## VOWEL-CONSONANT PATTERNS

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In his article "Seven-Letter Words" in the August 1968 Word Ways, Dmitri Borgmann tackled the problem of finding seven-letter words containing an excess of vowels or consonants. Specifically, he listed a no-vowel word (BTFSPLK, a character in Al Capp's "Li'l Abner" comic strip), four of the seven words in which the sole vowel occupies each of its possible positions, and all 21 words containing two vowels in all possible positions. Similarly, he listed a no-consonant word (OIOUEAE, found in Rupert Hughes' Music Lovers' Encyclopedia, representing the phrase "world without end, amen" in certain church music), five of the seven one-consonant words, and 19 of 21 two-consonant words. However, three of these 19 consisted of twoword phrases (as EN QUEUE), and one of the one-consonant words ( UKIYOYE) used Y as a semivowel rather than as a true vowel. Most of these words were taken without credit from an article by Robert Hooke ('Al Gebra') in the August 1949 issue of The Enigma.

In attempting to fill the gaps in Borgmann's article, I decided to add a little more challenge to the problem: find examples for all 128 possible combinations of vowels and consonants in seven-letter words. Furthermore, I decided to be stricter about the use of $Y$, allowing it only if it was strictly vocalic, and then only if nothing better could be found. (The three cases in which it was necessary were FIFTHLY, ARCHSPY and EARTHLY.)

|  | Llwchwr GD Strbské T* |  |  |
| :---: | :---: | :---: | :---: |
|  | Crngrob OY |  |  |
|  | shtchee |  |  |
|  | schwar |  | promise |
| ccvov | Schwege |  | station |
| cecrvo | schnook | cc | plateau |
| covvo | Schmeie OG* | covvoco | squints |
| covec | throngs | cor | reathe |
| cvecv | scherzo | cuvere | ro |
|  | striped | evvev | oz |
|  | scholia | vcc | eein |
|  | spreads | cv | ez |
|  | striate | vc | chaoua |
|  | spreeuw | vv | Chaouia |
|  | Brhouia |  |  |
| cvocc | plights | cyccecy | fifth |


|  |  |
| :---: | :---: |
| creccrv | , |
| vcc | di |
| crecrev | restive |
| vccuvc | fictio |
| vc | marque |
| reveco | resents |
| crevecr | finance |
| creveve | belate |
| creverv | malaria |
| c | en |
| cV | cadiate |
| crevrve | ious |
|  |  |
|  | earths |
|  | quibble |
|  |  |

cvvecve cvvevec crvevcr cVVCVVC cVVCVVV crvvecc cVrvccr crvveve cVVVCVV cVrvVcc crovrcr cVVVVVC cVrvevv vccecce vccecev vccecve vcccevv vcccvcc vccevcv vccevvc vcccvvv vccvece vccvecv vceveve vccvevv vcevvce
fiancee
diamond
beehive
seafood
rouleau
queests
faience
quailed
raoulia
queuing
pauoise OED
miaoued *
Zouaoua *
archspy
enthral
archsee
extract
uncrate
unction
archaei
imports
offense
alleged
escapee
abreast
vccvver actuate
vccvvve obvious
vccvvve Arbaoua TOM
vevcece vcvecev vcvecve vcvecve vcvevce vcvevev vcvevve vcvevve vcvvece vcvvecv vcvvevc vcvvevv vevvvec vevvvev
vcyvvic
vcvvvve
vveccec
vvccecv
vvccevc vvecevv vvecuce vvecvev vvecvve
actuate
obvious
Arbaoua TOM
alights
atingle
amended
oversee
ageless
operate
overeat
epikeia
amounts
oquassa
oceanic
alienee
apioids
elaeine
aqueous
Araouia OM*
eighths
earthly
oersted
Austria
airport
earlobe
oatmeal
vvccuvv oógloea vvcvccc outings eatable outages eulogia easiest aureate oidioid Outaoul OM*

Ouintla OM euaster
oöangia aoudads aeoline aeolian ouabaio

Aouacha OM Ouaifir OM euaemia FW Aeaeans
Iaouine OM aiaiais Uoiauai AL*

In this table, unmarked words are from Webster's Second (NI2) or Third (NI3). Other sources are encoded as follows: FW = Funk \& Wagnalls New Standard Dictionary, GD = Webster's New Geographical Dictionary (1972), OED = Oxford English Dictionary, OG, OM, OY = Official Standard Names Gazetteers for West Germany, Morocco, Yugoslavia, $\mathrm{T}=$ Times Index-Gazetteer of the World, $\mathrm{AL}=$ International Journal of American Linguistics (14:47). All place-names are populated places except for Schmeie (a stream) and Araouia (an area).
Strbské is the first word of a two-word phrase, Strbské Pleso; Outaoui is a variant of Out Aâoui; Uoiauai is a language of Pará state, in Brazil. Two of the Websterian words are hard to find: miaoued is explicitly given in Webster's Collegiate Dictionary (1949), and Zouaoua is given only in the etymology of 'Zouave'. (For those who are uneasy about this, many other cuvvevv words can be found in OM.)

In "Six Vowels, Two of the Other" Darryl Francis extended Borgmann's work to eight-letter words in the November 1970 Word Ways; as the title implies, he restricted himself to the 28 words corresponding to the various positions the two consonants can occupy. Even so, he was unable to find three words, and five of the others were forced to include $Y$ as one of the vowels, even when it was functioning as a consonant. These defects are remedied in the following table.

| 1-2 Chouieia | 2-3 Achaouia | 5-7 Aouokeda | $6-8$ Aououdid |
| :--- | :--- | :--- | :--- |
| 1-8 Douiouir | $2-8$ Iguiouaz | $6-7$ Ouaouchi | $7-8$ Aiaouech |

All are found in OM, and all are populated places except for Choueia, the second word in the phrase Jebel Choueia, a variant of Jebel Chalkha (a mountain).

The Official Standard Names Gazetteer for Morocco seems to be an especially fine source of vowel-rich words. Some longer specimens from there are:

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\(C_{1} V_{7}=\) Zouaouia (dune), Assif Ouaouzia (stream), Oued el
        Aouaouda (stream), Ouiouane (ridge)
\(\mathrm{C}_{2} \mathrm{~V}_{7}=\) Bouaouene, Eaoudaine, Ain Ouaousait (spring),
        El Aouaoucha, Ouaouassa (mountain), Ouaouareg
\(\mathrm{C}_{2} \mathrm{~V}_{8}=\) Ez Zouaouiine, Jebel Ouiouguene (mountain), Ouaourioud,
    Jebel Ouaouioust (hill)
\(\mathrm{C}_{2} \mathrm{~V}_{10}=\) Ijouaououene
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The eight consecutive vowels of Ouaouioust and Ijouaououene are, as far as I know, records among non-coined words.

Long consonant-dense words are harder to find. Vshchizh is in the OSN USSR, and Cwmsgwt is a locality in A Gazetteer of Welsh Place Names edited by Elwyn Davies (Cardiff: U. of Wales Press , 1967). In fact, all-consonant words are so rare that a collection of these would be useful in various Word Ways investigations. Cwm and crwth are the only two known in the main sections of NI2 and NI3 (other than interjections such as pst and sh), but the OED must contain many.

