LONG ISOGRAMS (PART 1)

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The Background

One of the aesthetic delights available to logologists is contemplating isograms: words, names, and other verbal entities in which each of the alphabetic letters used appears the same specified number of times. PSEUDOMYTHICAL, for instance, is a solo isogram, using each of 14 different letters once; HAPPENCHANCE is a pair isogram, using each of 6 different letters twice; and SESTETTES is a trio isogram, using each of 3 different letters three times. In a cryptographic context, solo isograms are known as nonpattern terms; in a pangrammatic setting, as partial pangrams. Beyond trio isograms lie hitherto unexplored higher orders - tetrad, pentad, and hexad isograms. Short isograms are plentiful, long ones a rarity, making the search for the latter a logological challenge and their discovery unusually rewarding: the numerical balance they display is an unexcelled form of verbal beauty.

The term **isogram** is one that I launched in 1965. It has gained some currency since then, particularly among **Word Ways** contributors and readers. My terminological choice was an unfortunate one, however, because an isogram is a type of line on a meterological, geological, or other map or chart - a line along which there is some sort of constant value. The word also has an abstruse meaning in higher mathematics. To avoid confusion, I recommend that the logological isogram be changed to an asogram. The prepossessing charm of this word is that it happens to be a reversal of **margosa** (the name of an East Indian tree of the mahogany family). Using the word **asogram** would finally end the profound frustration of reading **isogram** backwards only to confront the nonexistent **margosi**. So as not to perturb any readers, however, I am continuing to use the now-familiar word isogram in this article.

Pair isograms have heretofore been differentiated into two classes: ordinary specimens exhibiting a disorderly letter arrangement (as in the cas of ARRAIGNING), and patterned ones in which the last half of the isogram is a transposal of its first half. This distinction has been applied automatically and unthinkingly. My own view is that, if a pair isogram displays bilateral symmetry because it consists of separate, clearly discernible, structural elements which are mutual transposals and which have joined to form the isogram, then its symmetry or balance is nothing remarkable. According to this principle, the pair isogram HORSESHOER, which consists of the mutual transposals HORSE and SHOER, is

an undistinguished one. By contrast, INTESTINES, endowed with a purely accidental symmetry, deserves an accolade. Very few long pair isograms are accidentally symmetrical - only 7 have been discovered thus far. It is these accidental symmetries and no others which I am singling out for meritorious mention in this article. An analogous, tripartite accidental balance can be sought among long trio isograms, but no actual example of one has yet come to light.

Pair and trio isograms have, until now, been limited by excluding three categories of examples:

1. Palindromes such as DETANNATED and MARY B. BYRAM. Fortunately, perhaps, it is technically impossible for a palindrome to be a trio isogram as well if it has more than three letters.
2. Tautonyms or reduplications such as STRUMSTRUM and CHA-CHA-CHA.
3. Isograms featuring repeated letter pairs or trios - TATTLE-TALE, for instance, which consists of the letter pairs AA, EE, LL, TT, and a second TT; or TAT-TAT-TAT, a word which, in addition to being both a palindrome and a tritonym (a three-part tautonym), consists of the letter trios AAA, TTT, and another TTT.

The letter patterns which palindromy and tautonymy impose on words and names make these terms isograms automatically - that they are isograms is an incidental function of their being palindromes and/or tautonyms, not the independent attribute that alone is worthy of admiration. Repeated letter pairs or trios are evidence of imperfection in the same vein as repeated single letters in what would otherwise be a solo isogram. To illustrate, the 12-letter word UNLUBRICATED uses only 11 different letters, one of which is repeated: ABCDEILNRTUU.

In surveying pair and trio isograms, I have imposed the customary taboo against palindromes and tautonyms. The case against repeated-group pair and trio isograms is weaker, however. Beyond certain letter lengths, the search for isograms of each species becomes so difficult that even near isograms are sufficiently interesting to record. This article therefore includes a generous assortment of very long near isograms.

What is the minimum letter length required to qualify an isogram as long? The minimum depends on one's perspective, the context of the presentation, and the species of isogram in question. For the purposes of this article, I have established the following minimum letter lengths for long isograms: solo isograms, 15 letters; pair isograms, 14 letters; and trio isograms, 12 letters. Because the subject of higher-order isograms has never before been investigated and exceedingly few such isograms have been found, this article presents all known examples of higher-order isograms. In their case, therefore, the word long refers to the substantial number of repetitions of each alphabetic letter used, not to the substantial total number of letters comprising each of them.

