MORE BEGINNINGS AND ENDINGS

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In the November 1971 Word Ways, Darryl Francis presented a list of words and names, each as long as possible, beginning and ending with all possible letter-pairs. At the end of the article, he challenged Word Ways readers to draw up the corresponding list of the shortest possible words. Answering his challenge, I have constructed the list given below.

In order to make the two lists strictly comparable, I have used the rules enunciated in the earlier article to decide which words to exclude or include. Specifically, all unasterisked words in the list can be found as boldface entries in the main sections of Webster's Second and Third Editions. Hyphenated words (such as X-RAY, X-ING, X-MAN) have been excluded, as have all plurals not specifically given in boldface. Verb forms ending in -ING, -ED or -SHAVE have been similarly excluded.

In drawing up the short-word list, I soon discovered that further rules were needed. Single words in multi-word phrases (AU COURANT, OP ART) have been left out, as have apostrophized words (A'I, W'i, X'D), prefixes and suffixes (BI-, -IC, -CY). Most important, any words in the main section of Webster's Third having the identifiers abbr or symbol have been removed from consideration (if these were included, almost all of the short-word list would consist of two-letter words). Plurals of single letters (BS, CS, etc.) have arbitrarily been excluded, but names of letters (FF, EF, ZED, ZEE) have been allowed. To avoid uninteresting examples, one-letter words are not allowed as words beginning and ending with the same letter. Many exclamations, interjections and substandard words (TCH, SH, BAH, AH, AW, EH, ST) have been allowed. Reformed spellings (listed below the line in Webster's Second) are heavily represented.

If no word beginning and ending with the necessary letters could be found in the main dictionaries, I used words (asterisked) from the biographical and gazetteer sections of Webster's Second. The same rule was used in the "Beginnings and Endings" article.
This list contains 637 unasterisked words, the same as the long-word list. However, the list of asterisked words has been increased from 8 to 13 by adding a word found later by Darryl Francie (VI-DOCQ) and by adding four words from an earlier gazetteer section of Webster’s than he had available (PANJ, RONCQ, WERVICQ, ZENJ).

A considerable number of the unasterisked words, ranging from 3 to 12 letters in length, are found on both the long-word list and the short-word list. However, it is not too surprising to find here both the shortest words on the long-word list (RAJ, TAJ, YEZ, ZIW) and the longest word on the short-word list (XEROPRINTING).

<table>
<thead>
<tr>
<th>Unasterisked Words</th>
<th>Asterisked Words</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chuj</td>
<td>nastalq</td>
</tr>
<tr>
<td>Funj</td>
<td>weav</td>
</tr>
<tr>
<td>Iraq</td>
<td>xeriff</td>
</tr>
<tr>
<td>Inez</td>
<td>Zhdanov</td>
</tr>
<tr>
<td>munj</td>
<td>verb</td>
</tr>
<tr>
<td></td>
<td>Yugoslav</td>
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</tbody>
</table>

Readers may be amused by a couple of oddities in the two lists. The words LAB and LABLAB are in corresponding positions on the short-word list and the long-word list, as are the words QUALITATIV and QUANTITATIV.

AA aa AB Ab AC ac AD ad AE ae AF alf AG agog AH ah AI al AJ Allganj* AK ak AL al AM am AN an AO ao AP alp AR ar AS as AT at AU aku AV Av AW aw AX ax AY ay AZ adz

BA ba BB bib BC bac BD bad BE be BF buf BG bag BH bah BI ball BJ benj BK bak BL bal BM bam BN ban BO bo BP bop BR bar BS bus BT but BU bu BV bonav BW bow BX box BY by BZ buz

CA cha CB cab CC chlc CD cod CE ce CF cof CG cog CH cach CI chi CJ Chuj CK cork CL col CM cam CN can CO co CP cap CQ coq CR car CS cos CT cat CU cru CV chiv CW cow CX cox CY coy CZ coz

