

ON BUILDING WORDS OUT OF TRIGRAMS

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While riding in the automobile, my wife Faith amuses herself by trying to construct words containing the three letters on New Jersey license plates. She prefers words in which the letters are adjacent, but if this is impossible (as for trigram UUU), she will settle for non-adjacency (as UnUsUal).

Sometimes it is plausible that adjacency can be achieved, but no word comes to mind. Back home, one can quickly check for possible Webster's Collegiate words by consulting *Word Ways* for Aug 1969, Nov 1969 and Nov 1970, "A Dictionary of Common English Trigrams". If this does not produce a suitable word, a little more work is needed. I have the final report issued in 1963 by the US Army Electronic Research and Development Laboratory at Fort Monmouth NJ (Advanced Character Recognition Techniques Study Report No. 4, Appendix D, "Tetragrams Legal With Respect to Webster's International Dictionary Unabridged, Second Edition"). This can be used to determine the letters immediately preceding and following the trigram in question; sometimes even a valid hexagram can be uniquely identified.

To show how this works, consider the trigram ATJ, not found in the *Word Ways* list. This can be extended to the potential hexagrams (C or L)ATJA(C, N, R or Z), and a few guesses lead to the Webster Second words cATJang, the pigeon pea, and blATJang, a condiment resembling chutney. Similarly, the trigram ZGL produces the unique hexagram UZZGLO, and it doesn't take much searching to come up with the word buzZGLoak, a pickpocket. If the trigram contains the letter J, Q, X or Z, an additional reference can be profitably consulted: Tom Pulliam and Gordon Carruth's *The Complete Word Game Dictionary* (1984), which lists in positional order all Second Edition words containing these rare letters.

Obviously, the Fort Monmouth report is not readily available, even in libraries. Some years ago, I became aware of a website in which one could enter three letters, whereupon it would spit out a large collection of dictionary words and phrases containing them in order. Alas, I have lost the address of this work-saver, and do not know if it still exists!