## ANTIFREQUENCY WORDS

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Almost all English letter-frequency counts agree that the four least-often used letters of the alphabet in English text are J, $Q$, $X$, and $Z$. What the relative frequencies of these four letters are is in dispute. Three well-known frequency counts give the letters, going from the most common to the least common, in the order X, J, Q, Z; two other counts give that order as the alphabetical one - J, $Q, X, Z ; a \operatorname{sixth}$ count lists the letters in the order $Q, X, J, Z ;$ and $a$ seventh count gives the three least common letters in the order $Q, X, Z$, combining the frequency count for the letter $J$ with that of the much more common letter l. For reference purposes, it is convenient to think of the four letters in their alphabetical order, as the J-Q-X-Z group.

All seven of the frequency counts just cited agree that the single least common letter in English text is $Z$. All of the counts can't be wrong, but $l$ can't help wondering about them. Of the four letters, $Z$ is the only one that appears doubled in dozens of common words, from BLIZZARD to WHlZZlNG.
lf $Z$ is, indeed, the least common English letter, then its position as the last letter of the alphabet is a highly appropriate one - poetic justice, as it were. l shall, however, continue questioning that claim. Compare the dozens of common two-Z words with the extreme paucity of doubled J's, Q's, and X's in English. Among the 150,000 most common English words, there are only two including a double J - HAJJ and HAJJl. There are no doubled-Q words in the group, though it includes one such proper name - SAQQARA. For a doubled-Q word one must consult Webster's Second Edition, which includes the word ZAQQUM. Neither are there any doubled$X$ words among the top 150,000 English words; one must consult Webster's Third Edition to find XX-DISEASE, the Random House Unabridged for James Emory FOXX, the former baseball player, and large-city telephone directories for the corporation name EXXON. Additional words and names featuring doubled J's, Q's, and X's do exist (JHAJJAR, UJJAlN, HOOQQU, QQUECHUA, RIQQ, FIXX, and NAXXAR, for instance), but they are rarer still than those already named.

The infrequent occurrence of the letters $J, Q, X$, and $Z$ has inspired logological efforts to find words and names including a multiplicity of these letters - an antifrequency crusade, one might say. This article reviews two aspects of that crusade: the search for words and names including any one of the four letters in quadruplicate, and the search for those including each of the
four rare letters at least once.
Words and names in the first of these two categories are very difficult to find. Presented here is the finest example known for each of the letters, in order of increasing difficulty.

The letter $Z$. Here, again, the letter $Z$ is the one easiest to conquer. A common, though highly informal, English word, PlZZAZZ, fills the bill. It takes precedence over academically more acceptable four-Z words both because it is commendably shorter than all alternatives to it and because it has an upbeat meaning: the quality of being exciting or attractive; energy, vitality, vigor.

The letter J. A medical term solves the problem: all medical dictionaries include the solidly-written word JEJUNOJEJUNOSTOMY, defining it as the surgical formation of a junction between two parts of that section of the small intestine called the jejunum. May you never need a jejunojejunostomy!
The letter Q. Darryl H. Francis deserves credit for finding QAWIQSAQQ, the name of an Alaskan bluff more commonly spelled Kawiksak. It is located at latitude $680^{\circ} 1^{\prime}$ North and longitude $164^{\circ} 15^{\prime}$ West, at the southwestern edge of the De Long Mountains, in northwesternmost Alaska. The name is included in A Dictionary of Alaska Place-Names edited by Donald J. Orth TWashington, D.C.: U.S. Government Printing Office, 1967).

The letter $X$. For the following information, 1 am indebted to Dr. Warren L. Bosch, an assistant professor of chemistry at the Florida Institute of Technology in Melbourne, Florida. He has provided me with XYLARATOXENYLMETAXYLYLXENON (IV), a hypothesized xenon compound. Because xenon chemistry is still very young, it is not yet known whether the chemical designated by the specified name can actually be synthesized. Xenon has valences (numbers of bonds formed by a given atom in a chemical compound) of $2,4,6$, and 8 . The specified compound would use the tetravalent form of xenon. The xylaric acid involved in the hypothesized compound is a five-carbon diacid related to the sugar xylose; its name and structure are given on page 1086 of Morrison and Boyd's Organic Chemistry, 3rd Edition (Boston: Allyn \& Bacon, 1974) a very widely used organic chemistry text. The infix META, set off by hyphens from the rest of the word only if it is reduced to a lowercase initial (-m-), represents one of three varieties of xylyl entites, the other two being represented by the infixes PARA (-p-) and ORTHO (-o-). The choice of META in preference to ORTHO or PARA for the compound is an arbitrary one. If one wishes to refer to all compounds of the type without specifying the particular isomer, one may eliminate the infix entirely, giving the compound's name as XYLARATOXENYLXYLYLXENON (IV), a salutary shortening of the basic word to only 23 letters.

