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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 American Thesaurus of Slang. Borgmann (WW August 1985) offered the unsourced words DEDEDEDE, ANTI-ANTI-TITANIAN and KINNIK-KINNIK.

n=3 AIAIAI, CHACHACHA (OED), DEEDED, ESSEES, PEFFEE, GEGGEE, LILLI, MEHMEHMEH, POPPOLOLL, SESTETTES, SHEESHEHS, SHSHSH (OED), TAPPTAPTAP?, YACKYACKYACK. SHEESHEHS is the longest word with a group occurring three times in different forms: SHE,ESH,EHS). All but TAPPTAPTAP 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;

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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 ANTIPESPIRANTES w APPARELLER?
APPEARER APPEASES ARRAIGNING
BILABIAL CANCELLANSES w CAUCASUS w
CHARACTERETH w CICADELLIDAE CICADIDA?
COINICON w CONCISIONS w CONOCUNEUSES w
DETANNATED wp DIKWAKWADI ESOPHAGOGRAPHERS
ETERNITARIAN GAMAGEE? GENSENGS
GINGELLINE GNIPPING wp GRADGRINDIAN w
HAPPENCHANCE HORSESHOER HOTSHOTS
INACCIDENTATED! w INDENIED INSCIENCES w
INTERINSERTS w INTESTINES JIPIJAPA
JIRIJARA LEADLAPPED? MAAMSELLES w
MESOSOME MIASTMATIST MILLIEME
MIMETITE MONONEME MONONYM
MOTORMETER NAASSEN? NOTIONISTS w
NOTITION OPPINION OPPYNYN
PADLEPALDE w PANELPLANE? POCKETAPOCKETA
PYNEPENY RAPPAREE RATTAREE
REAPPEAR RECHERCH? REPPOSES
REEIGNING w RETARDATED! REWAREWA
RIVERVILLE? ROCKCORK? ROVEOVER?
SCINTILLESCENT SEMAEOSTOMAT? SHAMMASH
SHANGHAINGS w SHIPPISSH SIGNINGS
SNEEDENS wp SQUARESQUARE STELLETS wp
TAENIODONTIDAE TEAMMATE TEISTIES w
TELLURET TESSELLATA w TETRAPAPER
TITIANIAN TOOLSTEELS w TRANSNISTRIA w
TRISECTRICES w TROMOMETER UNENDED
VETITIVE VIVENNE WELLWOODED
YLANGYLANG

The longest ones are ANTIPESPIRANTES (WW 82-138) and ESOPHAGOGRAPHERS (Stedman), both with 16 letters; and INACCIDENTATED (WW 82-137), POCKETAPOCKETA (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 COUNTERTROUNCE ENODONTISTISE
NOTIDANOIDEATE PHILADELPHIADEE PTERIDOPTEROID
PTERODOPTEROID UNCONSTRUCTORS ANTITRANSVERSIVE
COUNTERUNCORSETS MALINTERTERMINAL TELEPHILOSOPIST
COPRAETERPOLITICAL ULTRATRANSLUCENCES
PSEUDOAUTOHERMAPHRODITISM

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 p | AMIMIA p | CNICIN pup | DEGGED p |
| DENNED p | DREDER p | FINNIF wp | GALLAG wp |
| GUNUNG p | HALAH p | HANNAH p | HECCHE |
| KALLAK p | KASSAK? p | KREKER p | LEFFEL p |
| LEFFEL wp | LITTL 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 |
| TEVBET p | TENENT p | TENNET p | TERRET p |
| TERTRE p | TIBBIT p | TILLIT wp | TINNIT wp |
| TIPPIT p | TIRRIT p | TUBBUT wp | TUFFUT wp |
| WOLLOW wp | WONNOW wp | WORROW p | YEZZIE 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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