The length minima just described do not condemn all shorter isograms to logological obscurity. Solo isograms of 13 and 14 let-

ters are interesting if they include one of the rare letters J, Q, X, or Z - CONJUGATIVELY, QUEBRACHITOLS, AMBIDEXTROUSLY, and SCHIZOTRYPANUM, for example. Transaddable or transdeletable such isograms are also interesting - the PSEUDOMYTHICAL-HEMIDACTYLOUS pair, for instance. Fourteen-letter transposable pair isograms are equally noteworthy: HYDROCALUMITES-TRICHLAMYDEOUS and DICHLORBUTANES-SUBCHLORINATED, for example.

The word TRICHLAMYDEOUS ("having a triple perianth, calyx, and corolla") has been criticized on the ground that, while **dichlamy**deous plants do exist, no trichl**amyd**eous ones are known to botanists. The argument is logologically irrelevant. TRICHLAMYDEOUS is a superbly-formed word; the evolution of life on earth still has some 4 or 5 billion years ahead of it; and trichlamydeous plants may well appear a billion or two years hence. The word TRICHLAMYDEOUS is today's term describing those potential future plants accurately; SUBCHLORINATED ("less than normally chlorinated") is another extralexical but thoroughly admirable word.

Isograms have received only the spottiest treatment up to now. A mere four articles on the subject have previously appeared in **Word Ways**: one by A. Ross Eckler in November, 1971; one by Ralph G. Beaman in May, 1972; one by me in February, 1974; and one by Jeff Grant in August, 1982. In addition, numerous notes and comments about isograms have been scattered through Colloquies and through articles about tautonyms, place names, miscellaneous word curiosities, and other topics. This fragmented presentation of the subject is responsible for the fact that the authors of full-fledged isogram articles were actually unaware of some of the finest examples of isograms and near isograms that had been previously been mentioned in **Word Ways** - tucked away in obscure locations. Worse yet, only three of the four isogram articles are listed in the editor's topical indexes. The first purpose of this article is, consequently, to collect and present all of the most meritorious isograms published thus far in **Word Ways**.

All heretofore-known isograms have been the discoveries or creations of nine logologists, contributing in varying degrees to the existing body of examples. Enumerated in alphabetical order, they are Ralph G. BEAMAN, Dmitri A. BORGMANN, Maxey BROOKE, Henry E. DUDENEY, A. Ross ECKLER, Darryl H. FRANCIS, Jeff GRANT, Jack LEVINE, and F. D. LYNCH. Note that the surnames of all nine authors are in the first half of the alphabet. This observation fortifies the long-standing hypothesis that first-half humans are more competent and successful than last-half ones in all intellectual endeavors, including the logological one. Last-half readers upset by this hypothesis are welcome to prove me wrong by finding and submitting droves of new isograms in the categories and length ranges covered by this article.

While I have included all long, previously-published quality isograms in this article, the spellings and definitions I am using here are strictly my own. The spelling problem revolves around the proper way of representing a compound term - solidly, in hyphenated form, or as two or more separate words. In each doubt-

ful instance, I have used my knowledge of English to decide what is the most appropriate orthography. My definitions, while accurate, are always those most conducive to casting the isograms in a fully acceptable light - just as clothes are said to make the man, so is it the definition that makes the isogram. Isogram definitions are, therefore, of critical importance.

The second, and more important, purpose of this article is to elevate the subject of isograms to the status of a major logological field. Of the 247 examples presented here, 156 or 63 per cent have never before graced (or defiled?) the pages of Word Ways - either as isograms or in any other logological capacity. That astonishing statistic shows how little attention logologists, I included, have devoted to isograms in the past. I hope that this article will stimulate significant interest in the topic, resulting in hundreds of new discoveries.

I have written this article from the perspective of NOEMATOLOGY (the science of concepts), not from that of LOGOLOGY (the science of words). Words can never be ends in themselves - they are merely symbols representing concepts. No dictionary of concepts has ever been published. There is an infinite number of concepts, so that only the merest handful is represented by dictionary words or names. The noematologist must, accordingly, assume full responsibility for determining which concepts are worthy of expression and what their most suitable verbal representations are. In this article, I have lived up to my responsibilities as a noematologist. Logology is just a rung on the ladder ascending to noematology, and I have now graduated from the former to the latter. Won't you join me in the exhilarating atmosphere of noematology?

