

# SOME SENTENTIAL PALINDROMIC FIVE-SQUARES

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The oldest word square on record, the famed SATOR-AREPO-TENET-OPERA-ROTAS square known from at least three widely separated Roman Empire sites, is also a palindromic square; that is, its five words, when read in order in any direction, form a letter-unit palindrome. In addition, this square is ostensibly what Dmitri Borgmann in *Language on Vacation* (Scribner's, 1965) called a "sentential" square, meaning that its words, when read in top-down or left-right order, form a comprehensible sentence. (Supposedly, **Sator arepo tenet opera rotas** means something like "The reaper shall cease from his toil as the mower works his wheel," but any such interpretation is clouded by the fact that no one really knows what "arepo" means.)

Palindromic word squares of two main kinds have also been fashioned in English. The more interesting kind consists mostly or entirely of reversal words, containing no more than one palindromic word in its rows and no more than one in its columns. In *Language on Vacation*, Borgmann presents four 5-squares and one 6-square of this type. Shown at left below are his four 5-squares; the first three are singles, the fourth one a double.

H A L E S	R E C A P	S E R A C	P A L E R	L I V E D
A N E L E	E L A S A	E S O R A	A S A L E	I M A D E
L E V E L	C A R A C	R O T O R	C I V I C	V A S A V
E L E N A	A S A L E	A R O S E	E L A S A	E D A M I
S E L A H	P A C E R	C A R E S	R E L A P	D E V I L

As may be seen, none of these four squares works especially well as a sentential square. In apparent resignation, Borgmann writes, "As for creating a 5 x 5 [sentential palindromic] square, this has been accomplished only by abandoning the principle of using 5 five-letter words," and he accordingly offers the fifth square shown above, in which words of various lengths are used, some of them running over from line to line. This square may be read, sententially, as **Lived I, mad Eva, saved amid evil.**

But is it truly the case, I wondered, that sentential palindromic 5-squares consisting entirely of 5-letter words cannot be formed in English? English-language sentential 5-squares of the non-palindromical kind that use only 5-letter words are not, after all, any novelty; the well-known **Leave Ellen alone, venom enemy!** square was first published in 1859, and various others have surfaced since then. Could not a palindromic version of such a square exist? Assembling lists of 5-letter palindromes and reversal words, I set out to revisit this question.

These lists eventually encompassed 278 palindromes and 633 reversal pairs, and as I began to use them to generate palindromic 5-squares, it quickly became apparent that such squares are by no means scarce. My procedure was to go through the reversal words list alphabetically, noting every palindromic square of the single variety that could be formed with a given reversal word pair as the first and last words in the square. (Fortunately, fully alphabetized vocabulary lists render this a simple task in the case of palindromic 5-squares.) My original intention had been to examine the square-forming potential of every reversal word pair on my list; by the time I had



finished with the F's, however, I found that I had already recorded a total of 2029 palindromic squares, which seemed a more than adequate number for the purpose at hand. I therefore delved no deeper into my reversal words list.

Because the words in these squares can be read off in opposite directions, the 2029 squares I had found actually presented a total of 4058 different 5-word sequences for sentential consideration. Among these, I found about 35 sequences (not counting minor variants) that might, at least charitably, pass for complete sentences. Twenty-five of the more plausible of these specimens are shown below. Alas, few of them compare in naturalness to the aforementioned "Ellen" square; as will be seen, they tend to be characterized by the names of obscure towns (for most of which I am indebted to *Palindromicon II*) in their centers and uncommon, often dialectic or obsolete words elsewhere. (As further evidence of these squares' odd predilection for the archaic, note their frequent insistence that verbs should follow their objects.) On the whole, though, I think that this group does at any rate demonstrate that sentential palindromic 5-squares can, in fact, be formed in English using only 5-letter words.

To save space, the following "squares" are not shown as arrays, but simply written as sentences. They are divided into two classes: Class A sentences contain only non-dialectal, non-obsolete words and spellings, whereas Class B sentences incorporate at least one dialectal or obsolete word or spelling. Unfamiliar words are briefly defined in a glossary at the end.

## CLASS A SENTENCES

### **Aleda lived, Eveve devil Adela!**

(No thanks to *you*, venom enemy!)

### **Aleda lysed Esase desyl, Adela.**

(Aleda dissolved desyl in Esase, Adela.)

### **Anele, nopal, Epipe lapon Elena!**

(Anoint, O prickly pear, Epipe scorpion fish Elena!)

### **Asyla steal Yeley laets, Alysa!**

(Asylums are getting all the Yeley freedmen, Alysa!) (Variant: steel/leets)

### **Decaf, Enola, Conoc alone faced.**

(The other towns still had regular.) (Variant: Coyoc)

### **Dedal Enola Dolod alone laded.**

(Do a job well, and it's yours for life.)

### **Edile dedal, "idedi-laded" elide.**

(Skillful official, edit out the term "angel-burdened.") (Variant: Idodi)

### **Elide "laded idedi," dedal edile.**

(Delete the reference to "burdened angels," skillful official.) (Variant: Idodi)

This pair constitutes the only "two-way" sentential palindromic square found; the "idedi" variants are also the only two Class A sentences that do not use proper nouns.

### **Elide "lysed Isisi desyl," edile.**

(Just write "non-caloric sweetener.")

### **Eliot, lasso Isisi "ossal" toile.**

(Eliot, grab some Isisi bone-pattern toile.)

### **Emil's mural, "Irii Larum," slime!**

(Let us now egg Emil's kitschy mural, "Irii Alarum"!)

### **Esora, saner Onano renas arose.**

(Esora, less-rash Onano rockfish evolved.)



**Sessa, Edin's sidis' snide asses!**

(Hurry up, Edin's sidis' insolent donkeys!)

