

NEAR-IDEAL NINE-LETTER WORD LADDERS

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In my article "Snakes and Ladders" in the May 1998 Word Ways, I recorded just one example of a word ladder with nine-letter words. The impression may have been given that it was the only one. As recorded in "Statistics of Word Neighbours" in the November 1997 issue, about 48 per cent of nine-letter words have one or more words that will sit next to them in a ladder, so, given in excess of 100,000 nine-letter words, there will be many ladders. In fact there are nearly two billion of them, many beginning DE-! However, the published ladder by Ross Eckler on p 148 of the August 1988 Word Ways shows considerable signs of stress in its composition. CANCERINE appears only in Webster's First Edition, CANCERING is derived from a verb which only appears in the full OED, and BATTONING is derived by taking it to be equivalent to the verb "baton." The reason for this wordsmithing resourcefulness is that the author wished to change every letter of the original word in the minimum number of steps, the conditions for an ideal ladder as I redefined it in my article. Such ladders are hard to find or construct.

There are a number of characteristics that a truly-wonderful ladder might possess:

1. It should take the minimum number of steps (equal to the word length)
2. For each position in the word, the letter in the first word should differ from the letter in the last word
3. The first and last words should both be heterograms (haplograms, solo isograms), i.e. every letter should be different
4. The letters should be changed in sequence
5. All words should be recognisable
6. The first and last words should bear some apt semantic relationship to each other, or a logological relationship such as being reversals of each other, or both simultaneously (examples of this can be found in "Snakes and Ladders")

A beast with all the above properties could surely be called a Connoisseur's Ladder, but, like the Philosopher's Stone, it is easier to imagine than to find using longer words.

I shall now disappoint the reader by failing to produce a nine-letter ladder with all these relationships! The published ladder was CANCERATE-CANCERITE-CANCERINE-CANCERING-CANTERING-BANTERING-BATTERING-BATTENING-BATTONING-BUTTONING, It has properties 1 and 2. I now present about fifty more ladders with the

same properties, some with rather more accessible words, though most show signs of strain.

I also present some ladders which bend property 2 by a single letter, but which have property 3. These are actually rarer. Among these ladders are some which can be shortened by one word to make eight letters changed in eight steps: such words are marked with an asterisk.

I found no ladders with property 4, and the reader is free to judge properties 5 and 6 for himself, but should have low expectations. As for property 4, there is sufficient hint in my article "Sequential Snakes and Ladders" in the May 2000 Word Ways that it's a difficult proposition at length nine, and in fact I found none.

The order of the words within the ladders below is such that the first word occurs earlier in a dictionary than the last word. Unless otherwise indicated, words are to be found in more than one dictionary from among the OED, Webster 2, Pulliam, OSPD, and Stedman. 2ps = obsolete second person singular, obs = obsolete, superl = superlative, vbln = verbal noun, and vf = OED variant form.

Ideal Ladders

- BLACK NOBS (OED)—BLACK-NEBS (OED)—BLACKNESS—BLANKNESS—BLANKLESS (OED)—CLANKLESS (W2)—CRANKLESS (W2)—CRANKLEST (OED crankle)—CRINKLEST (2ps crinkle, OED)—CRINALEST (superl crinal, OED)
- BUTT-SLING (OED)—BUTTELING (OED)—BUTTERING—BATTERING—BANTERING—CANTERING—CANCERING (OED vb)—CANCERINE (Web New Intl 1932)—CANCERITE—CANCERATE. Another ladder with BATTELING.
- DISCASKST (2ps, discask, OED)—DISCASEST (2ps, discase, OED)—DISCALEST (2ps discal, OED)—DESCALEST (2ps, descale, OED)—RESCALEST (2ps rescale)—RESEALEST (2ps reseal)—REPEALEST (2ps repeal)—REPELLEST (2ps repel)—REPELLESS (OED)—REPELLERS
- EMBOSTURE—IMBOSTURE (vf)—IMPOSTURE—IMPASTURE—IMPARTURE (OED)—IMPARTIRE (Ch, Latin root impart)—IMPARTITE—IMPARFITE (vf)—INPARFITE (OED)—INPARFITS (OED inparfit) (3 other ladders using IMPORTURE and IMPARFITS)
- ENDOSTOME—ENPOSTOME—EMPOSTOME—EMPOSTEME—IMPOSTEME (OED)—IMPOSTEMS—IMPOSTERS—IMPORTERS—IMPARTERS—IMPARLERS (OED). For words 2, 3, 4, and 6 see OED under IMPOSTUME. Other ladders are possible using words under IMPOSTUME (such as IMPOSTEMS), plus ENPOSTEME (under congregate), and IMPOSTEME.
- ESCHEATOR—ESCHEATER (vf)—ENCHEATER (OED)—ENCHEATED (OED encheat)—UNCHEATED—UNCHESTED (W2)—UNCRESTED—UNCRUSTED—UNCRUSHED—UNBRUSHED. 12 ladders in all by using ESCHEATED, ENCHESTED, UNCHESTED, UNTRUSTED, UNTRUSSED.
- IMPRESSAS (OED)—IMPRESSES—IMPRESSED—IMPRESTED (IMPREST vb OED)—IMPRENTED (OED, obs imprinted)—IMPRINTED—INPRINTED (OED inprint)—UNPRINTED—UNPAINTED—UNTAINTED. 7 more ladders by using IMPRENTED (OED imprint), UNPOINTED, UMFAINTED, UNSAINTED, UNJOINTED
- IMPRESSOR—IMPRESSER—IMPRESSED—IMPRESTED (IMPREST vb OED)—IMPRENTED (OED, obs imprinted)—IMPRINTED—INPRINTED (OED inprint)—UNPRINTED—UNPOINTED—UNJOINTED. 7 more ladders by using IMPRENTED (OED imprint), UNPAINTED, UNFAINTED, UNSAINTED, UNTAINTED.
- RIDGLINGS—RIDDLINGS—RADDLINGS—SADDLINGS (OED noun)—SANDLINGS—SAND-LINES (OED)—SAND PINES (W3)—SAND-PIPES (OED)—SANDPIPER—SANDPAPER
- SWELLINGS—SWILLINGS (OED vbln)—TWILLINGS (OSPD)—TRILLINGS—TRIPPLINGS—TRIP-LINES (OED)—TRIPLANES—TRIPHANES (so called from exhibiting three lustrous cleavages!)—TRIPHASES—TRIPHASER (Li Commander Data?, also W2)