Solo Isograms

15-Letter Examples

BENZHYDROXAMICS. That branch of organic chemistry which deals with the isomeric forms of benzhydroxamic acid, a crystalline acid including the benzene ring in its chemical formula. Note the X and Z.

BIG FLATS, NEW YORK. A town in Chemung County, New York, about 9 miles northwest of the industrial city of Elmira.

BLACKING POWDERS. Carbon facings for metal-melting and -casting molds, made of charred wood, coal, or graphite and ground to powder.

BY-COURTEZANSHIP. The status or condition of a court mistress, or paramour of noblemen, whose service in that capacity is incidental or additional to some other function.

COUNTERBAWDSHIP. The condition or status of a brothelkeeper considered as reciprocal or complementary to that of the brothel's prostitutes.

COUNTERDIAGLYPH. A countersunk die for producing a figure in relief.

DERMATOGLYPHICS. The study of skin ridge patterns on the fingers, palms, toes, and soles.

ENDOLYMPHATICUS. A modern Latin word appearing in English

in the term ductus **endolymphaticus** - a blindly-ending canal or tubular process in the ear, connecting the membranous labyrinth with the endolymphatic sac.

FIVE-THOUSAND-PLY. A compound adjective describing an unusually sturdy sort of bathroom tissue.

FLATBUSH, NEW YORK. A rural location in Ulster County, New York, near Saugerties (a village 11 miles north of Kingston noted for its cement and flagstone quarries).

FOLDING BRACKETS. Small shelves supported by L-shaped rigid structures. Each shelf consists of two sections hinged together, making it possible to fold it when it is removed from its frame, or from the wall to which it is normally fixed.

HYDROPNEUMATICS. That branch of physics which deals with mechanisms operating by means of both water and air or some other gas.

MISCONJUGATEDLY. In an incorrectly conjugated manner.

PREDISCOUNTABLY. In the manner of something capable of being discounted in advance.

SUBCANDLEWRIGHT. An apprentice worker who manufactures candles under the supervision of a master candlewright.

THUMBSCREWINGLY. Torturingly, in the fashion of someone who applies thumbscrews to his or her victim.

UNCOPYRIGHTABLE. Not copyrightable.

UNCRYPTOGAMLIKE. Unlike those plants not producing flowers or seeds - unlike such plants as algae, ferns, and mosses.

UNCYSTOGRAMLIKE. Unlike an X-ray photograph of the urinary bladder.

UNPITCHFORKEDLY. Not in the manner of suddenly or haphazardly being put or thrust somewhere.

UNSKIOGRAPHEDLY. In some manner other than by using X rays to form a shadowlike image on a sensitive surface.

WALPURGISNÄCHTE. The German plural of **Walpurgisnacht**, also a name in English for Walpurgis Night (the eve of May Day). In order to make the plural word a solo isogram, it is necessary to treat the umlauted German Ä as a letter different from the ordinary A.

WHITE GYRFALCONS. Certain large falcons of the Arctic regions which are almost pure white, with only a few dark markings.

Of the 24 solo isograms just listed, only 7 have been noticed by standard reference words: BIG FLATS, NEW YORK; DERMATOGLYPHICS; ENDOLYMPHATICUS; FLATBUSH, NEW YORK; FOLDING BRACKETS; WALPURGISNÄCHTE; and WHITE GYRFALCONS. Those works are not very observant or comprehensive.

16-Letter Examples

BOUGY, SWITZERLAND. A village in Vaud canton, in western Switzerland, between the communes of Morges and Nyon, some 1½ miles north of the Lake of Geneva.

COUNTERDIAGLYPHS. The plural of **counterdiaglyph**, above.

EIGHTY-FOUR McNABS. Seventy-six more individuals bearing the surname **McNab** than are listed in The New York Times Obituaries

Index 1858-1968.

OUCHY, SWITZERLAND. A village in Vaud canton, in western Switzerland, on the northern shore of the Lake of Geneva. It is the port for Lausanne and once served as a residence for the English poets Byron and Shelley.

SOUTH CAMBRIDGE, NY. A rural community in Washington County, New York, in an agricultural and stockbreeding area, about 19 miles northeast of the commercial and industrial city of Troy.

STANLEY KIMBROUGH. An English name, available to anyone in the market for one - an author looking for a pseudonym, for instance.

SUBENDOLYMPHATIC. Containing less than the usual or normal amount of endolymph (the watery fluid in the membranous labyrinth of the ear).

THICK-WARBLED SONG. Vocal music sung indistinctly, with many turns and variations.