**Tessa, Edin's Siris' snide asset!**

(She's certainly driven enough people to drink!) (Variants: Silis', Sinis', Siei's, Siwi's, Sixi's, Siyi's, Sizi's)

## CLASS B SENTENCES

**Asyla skeel Yeley leeks, Alysa.**

(Asylums put Yeley leeks in tubs, Alysa.)

**Asyla snool Yoyoy loons, Alysa!**

(Asylums are bullying Yoyoy Lake's lunatics, Alysa!)

**Demas, Enola Mogom alone samed.**

(Demas, Enola greased only Mogom.) (Variants: Mohom, Mo-som, Motom)

**Denys, "Emony Noton" y-nome, syned.**

(Denys, "Anemone Noton" taken, rinsed.)

**"Drier, relue Ili!" Euler reird.**

("Dryer, resift Ili!" a delirious Euler cried.) (Ominously, one diagonal is "deied.")

**Drook, retro Otuto-orter Koord!**

(Soak, anachronistic Otuto-rejecting Kurd!)

**Drows resew Ososo, Weser sword?**

(Magical mists mend Ososo, Weser swordsman?)

**Enols—nerol?—"Oruro Loren" slone.**

("Oruro Loren" was done in by an organic compound, possibly nerol.)

**Esnes slive nikin, evils sense.**

(Workmen bisect a "natural or very soft" creature, feel a sudden foreboding.)

**Esnes Steve neven "Evet's Sense."**

(Workmen nickname Steve "Newt's Brain.")

**Esora, serer Oruro reres arose.**

(Esora, the Oruro contingent got the drier seats.)

In deciding which word sequences to accept as being sentential, one rule I observed was that predicates must be expressed, not merely implied; thus, a sequence such as **Damon: Agano-Matam-Onaga nomad?** was not considered to be a true sentence. Another rule was that a "sentence" should in fact be one sentence, and not a multi-sentence passage such as **Serac, Enola? Rodor alone cares!** But others may well see nothing to object to in such constructions.

Many more sentential palindromic 5-squares obviously remain to be found, in particular those whose first and last words both begin with letters in the G-Z portion of the alphabet. Also remaining to be discovered is the world's first double sentential palindromic 5-square, which I made no effort to find.

## GLOSSARY

(Abbreviations: **d** = dialectal word or spelling; **o** = obsolete word or spelling; **W2** = Webster's Second; **W3** = Webster's Third; **W11** = *Merriam-Webster's Collegiate Dictionary, 11<sup>th</sup> Ed*; **P** = *Palindromicon II*; **A** = *Aldine University Atlas*)

**Proper Nouns:** **Oruro**—city, W2; **Conoc, Coyoc, Dolod, Epipe, Esase, Eveve, Idodi, Ili, Isisi, Mogom, Mohom, Mo-som, Motom, Onano, Ososo, Otuto, Siei, Siwi, Sixi, Siyi, Sizi,**



**Yeley**—towns, P; **Matam, Onaga**—towns, A; **Agano, Iriri, Silis, Weser**—rivers, W2, P, A; **Yoyoy**—Ontario lake, P; **Esora**—Biblical name, W2; **Demas**—companion of Paul, W2; **Euler**—Leonhard, Swiss math., W2; **Noton**—Nat. Am. forename, two sources; **Sinis**—myth. figure, P; **Siris**—Babylonian god of alcoholic drinks, W2; **Koord**—Kurd, W2

**Other Words:** **anele**—anoint, W3; **asyla**—asylums, W2; **dedal** (daedal)—skillful, W3; **deied**—o died, P; **desyl**—organic radical, W3; **drook** (drouk)—d soak, W3; **drows**—d mists, W3; **edile** (aedile)—Roman all-purpose municipal official, W3; **emony**—d anemone, W3; **enols**—organic compounds, W3; **esnes**—Anglo-Saxon laborers, W3; **evet** (eft)—d newt, W2; **idedi**—Akkadian angels, P; **laets**—Kentish freedmen, W3; **lapon**—scorpion fish, W2; **larum** (alarum)—alarm, W3; **leets**—civil courts, W3; **lysed**—dissolved, W3; **nerol**—alcohol used in perfumes, W3; **neven**—to name, o, W2; **nikin**—a natural or very soft creature, P; **nopal**—prickly pear cactus, W3; **orter**—d rejector W2; **ossal**—of bone, W2; **reird**—o d cried, W2; **relue**—resift (inferred), W2; **renas**—rockfish, W2; **reres**—d rears, W2; **retro**—harking back to earlier style, W11; **rodor**—Anglo-Saxon “heaven,” P; **samed**—d greased, W2; **serac**—glacial ice ridge, W3; **serer**—drier, W3; **sessa**—Hurry!, W2; **sidis**—African Muslims of high position, W3; **skeel**—d wooden pail or tub, W3; **slive**—d slice off, cut through, W3; **slone**—o “did slay,” W2; **snool**—to bully, d, W3; **syned** (sinded?)—d rinsed, W2; **y-nome** (o p. part. of nim)—taken, W2

### **The Million Word Crossword Dictionary**

To be published by HarperCollins in March 2004, this landmark compendium by Stanley Newman and Daniel Stark will be a boon to solvers of crossword puzzles. A worthy successor to the well-known *The Master Crossword Puzzle Dictionary* compiled by Herbert Baus in the 1980s, this book will feature fill-in-the-blanks entries (such as look \_\_\_\_\_ at: 7 daggers) and multiple-word entries. It will also emphasize movies and their actors, brand names, and popular culture (from Harold Lloyd to Britney Spears). You can even find names of pain relievers and rental cars! Many of the entries come from a database of more than two million clues drawn from published crosswords. The price is \$25.95.