

# TEN-LETTER WORD LADDERS

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In my article "Near-Ideal Nine-Letter Word Ladders" in the August 2000 Word Ways, I stated six criteria for a Connoisseur's Ladder: the technical criteria of changing all words in the minimum number of steps (in sequence), and the aesthetic ones of familiar words with apposite meanings. I found about 50 ladders which met some of the technical criteria, and perhaps none which met the aesthetic ones, though BRAWNIEST-TWINKLERS might be regarded as amusing. The case of ten-letter words is much more difficult. Compare the problem with word squares: there are thousands of nine-letter word squares, but no ten-letter word squares with straightforward dictionary words or phrases (though perhaps judicious addition of prefixes and suffixes might make the task possible). So ideal ladders are much harder to find than word squares, and we might expect to find no ten-letter examples, which is indeed the case. Indeed, I am not aware of any ten-letter ladders published, though there are undoubtedly billions if we relax the criteria sufficiently.

Below are listed the closest to ideal ladders found, with just one or two letters remaining unchanged after ten steps. There are also two ladders with three letters unchanged, because they have apposite terminal words: the dangerous INCESTUOUS AFFECCIOUN, and the game of consequences in which AFFECSIOUN leads to INSERTIONS.

Ideal ladders stretching between two heterograms are clearly rarer, not least because there are fewer than ten thousand ten-letter heterograms. Examples of ladders with three letters unchanged are listed (compare one letter unchanged for nine-letter ladders), together with a mere taster of those with four letters unchanged.

Note that some of the ladders achieve their stated results in just eight or nine steps, and in some such cases, nine steps change nine letters: asterisks or NBs indicate words that may be omitted without changing the number of letters changed by the ladder. That makes it especially grievous that there were no eleven-step ladders worth reporting, in that the results are no better than those for ten steps. There are more than ten times as many eleven-step ladders missing the ideal by just one letter, but they are merely elaborations of the ten-step ladders below. The number of interesting ladders with heterogrammatic terminals actually seems to decrease, so the ladders starting with IMBRANCHES below seem to be exceptional.

A perusal of the ladders below will reveal the few areas in which the complete net-

work of ten-letter words is highly connected. Although some groups of ladders could have been shown as a single graph, the reader would then have had to tease out all ten-step sequences with all words different.

The order of the words within the ladders below is such that the first word occurs earlier in a dictionary than the last word. Within each category of ladders, the source for a given word is given the first time only. Unless otherwise indicated, words are to be found in more than one dictionary from among the OED, Webster 2, Pulliam, OSPD, and Stedman.