Ladders between heterograms, but with one letter unchanged

BATHERING (OED)—BATTERING—TATTERING—TATTERINE (vf)—TARTERINE (OED)—TARTARINE—
TARTARIZE—MARTARIZE (vf)—MORTARIZE—MORTALIZE

BRAWLIEST (OSPD)—BRAWNIEST—BRANNIEST (OSPD)—BRANKIEST (superl branky, OED)—TRANKIEST (?OED
trank, hence superl = most tranquillising)—TWANKIEST (?OED twank, twanking, twanker, or most like Widow
Twankey)—TWANKLEST (2ps twankle = twangle, OED)—TWINKLEST (2ps twinkle)—TWINKLESS—
TWINKLERS

BRAWNIEST—*BRAINIEST—BRANNIEST (OSPD)—BRANKIEST (superl branky, OED)—TRANKIEST (see above)—
TWANKIEST (see above)—TWANKLEST (see above)—TWINKLEST (see above)—TWINKLESS—TWINKLERS. 7
more ladders using CRANNIEST (superl cranny, OED), CRANKIEST, CRANKLEST (2ps crankle, OED),
CRINKLEST (2ps crinkle, OED), PRINKLEST (2ps sprinkle, OED), TRINKLEST (2ps trinkle, OED) for words 3 to 7.

BROWNIEST (OSPD)—BRAWNIEST—BRANNIEST (OSPD)—BRANKIEST (superl branky)—TRANKIEST (see above)—
TWANKIEST (see above)—TWANKLEST (see above)—TWINKLEST (2ps twinkle)—TWINKLESS—TWINKLERS

CLAVERING—*GLAVERING—SLAVERING—SLAVELING—SHAVELING—SHOVELING—SHORELING (The
Electronic Alveary)—SHORELINE (Ch)—SHORT-LINE (OED)—SHORT-LIFE (OED). 3 more ladders with
SLAVERING, SLAVE KING (OED), and SHORTLING (vf) for words 2, 3, and 8.

EMBOSTURE—IMBOSTURE (vf)—IMPOSTURE—IMPORTURE (OED)—IMPARTURE (OED)—IMPARTIRE (Ch, Latin
root impart)—IMPARTITE—IMPARFITE (vf)—INPARFITE (OED)—INPARFITS (OED, obs imperfects). 3 more
ladders using IMPASTURE at word 3, and IMPARFITS (OED, obs imperfects) at word 8.

PRAWNIEST (superl prawny, OED)—BRAWNIEST—BRANNIEST (OSPD)—BRANKIEST (superl branky, OED)—
TRANKIEST (see above)—TWANKIEST (see above)—TWANKLEST (see above)—TWINKLEST (2ps twinkle)—
TWINKLESS—TWINKLERS

UNDERLOFT (W2)—UNDERLIFT—UNDERLIFE—UNDERLINE—UNDERLING—UNDERKING (W2)—UNDECKING
(undeck, OED)—UNDOCKING—UNLOCKING—UPLOCKING (uplock, OED)

The Borgmann Project

Chris Cole (Chris@questrel.com) plans to use the web plus the dictionaries he has in machine-readable form (including Webster's Third) to produce a word list with all the words in current use, including closed compounds such as AIRVENT that do not occur in any dictionary due to space constraints. He expects that it will contain two million words, over twice as many as any presently-existing list. It will be freely available on the Web.

For each word the list will note what dictionaries it is in, or how it can be constructed from entries in existing dictionaries, which will enable one to decide what the word means. He will also construct an auxiliary database that will include citations of word use on Web pages.

Although the initial focus will be on lexical entries, the word list will be eventually expanded to include placenames and proper names.

Please let Chris know if you have any machine-readable wordlists that you would like to contribute to his endeavor.