Words and names in the second category, using all four of the rare letters J, Q, X, and $Z$, each one at least once, are far more difficult to locate, and the search for them has absorbed the attention of logologists for many years. Listed below, in alphabetical order, are 26 such items. Many or most of them were originally
found either by Darryl H. Francis or by me, with marginal assistance from a few other individuals whose names are lost to posterity. The following list includes a number of terms revealed here for the first time, and all of the terms are treated somewhat more thoroughly than they have been in previous logological literature.

1. ARJUZANXESQUE, defined as "in the manner or style of Arjuzanx or of its inhabitants." The word is derived from Arjuzanx, the name of a small town in southwestern France, about 20 miles west-northwest of Mont-de-Marsan, the capital of the department of Landes. There is a railroad running from Mont-de-Marsan to Arjuzanx and beyond. About 4 miles further along that railroad is another small town by the name of Morcenx. I infer that Morcenx is more important or more prominent than Arjuzanx, from the fact that numerous large atlases show Morcenx on the map, but not Arjuzanx. Arjuzanx is both mapped and indexed by Volume lli of the Mid-Century Edition of The Times Atlas of the World, edited by John Bartholomew (Boston: Houghton Mifflin Company, 1955). That atlas is a successor to The Times Survey Atlas of the World prepared under the direction of J. G. Bartholomew (London: The Times, 1922). The 1922 atlas maps and indexes the same town as ARJUZANE. Is ARJUZANX a correction, or a corruption, of ARJUZANE? Very few atlases or other maps show the town, making a decision difficult. However, the ending of ARJUZANX is consistent with that of its neighbor MORCENX, and the map of France in Volume 10 of the 11th Edition of the Encyclopedia Britannica (1910-1911) also shows the name - as ARJUZANX. These circumstances vindicate the word heading the list of antifrequency words - ARJUZANXESQUE.
2. B. 1. JACQUET, JAZZ SAXOPHONIST. A short identification of Battiste Illinois Jacquet, prominent tenor sax, born in Broussard, Louisiana on October 31, 1922 (The Encyclopedia of Jazz, by Leonard Feather; New York; Bonanza Books, 1962). Included free of charge are a second $J$ and a second 2.
3. DELPHI KNOXJAQZONVILLE, the author of three Word Ways articles published in 1970 and 1971. A sophisticated computer analysis of the articles suggests strongly that the author was Darryl H. Francis's soulmate or alter ego.
4. EX-JACQUARDIZER, someone whose job it formerly was to convert fabric-manufacturing plants to the use of Jacquard looms (apparatuses for weaving figured fabrics). Credit for discovering this extralexical term goes to Alan Frank, on page 68 of the May 1983 issue of Word Ways.
5. EX-JAZZ QUEEN, a woman formerly one of the leading females professionally in the domain of jazz music. The sobriquet "The Jazz Queen" has probably been applied to some particular female jazz artist, though lam unable to identify her on the spur of the moment. Readers may wish to locate her in some reference work. If she is no longer active in jazz, or perhaps even alive, then she is (or was) an EX-JAZZ QUEEN.
6. EX-QEZELJEH, an adjectival construction defined as "former-
ly belonging to or of Qezeljeh, a town in northwesternmost lran, 65 miles west-northwest of Tabriz." The word is used in expressions such as "an ex-Qezeljeh resident." The town is both mapped and indexed in Volume 11 of the Mid-Century Edition of The Times Atlas of the World (Boston: Houghton Mifflin Company, 1959). The name also appears in the 1965 Edition of The Times Index-Gazetteer of the World. Since the Gazetteer copied the name from the Atlas, this does not constitute an independent confirmation of the name.
7. EXQUISITE JEZEBEL, a phrase of obvious meaning. It could be the title of some poem, or even of some motion picture. More plausibly yet, the phrase could easily appear within the text of some novel, short story, or drama. Making a determined search for the precise location of the phrase in the printed literature of the English language is an awesome undertaking - one $l$ have not yet completed. Give me more time, please.
8. EX-ZANGJIAQIAO, an adjectival construction defined as "formerly belonging to or of Zangjiaqiao, a town in the People's Republic of China, 83 miles southwest of Tientsin." The word is used in expressions such as "an ex-Zangjiaqiao resident." The town is both mapped and indexed in the 1969 Edition of Rand McNally: The lnternational Atlas.
9. 4-OXALO [ij] QUINOLINIUM COMPOUNDS, a class of chemical compounds mentioned on page 7682 of the American Chemical Society's Chemical Abstracts, Fourth Decennial Index (1948). Chemist readers are invited to explain what sort of compounds these are. The fact that one of the four rare letters, J, is relegated to a bracketed, lowercase status in this term detracts from the aesthetic appreciation of the discovery.
10. HAXIXA QASQAJŻA (or QUZQAJŻA HAXIXA; the word "Haxixa" is simply Maltese for "plant"), a Maltese name for the bladder campion, a plant also known as the behen or behn, cowbell, rattlebox, or snapper. It is a bluish-green herb of the pink family, with white flowers and a greatly inflated calyx. These details will distract you from the somewhat unsavory usual name of the plant. Maltese is the Semitic language of the inhabitants of Malta. It is written in Latin characters. The language includes numerous strange-looking words spelled with three of the four rare letters. Even in Maltese, however, finding words using all four of those letters is a difficult achievement.
11. JABEZ QUIXOTE, the President of the United States from 2009 to 2017. History remembers him as an idealistic but utterly impractical President, proposing rash, lofty, romantic national courses of action doomed to fail. Although Jabez is a Biblical name (see 1 Chronicles 4:9-10), Hebrew for "he gives pain or sorrow," its form fitted President Quixote's Hispanic background nicely.
12. JACQUES-XAVIER, a compound first name or middle name. No doubt there is now, or has been in the past, someone, somewhere in the world, with that name. Whether or not it has already been appropriated by someone is utterly unimportant: words and names exist, whether or not humans are smart enough and opportunistic