UNCOPYRIGHTABLES. Written or printed materials not eligible for copyrighting.

Of these 9 solo isograms, 3 are definitely known to have engaged the attention of standard reference works: BOUGY, SWITZERLAND; OUCHY, SWITZERLAND; and SOUTH CAMBRIDGE, NY. It is, however, possible or even likely that a STANLEY KIMBROUGH is listed in some telephone directory.

17-Letter Examples

ANTI-RUMBOLDSWHYKE. Many years ago, the late British palindromist Leigh Mercer passed the 13-letter solo isogram RUMBOLDSWHYKE along to me. He identified it as a village somewhere in the United Kingdom, neglecting to be more specific. Can any reader pinpoint its location? Assume that the residents of Rumboldswhyke have decided to dam a stream coursing through their community but also providing fresh water for various downstream communities. As a consequence, anti-Rumboldswhyke feeling would be running high in the about-to-be-deprived communities.

JACK BUSLINGTHORPE. Thorpe is well-known both as a place name and as a surname, both in Great Britain and in the United States. It is, for example, the name of a post office in McDowell County, West Virginia, and Jim Thorpe was a famous American Olympics athlete. Other surnames such as Oglethorpe are compounds of Thorpe. Situated some 10 miles north-northeast of Lincoln, in the Parts of Lindsey, Lincolnshire, England, is a hamlet by the name of Buslingthorpe. Since many individuals bear surnames reflecting the localities where their ancestors lived, it is possible or even likely that Buslingthorpe is also, or will soon emerge as, a surname. More particularly, I believe that Jack the Ripper's real name was Jack Buslingthorpe, solving a century-old mystery. In any event, the noematologist cannot limit himself to the actual, to the content of the past and present - he is professionally committed to a vigorous, concomitant exploration of the potential, of the future: an unquestionable provenance of Jack Buslingthorpe.

STANLEY D. KIMBROUGH. A more complete form of the name Stan-

ley **Kimbrough**, above. The middle initial may stand for **Daniel**, **David**, or **Donald**. The complete name is an excellent one for some character in a future short story, novel, or play.

SUBDERMATOGLYPHIC. Pertaining to patterns under one's skin, such as those of visible veins.

SUBLYCANTHROPIZED. Changed almost, but not quite, from a man into a wolf.

SUBLYKANTHROPIZED. An alternate spelling of **sublycanthropized**, above.

Reference works have, it appears, not yet become aware of any of these six solo isograms.

18-Letter Examples

PICKY DRAUGHTSWOMEN. Women very choosy about the machinery or structures for which they draw plans and sketches.

STANLEY D. KIMBROUGH, V. If the full Kimbrough name presented above is handed down from one generation to the next, then its fifth male holder will be known as **Stanley D. Kimbrough, V** - an isogram remarkable for its 18-letter length. If you assume that the name can endure over long periods of time, even more interesting results ensue: the 15th-generation holder of the name will be using a 19-letter isogram; the 115th-generation holder, a 20-letter isogram. Such continuity is, however, unrealistic. These longer isograms are, therefore, not shown here.

Readers unimpressed with an isogram constructed of an English first and an English last name as its principal ingredients are invited to try duplicating the feat. They will discover that it verges on the impossible to find a first name and a surname that are both thoroughly English, use a total of 16 letters, and include no repeated letters. **Stanley Kimbrough** is probably not the only existing such combination, but I have not been able to match it with another. Can you?

19-Letter Examples

JASPER WHITCOMB LUNDY. The American poet James Whitcomb Riley furnishes the inspiration for this 19-letter solo isogram. I unreservedly recommend the name as an alias for a would-be criminal in search of a distinctive name under which to operate.

SCHULTZ BAKING POWDER. Baking powder manufactured and distributed by the Schultz Baking Company. If you happen to be planning to start such a company, that is the name *par excellence* to use!

A New Modus Operandi

In order to ascend to higher levels of solo isograms, assume that you are an eccentric - or not so eccentric - multimillionaire. Your first step is to construct a palatial mansion for yourself in Columbia County, Arkansas, at a hitherto unpopulated location known as **McKnight Spur**: a stop on the Louisiana and North West Railroad. Next, you build an equally magnificent residence in

Wolf Bay, a village in eastern Quebec, Canada, at the approximate point on the Gulf of Saint Lawrence where Quebec's coastline stops running straight eastward and starts running northeastward. To avail yourself of both residences, you jet back and forth between them. As a result, you cover the WOLF BAY-McKNIGHT SPUR route several times annually. In the process, you have produced a 19-letter isogram.

