# ISOGRAMS: THE SEQUEL

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In the May 1985 Word Ways, Dmitri Borgmann defined an isogram (actually, he recommended "asogram") as a verbal entity in which each of the alphabetic letters used appears an equal number of times. He further defined a solo isogram as an isogram in which said equal number was one (CAT), a pair isogram when the number was two (DODO), and a trio isogram when the number was three (CHA-CHA-CHA). It is more natural to refer to a solo isogram as a heterogram (Susan Thorpe) or perhaps a haplogram (J H Marshall), rather than an isogram. The problem is avoided if we always use the word solo together with isogram when wishing to emphasise the family isogram connection, or heterogram when wishing to emphasise the difference aspect. This article excludes heterograms except for the next-to-last section, on English placenames.

## SUMMARY OF ISOGRAMS

Here is an attempted summary of isograms I have encountered or found. The amount of space taken by articles on isograms is out of all proportion to the actual number of them--perhaps because it takes a paragraph to justify each coined word! Many words listed below have appeared in Word Ways, especially in articles by Jeff Grant in August 1982 and by Dmitri Borgmann in May and August 1985.

When the "equal number" (call it n) is large, isograms are very rare and not very interesting, which is no doubt why there are so many coined words in the literature.

- n=7 BUBUBUBUBUBUBU (WW 73-147)
- n=6 n=5 ZZZZZ (WW 70-252)
- n=4 AAAA, KEEKKEEK (OED), KUKUKUKU, MMMM, OOOO, PEEPPEEP, ZZZZ. All but the second have appeared in Word Ways; ZZZZ is in the Amer-. ican Thesaurus of Slang. Borgmann (WW August 1985) offered the unsourced words DEDEEDED, ANTI-ANTI-TITANIAN and KINNIK-KINNIK.
- n=3 AIAIAI, CHACHACHA (OED), DEEDED, ESSEES, FEFFEE, GEGGEE, LIL-LII, MEHMEHMEH, POPPOLOLL, SESTETTES, SHEESHEHS, SHSHSH (OED), TAPTAPTAP?, YACKYACKYACK. SHEESHEHS is the longest word with a group occurring three times in different forms: SHE, ESH, EHS). All but TAPTAPTAP have appeared in Word Ways; POPPOLOLL is in the English Dialect Dictionary. Borgmann (WW August 1985) suggested the non-dictionary words ANTI-TITANIAN, METATEAMMATE, INTRATRANSNISTRIAS;

Jeff Grant suggested MONIMOLIMNION'LL (from an OED word).

n=2 There are many examples, so the following list is restricted in two ways. All words have at least 8 letters, and obvious tautonyms like CHUG-CHUG (almost 60% of the cases) are omitted. However, I have left a few that caught my fancy, and any like HOTSHOTS which are not tautonyms in the semantic sense (the word is HOT-SHOTS). Words can be found in Pulliam, Stedman, Webster 2, OSPD or the OED; words in Word Ways are marked w, and palindromes indicated by p. Words labeled? are unsourced, and! symbolizes "ugh".

ADINIDAN APPEARER BILABIAL CHARACTERETH w COINICON w DETANNATED wp ETERNITARIAN GINGELLINE HAPPENCHANCE INACCIDENTATED! w INTERINSERTS w JIRIJARA MESOSOME MIMETITE MOTORMETER NOTITION PADLEPALDE W PYNEPENY REAPPEAR REREIGNING w RIVERVILLE? SCINTILLESCENT SHANGHAIINGS w SNEDDENS WP TAENIODONTIDAE TELLURURET TITANIAN TRISECTRICES w VETITIVE

ANTIPERSPIRANTES w APPEASES CANCELLANSES w CICADELLIDAE CONCISIONS W DIKWAKWADI GAMMAGEE? GNIPPING wp HORSESHOER INDENIED INTESTINES LEADLAPPED? MIASMATIST MONONEME NAASSENE? OPPINION PANELPLANE? RAPPAREE RECHERCH? RETARDATED! ROCKCORK? SEMAEOSTOMAT? SHIPPISH SQUARESQUARE TEAMMATE TESSELLATA w TOOLSTEELS w TROMOMETER VIVIENNE YLANGYLANG

APPARELLER? ARRAIGNING CAUCASUS w CICADIDA? CONOCUNEUSES w ESOPHAGOGRAPHERS GENSENGS GRADGRINDIAN w HOTSHOTS INSCIENCES w JIPIJAPA MAAMSELLES w MILLIEME MONONYMY NOTIONISTS w OPPYNYON POCKETAPOCKETA RATTAREE REPROPOSES REWAREWA ROVEOVER? SHAMMASH SIGNINGS STELLETS WP TEISTIES w TETRAPAPER TRANSNISTRIA w UNENDUED WELLWOODED

The longest ones are ANTIPERSPIRANTES (WW 82-138) and ESOPHAGO-GRAPHERS (Stedman), both with 16 letters; and INACCIDENTATED (WW 82-137), POCKETA-POCKETA (sound of an engine, e.g. Thurber OED), SCINTILLESCENT (OED), and TAENIODONTIDAE (Web 2), all of 14 letters. We might also accept UNSUFFICIENCES, an inferred plural.

In Language on Vacation, Borgmann suggested RE-RESIGNINGS and SPHEROPHORES. I have assumed that BILABILA is a tautonym so it is not listed. In his Word Ways article, Borgmann suggests the following non-dictionary words:

ARCORESONANCES
NOTIDANOIDEATE
PTERODOPTEROID
COUNTERUNCORSETS
COPRAETERPOLITICAL

COUNTERTROUNCE
PHILADELPHIADE
UNCONSTRUCTORS
MALINTERTERMINAL

ENDODONTISTISE
PTERIDOPTEROID
ANTITRANSVERSIVE
TELEPHILOSOPHIST
ULTRATRANSLUCENCES

### **PSEUDOAUTOHER MAPHRODITISM**

It is worth examining shorter pair isograms in which the letters in the second half are a rearrangement of those in the first half. Borgmann discarded such words as having a pattern, but I think they are very interesting, especially those that are not palindromes. Note that all palindromes of even length appear. Here is a list of such words with six letters:

AENEAN AMIMIA CNICIN DEGGED p GALLAG wp DREDER DENNED FINNIF wp GUNUNG HALLAH p HECCHE HANNAH p KALLAK p KASSAK? p KREKER LEFFEL p LEPPEL wp LITTIL wp LUFFUL p LYSYLS MALLAM p MARRAM p MODDOM p NATANT PULLUP p RATTAR p REDDER p RENNER p REPPER p RETTER p SAMMAS wp SELLES P SEMMES? p SHOOSH w SIRRIS p SOCCOS WP SUCCUS p TALLAT p TAMMAT wp TARRAT p TEBBET p TENENT TENNET p TERRET P TERTRE TIBBIT p TILLIT wp TINNIT wp TIPPIT p TIRRIT p TUBBUT wp TUFFUT wp WOLLOW wp WONNOW wp WORROW P YEZZEY WP

All but three of the words marked w appear in an article on palindromes by Jeff Grant in the November 1978 Word Ways.

#### ENGLISH PLACENAMES

The readers of Saga magazine in the United Kingdom have supplied the 13-letter heterograms BUCKFASTLEIGH and BERWICK ST JOHN to equal Borgmann's BUSLINGTHORPE, and the 14-letter BRICKLEHAMPTON to surpass it.

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