deriv = derived

vf = OED variant form

obs = obsolete

### Near Ideal Ladders (one letter unchanged)

1. BESPORTING (OED besport)—DESPORTING (OED desport)—DISPORTING—DISSORTING (OED dissort)—DISSERTING (OED dissert)—DISSEATING (OED disseat)—DISSEASING (OED dissease, obs decease)—DISSEISING—DISSEISINS (OED disseisin)—DISSEISONS (OED under disseisin)—DISSEISORS (OED)  
 as 1 to DISSEATING, then —DISSEAZING (vf disseaze vb)—DISSEIZING—DISSEIZINS (vf disseizin)—DISSEIZENS (vf)—DISSEIZERS (deriv. disseize, OED)  
 as 1 to DISSERTING, then DISSENTING—DISSENSING (OED dissense)—DISSEISING—DISSEISINS—DISSEISONS—DISSEISORS
2. BESPORTING—DESPORTING—DISPORTING—DISPERTING (vf deriv dispert = desparate?)—DISSERTING, then as 1  
 as 2 to DISSERTING, then DISSEATING—DISSEAZING—DISSEIZING—DISSEIZINS—DISSEIZENS—DISSEIZERS  
 as 2 to DISSERTING, then DISSENTING—DISSENSING—DISSEISING—DISSEISINS—DISSEISONS—DISSEISORS  
 as 2 to DISPERTING, then DISPERSING—DISPENSING—DISSENSING—DISSEISING—DISSEISINS—DISSEISONS—DISSEISORS
1. DISSEISERS (OED under disseisor)—DISSEISORS (OED)—DISSEISONS (OED under disseisin)—DISSEISINS (OED disseisin)—DISSEISING—DISSENSING (OED dissense)—DISPENSING—DISPENDING—DISPONDING (OED, obs despond)—RESPONDING  
 DISSEISORS—DISSEISONS—DISSEISINS—\*DISSEISINE (OED, under disseisin)—DISSEISING etc as 1.  
 DISSEISORS—DISSEISONS—DISSEISINS—DISSEISING—\*DISSEASING (OED dissease, obs decease)—DISSENSING etc as 1.  
 DISSEISORS—DISSEISONS—DISSEISINS—DISSEISING—\*DISSEESING (OED, obs decease under dissector)—DISSENSING etc as 1.  
 DISSEISORS—DISSEISONS—DISSEISINS—DISSEISING—DISSENSING—DISPENSING—\*DISPENCING (OED, obs dispense)—DISPENDING etc as 1.  
 DISSEISORS—DISSEISONS—DISSEISINS—DISSEISING—\*DISSESSING (OED, derived from dissesor, dissession)—DISSENSING etc as 1.  
 DISSEIZERS (deriv. disseize, OED)—DISSEIZENS (vf)—DISSEIZINS (vf disseizin)—DISSEISINS etc as 1.  
 DISSEIZERS—DISSEIZENS—DISSEIZINS—DISSEIZING—DISSEISING etc as 1.  
 DISSEIZORS (vf under disseisin)—DISSEISORS etc as 1.  
 DISSEIZORS (vf under disseisin)—DISSEIZONS (OED under disseisin)—DISSEIZINS (vf disseizin)—DISSEIZING—DISSEISING etc as 1.
2. DISSEISORS (OED)—DISSEISONS—DISSEYSONS (OED, under post-disseison)—DISSEYSINS (vf)—DISSEYSING (OED, under disseise)—DISSENSING etc as 1.  
 DISSEISORS—DISSEISONS—DISSEISINS—DISSEYSINS etc as 2.  
 DISSEISORS—DISSEISONS—DISSEISINS—DISSEISING—DISSEYSING etc as 2.

**Near Ideal Ladders (two letters unchanged)**

EMBLANCHED (OED)—EMBRANCHED (OED)—ENBRANCHED (OED under imbranch)—UNBRANCHED—UNBLANCHED—UNBLEACHED—UNBLEACHED—UNBREACHED—UNBREATHED—UNWREATHED—UNWREATHES (OED)

EMBLANCHES (OED)—EMBLANCHED—EMBRANCHED—ENBRANCHED—UNBRANCHED—UNBLANCHED—UNBLEACHED—UNBLEACHED—UNBREACHED—UNBREATHED—UNWREATHED

EXPANDABLE—(EXPENDABLE or EXPANDIBLE (Web3 under expandable))—(EXTENDABLE or EXPENDIBLE)—EXTENDIBLE—ENTENDIBLE—INTENDIBLE—(INVENDIBLE or INTENTIBLE (OED))—INVENTIBLE—INVESTIBLE—INGESTIBLE—INGESTIBLY. NB just 5 valid combinations

EXPANSIBLY—EXPANSIBLE—EXPANDIBLE—EXPENDIBLE—EXTENDIBLE—ENTENDIBLE—INTENDIBLE, then (INTENDABLE or INTENTIBLE or INVENDIBLE)—(INVENTIBLE or INTENTABLE), then (INVESTIBLE or INVENTABLE or INTESTABLE)—(INVESTABLE or UNTESTABLE). NB just 10 valid combinations

EXPENDABLY—EXPENDABLE—(EXTENDABLE or EXPENDIBLE)—EXTENDIBLE—ENTENDIBLE—INTENDIBLE—(INVENDIBLE or INTENTIBLE)—INVENTIBLE—INVESTIBLE—INGESTIBLE—INGUSTIBLE (Roget, OED erroneous)

EXTENSIBLY—EXTENSIBLE—EXTENDIBLE—ENTENDIBLE—INTENDIBLE, then —INVENDIBLE—UNVENDIBLE—UNVENDABLE—UNBENDABLE—UNBINDABLE—UNBIDDABLE —INVENDIBLE—INVENTIBLE—INVESTIBLE—INGESTIBLE—INGUSTIBLE—INGUSTABLE —INTENTIBLE—INVENTIBLE—INVESTIBLE—INGESTIBLE—INGUSTIBLE—INGUSTABLE —INTENTIBLE—INTENTABLE—INTESTABLE—UNTESTABLE (or INTASTABLE)—UNTESTABLE—UNWASTABLE —INTENDABLE—INTENTABLE—INTESTABLE—UNTESTABLE (or INTESTABLE)—UNTESTABLE—UNWASTABLE