After a number of years, you tire of the routine and sell both homes at a tidy loss. You have now become an EX-WOLF BAY-McKNIGHT SPUR commuter, thereby assisting the progress of the solo isogram to the 21-letter level.

Your experience has been enthralling but remains somewhat anomalous. In order to explore the higher isogram levels effectively, you draw inspiration from the Bermuda Triangle. What that nemesis suggests to you is that any triangular area within the 48 contiguous states can be identified by naming its vertices. If, for instance, these three vertices are at Chicago, Denver, and Houston, then the area within the triangle is known as the **Chicago-Denver-Houston** triangle. This revelation enables you to locate other geographic triangles within the "lower 48" states - triangles that happen to be designated by long solo isograms.

In each of the next 11 examples, the county and state locations of the three communities at the vertices of your triangle are given immediately following the isogram. With the single exception noted below, all of the localities are taken from recent, major Rand McNally atlases.

20-Letter Examples

ASHBY-GULF-PEDRICKTOWN. Grant, NE; Chatham, NC; Salem, NJ.
BOLD SPRING-FAY-KETCHUM. Humphreys, TN; Dewey, OK; Blaine, ID.
BUCKSPORT-FLYING H-MEAD. Hancock, ME; Chaves, NM; Spokane, WA.
BYRDSTOWN-McVEIGH-PAUL. Pickett, TN; Pike, KY; Minidoka, ID.
FORSYTH-LUBECK-WINDGAP. Monroe, GA; Wood, WV; Northampton, PA.
KIEF-LYNCHBURG-POTSDAM. McHenry, ND; DeSoto, MS; St. Lawrence, GA.
LYNCHBURG-MIDWEST-PAVO. Highland, OH; Natrona, WY; Thomas and Brooks, GA.

21-Letter Examples

FAY-NORTH SEDGWICK-PLUMB. Carroll, IL; Hancock, ME; Thurston, WA.
FLOYD-PECKHAM-TWINSBURG. Roosevelt, NM; Weld, CO; Summit, OH.

22-Letter Examples

CAMP FLOWERS-DUXBY-KNIGHT. Bay, FL; Roseau, MN; Vernon, LA.
DUXBY-GRAVEL SWITCH-KNOPF. Roseau, MN; Marion, KY; Caroline, VA.

Knopf, Virginia is a name found in both the 1911 and the 1930 Editions of the Rand McNally Commercial Atlas, and in the 1939

Hammond's New World Atlas, among other places. Knopf is the German word for "button." The life of this town seems to have been snuffed out at some point between 1939 and 1984.

23-Letter Examples

If triangles are good, quadrilaterals are better. Any quadrilateral area within the continental United States can be identified by using the names of its four vertices. If those names represent geographic locations, you have the potential of a solo isogram such as this one:

DUXBY-McKNIGHT-JASPER-WOLF. Roseau, MN; Allegheny, PA; Dubois, IN; Sheridan, WY.

With the 23-letter example just presented, the solo isogram has awakened to the realization that its true destiny lies in becoming a full-fledged pangram, using all 26 letters of the alphabet. The 23-letter example is missing only the letters Q, V, and Z. Won't you help the once-lowly solo isogram fulfill its intimations of immortality by finding a combination of 4 or 5 American place names using the entire alphabet?

You can, to illustrate, decide to compile a dictionary of the specialized terms used in recreational linguistics - work long overdue, by the way. Without your exerting any real effort, the very first entry that occurs to you reads as follows:

QUADRILATERAL, GEOGRAPHIC. A tetragonal land area such as the renowned Quadrilateral Z (Duxby-McKnight-Jasper-Wolf), q.v.

Presto! In one lightning flash of inspiration, you have produced both the ultimate solo isogram and the ultimate pangrammatic window: a 26-letter miracle!

By investing a little thought in the project, you will certainly come up with a better example.

P.S. Fitzjohn Burgwald McKey, X (q.v.) is another 26-letter combination solo isogram and pangrammatic window. Fitzjohn and Burgwald are British masculine first names, listed in Flora Haines Loughead's Dictionary of Given Names, Second Edition (Glendale, CA: Arthur H. Clark Company, 1958). McKey is a British surname found in various current telephone directories, including those of Chicago, Seattle, and Portland (Oregon). The numeral X indicates a remarkable handing down of the name from one generation to the next. The abbreviation q.v. refers the reader to the specified name in its alphabetical position in a given list or glossary.