enough to avail themselves of them. Like seats on a bus, they are there, waiting patiently to be used.
13. JEZEBEL QUlXOTE, a presumed relative, by blood or by marriage, of Don Quixote, the protagonist of the satirical romance Don Quijote de la Mancha by Miguel de Cervantes Saavedra. In logological circles, Cervantes is remembered chiefly for dying on the same day on which William Shakespeare died - on April 23, 1616. In a world of unlimited possibilities, we must assume - we are compelled to assume - that Don Quixote did have a relative named Jezebel, unless and until we are presented with proof to the contrary. Such proof has not yet appeared.
14. JEZEBEL Q. XlXX, the authoress of various articles published in Word Ways from November 1973 through May 1982. Some doubting Thomases probably regard the name as a pseudonymous or fictitious one. I, however, with unbounded faith in human nature, feel certain that Jezebel Q. Xixx is the authoress's real name - if for no other reason than the fact that the name is much too strange for someone to have invented. What intrigues me is the middle initial Q. Does it stand for Quixote? Quackenbush? Quigley? Guebracho? Or what? In any case, I eagerly await the appearance of further articles by Ms. Xixx.
15. JIQUILPAN DE JUAREZ, MEXICO, a town in the state of Michoacán, in southwestern Mexico. lt sits on a central plateau, 60 miles southeast of Guadalajara. The name of the town, with the name of the country in which it is located, is shown in various atlas indexes, such as the 1965 Edition of the Rand McNally Cosmopolitan World Atlas.
16. JITQAŻŻŻZX, another Maltese term - this one, a word meaning "he does not mind; he does not feel any revulsion." I am unfamiliar with. Maltese, but guess that the word is a derivative of the verb QAŻŻEŻ or TQAŻŻEŻ, meaning "to disgust, to loathe, to cause nausea." lt is, incidentally, accidental that all of the Z's in the Maltese terms in this collection are adorned with the single dot; the Maltese language also uses unadorned $Z$ 's, as in the case of the word lZZEKZEK ('to hiss").
17. JOAQUIN XlMENEZ, the Vice President of the United States serving with President Quixote. He claimed to be descended from the 14th-century Catalan (Spanish) theologian Francesch Ximenez. His first name, Joaquin, like its German analog Joachim, is a derivative of the Biblican Jehoiachin (see 1 Chronicles $3: 16-17$ ), King of Judah 598-597 BC. The name is a Hebrew one, meaning "the Lord will judge."
18. 100 JAX SQUARE PUZZLES, the title on the title page of a booklet containing one hundred double $5 \times 5$ word squares, presented as puzzles to be solved. The author concealed his or her identity, publishing the booklet under the pseudonym Jax. The booklet was printed in England. At the time of its publication, indicated nowhere in the booklet, it was obtainable from J. Wilson, College Road, Crosby, Liverpool, 23. At the time of its publication, the booklet sold for 3 shillings and sixpence. Interspersed among the
puzzles are a running text, little poems, and several types of clues to the correct solution - clues which diminish as the solver progresses toward the end of the booklet.
19. QUIZ-JINXING, a hyphenated adjective aptly descriptive of the revelations concerning the big-money quiz shows on American television, surfacing in the summer of 1958 , which resulted in the cancellation of those shows within a few months. Just how quizjinxing these revelations were is demonstrated by the fact that such shows, popular as they were, have never returned to the air.
20. STORY OF "THE JAX SQUARE" AND 100 PUZZLES, the title of the booklet described above and printed both on its front and on its back covers. I have never understood why some books use one title on the cover, and a different title on the title page.
21. XINJIANG WEIWUER ZIZHIQU, the Chinese name for the autonomous region of Sinkiang, or Sinkiang-Uighur. The name is mapped and indexed in the 1969 Edition of Rand McNally: The International Atlas. The spelling uses the Romanized Pinyin system introduced in China in 1958, gradually replacing the older wade system for transliterating Chinese into Roman characters. The Pinyin system has been adopted both in the United Nations and by the United States Board on Geographic Names. The Pinyin form of the region's capital is Wulumuqi, replacing the older form Urumchi - which l liked because it was a transaddition upon the element curium.
22. YIYKAEJR GZQSYWX, the title of a pamphlet on military codes, by a certain $W$. E. Beard. The title represented the words military ciphers, enciphered in a special U.S. Naval Code. I came across this information in a very old issue of The Enigma, and have never gotten around to attempting its verification. Would any reader care to try confirming the correctness of this account?
23. ZEDFKJHGRBQCTSWVXYPMLN, a word on page 175 of Games for lnsomniacs by John G. Fuller (Garden City, New York: Doubleday \& Company, 1966). The word is the star attraction of a pangrammatic sentence devised by one $W$. C. Countess, reading as follows: l.O.U. a Zedfkjhgrbqctswvxypmln. The sentence represents a credit receipt from one of the emerging nations of the world. The long word in it is, presumably, the monetary unit of that nation, or some multiple of such a unit. In addition to including all four of the letters $J, Q, X$, and $Z$, the word is remarkable for being 22 letters long and for containing a string of 15 consecutive consonants.
24. ZIKXHAFAJESQUE, defined as "in the manner or style of Zikxhafaj or of its inhabitants." The word is derived from Zikxhafaj, the name of a small village about $3 \frac{1}{2}$ miles north-northwest of Kavajë, Albania. The latter is a town in west-central Albania, about 17 miles southwest of the capital of Tirana. The village of Zikxhafaj is listed in the 1946 Edition of A Gazetteer of Albania, issued by the Permanent Committee on Geographical Names for British Use. Albanian, like Maltese, features letter combinations in its words and names that seem bizarre by English standards, making its contributions to this list of $J-Q-X-Z$ terms a natural one.
25. ZIQ-XHAFEJ, another spelling of the name Zikxhafaj. The name itself includes all four of the rare letters, but is written with a hyphen instead of solidly. It is given in the same gazetteer.
26. ZIQ-XHAFEJLIKE, defined as "resembling the Albanian village of Ziq-xhafej," which see above.