IF POSSIBLY (OED)—IF POSSIBLE—IMPOSSIBLE (OED)—UNPOSSIBLE—UNPASSABLE (OED)—UNPASSABLE—UNCASSABLE (OED)—UNCESSABLE (OED)—UNCEASABLE—UNLEASABLE (Web2)—UNLEAKABLE

IMPOSSIBLY—IMPOSSIBLE—IMPOSSIBLE—UNPOSSIBLE—UNPASSABLE—UNPASSABLE—UNCASSABLE—UNCESSABLE—UNCEASABLE—UNLEASABLE—UNLEAKABLE

(SPRINGSIDE (place) or SPRINGTIME)—SPRINGTIDE (Web2)—SPRING TINE (Lo)—SPRING LINE (OED)—SPRINGLING—SPRANGLING (OED)—STRANGLING—STRANGLING (OED)—STRADDLING—STRODDLING—STRODDLYNG (vf). STRIDDLING can be added between straddling and stroddling, for 11 steps

SPRINGTIDE—SPRINGTIME—SPRING TINE etc as immediately above, to make up to 12 steps

**Near Ideal Ladders (three letters unchanged) — one example**

6 ladders starting AFFEC:

AFFECCIOUN (vf)—AFFECSIOUN—(vf)—AFFECCIOUN (vf)—AFFECCIOUS—AFFECTIONS—EFFECTIONS (OED)—ENFECTIONS (OED under infection)—INFECTIONS—\*INJECTIONS—INSECTIONS (OED)—INSERTIONS. NB one of affecioun or affectioun is not necessary; and these two words may be reversed.

(AFFECCIOUN or AFFECSIOUN)—AFFECCIOUN—AFFECCIOUS—AFFECTIONS—EFFECTIONS—ENFECTIONS—INFECTIONS—INFECTIOUS—(INFESTIOUS or INFECTUOUS)—INFESTUOUS (OED)—INCESTUOUS

**Ladders between heterograms, but with three letters unchanged**

9 ladders starting with IMBRANCHES:

1. IMBRANCHES (OED)—INBRANCHES (OED under imbranch)—ENBRANCHES (OED under imbranch)—(UNBRANCHES (Sted) or ENBRANCHED (OED under imbranch))—UNBRANCHED—UNBLANCHED—UNBLEACHED—\*UNCLENCHED—UNFLENCHED (OED)—UNFLETCHED (Web2)—UNFLITCHED (Web2). NB enbranches is not necessary if unbranches follows; in which case, if unclenched be omitted, 8 steps change 7 letters.  
as 1 but —INBRANCHED—ENBRANCHED— as words 2 and 3  
as 1 but —IMBRANCHED—EMBRANCHED—ENBRANCHED— as words 3 to 5  
as 1 but —IMBRANCHED—INBRANCHED—\*ENBRANCHED— as words 2 to 4
2. IMBRANCHES—INBRANCHES—ENBRANCHES—ENBRANCHED (OED under imbranch)—\*INBRANCHED (OED under imbranch)—UNBRANCHED—UNBLANCHED—UNBLEACHED—UNFLENCHED, then as 1.  
as 2 but —UNBRANCHES—ENBRANCHES—ENBRANCHED— as words 3 to 5  
as 2 but —IMBRANCHED—EMBRANCHED (OED)— as words 2 and 3  
as 2 but —IMBRANCHED—INBRANCHED—INBRANCHES—\*UNBRANCHES— as words 2 to 5

**Ladders between heterograms, but with four letters unchanged (samples)**

BESPOUTING (OED)—DESPOUTING (vf)—DESPORTING (OED desport)—DISPORTING—DISTORTING—DISTRORING—DYSTORING—DESTORING—DESTORING—DYSTORING (The last five words are in the OED under disturb)

BESHOUTING—BESPOUTING—DESPOUTING—DESPORTING—DISPORTING—DISPARTING—DISPARGING (vf)—DISPARKING (OED)—DISPACKING (OED)—DISPACHING (vf)—DYSPACHING (vf)

BESPOUTING (OED)—DESPOUTING—DESPORTING—DISPORTING—DISTORTING—DISTRORING—DESTORING—DESTORING (OED under detour)—DYSTORING (vf)—DYSTORING—DYSTORING