DA da DB dab DC doc DD dud DE de DF def DG dog DH dah DI dl DK dak DL dal DM dam DN din DO do DP dip DR dar DS das DT dot DU du DV dev DW dew DX dux DY day DZ Daez

EA ea EB eb EC epic ED ed EE ee EF ef EG eg EH eh EI Eil EK elk EL el EM em EN en EO ego EP equip ER er ES es ET et EU eu EV evuv EW ew EX ex EY ey EZ ersatz
PQ Pontacq PR par PS pus PT pat PU pu PV Pshav PW paw PX pox PY py PZ poz

QA qua QB quab QC Quebec QD quad QE que QF Qaf QG quag QH qoph QI qui QL quick QM quim QN quin QO quo QP quip QQ Qazaq QR quar QS quis QT qat QU qu QV qualitativ QW quaw QX quax QY quy QZ quiz

RA ra RB rlb RC roc RD red RE re RF ref RG rlg RH rah RI ri RJ raj RK rak RL rel RM ram RN run RO ro RP rip RQ Roncq* RR roar RS ras RT rat RU ru RV rev RW raw RX rax RY rey RZ riz

SA sa SB sob SC sac SD sad SE se SF saf SG sag SH sh SI si SJ saj SK sak SL sol SM sum SN sin SO so SP sap SQ suq SR sir SS sis ST st SU su SV sov SW saw SX six SY sz Suzz

TA ta TB tab TC tlc TD tad TE te TF tlf TG tag TH tch TI ti TJ taj TK tak TL tal TM tam TN tln TO to TP tlp TQ trlnq TR tar TS to TT ttt TU tu TV tav TW tow TX tax TY ty TZ tez

UA ula UB unsib UC unc UD urd UE use UF urf UG ugh UI UdI UI Ulctnj* UK Uruk UL Uel UM um UN un UD udo UP up UR ur US us UT ut UU utu UW unbow UX Ulex UY uny UZ Uz

VA va VB verb VC Vac VD Vod VE Ve VF vlf VG vug VH vah VI Val VJ Venralj* VK volk VL vol VM vlm VN van VO vino VP vamp VQ Vldocq* VR vor VS vas VT vat VU Vu VV vav VW vow WX vex VY vly VZ Vejoz

WA Wa WB web WC Wac WD wed WE we WF waf WG wag WH wha WI wai WL wak WL wal WM wem WN wun WO wo WP wap WQ Wervlcq* WR war WS was WT wit WU Wu WV wav WW wow WX wax WY wy WZ wiz

XA xa XC xebec XD xed XE Xipe XF xerif XG xeroprinting XH xerarch XI xi XK Xicak XL xall XM xylem XN xenon XO Xibaro XP xylocarp XR xyster XS xis XT xat XU Xamdu XX xylanthrax XY xenogyny XZ Ximenex*

YA ya YB yob YC ytricc YD yad YE ye YF yaf YG yeg YH yah Yi yol YK yak YL yal YM ym YN yn YO yo YP yap YR yr YS ys YT yt YU yu Yv Yugoslav YW yaw YX yex YY yoy YZ yez

ZA za ZB zimb ZC zac ZD zed ZE zee ZF Zif ZG zag ZH zoh ZI zatl ZJ Zenj* ZK zak ZL zel ZM zlzm ZN Zen ZO zo
QUERY

What is the shortest word that has a unique pattern? The answer can easily be found using Jack Levine's "A List of Pattern Words of Lengths Two Through Nine". After eliminating several errors, the shortest unique pattern words appear to be ESSEE, LLAMA, RERE, and OOLLY. (Note that LLUDD does not qualify, because AALLII matches it.) If one does not allow below-the-line entries from Webster's Second, the shortest unique pattern word is IIWI (EESE is below the line, and EEFE and EELE cannot be located). If one is restricted to Webster's Pocket Dictionary, the shortest word is EEL.

What is the longest word that does not have a unique pattern? More stringently, what is the longest word having an isomorph in which none of the letters in corresponding positions are the same? It is conjectured there are isomorphic pairs of more than sixteen letters, unless one is restricted to a small dictionary.