I have now spread before you a veritable feast of antifrequency terms. Browse among them and choose the ones you like most, for yourself!

## BUMPUS MCPHUMPUS ANGLEDES

This is one of some 300 strange-but-reputedly-real names contained in John Train's Most Remarkable Names (Clarkson $N$. Potter, Newr York; 1985). This \$9.95 hardcover consists largely of names appearing in two earlier compendia by the same author, reviewed in the August 1978 and February 1980 issues of Word Ways; a check of names beginning with $A, B$ or C revealed that only about 25 per cent of the entries are new. The book claims the author has "gone to great pains to verify each entry with solid documentation". No doubt the inclusion of such documentation would have made the book far too long, but as matters stand the reader has no way to sort out the true from the spurious. Carborundum Petroleum Dobbs in an earlier book has been transformed into Carbon Petroleum Dubbs in this one; are we to believe that two different people with such similiar names exist, or is one of these in error? Many names have no attribution whatever, and others list newspapers and magazines, notoriously unrealiable sources of such curiosa. But this shouldn't prevent the reader from enjoying the marvelously zany names found in the book: Oldmouse Waltz, Cashmere Tango Obedience, Eucalyptus Yoho, Humperdinck Fangboner, Odious Champagne, Membrane Pickle, Original Bug, Ulysses Tirebiter, and Fairy Clutter. Eat your heart out, Charles Dickens!

