

## FOUR-LETTER SUPER CONNOISSEUR'S LADDERS

REX GOOCH

Letchworth, Herts, England

Four-letter words are famously well connected to each other. Fewer than one per cent of words connect to no other, whereas over 70 per cent connect in each of the four possible positions—on average, there are 23 neighbours for each word. For our present purpose, note that more than three-quarters are heterograms. This means that Connoisseur's Ladders (those with sequential replacement between heterograms, plus a relationship between the first and last words) become commonplace. On the other hand, the number of such ladders is restricted by the relatively small number (fewer than 20,000) of four-letter words available. As in the case with the previous article on five-letter ladders, the lists below offer just a selection of Connoisseur's Ladders of the technical variety, i.e. those in which the first and last words are permutations of one another. However, we have seven times as many to choose from; indeed, there are more four-letter ladders between reversals than there are five-letter ladders between all types of permutation.

Some of these technically outstanding ladders also qualify as semantic Connoisseur's Ladders (in which the terminal words bear an apt relationship in meaning to one another). As this is subjective, the selection of such ultimate Connoisseur's Ladders (both technical and semantic, hence Super in the title) is left to the reader. Because of the strict conditions, it is uncommon to find recognizable words at both ends of the ladder, such as SHAT and TASH (=moustache). There is one outstanding technical and semantic ladder with forward replacement, consisting of a verb and object intimately related, but both words are obscene: the ladder is in the first list. Due to the fact that both terminal words in this ladder can be nouns or verbs, there is a much less cogent connection between the same two words: "slash a cormorant".

Among ladders between permutations (but not reversals), forward replacement gives DARE-READ, and reverse replacement examples include the droll LOSE-'OLES, the rather rude ERMA-MARE, the female commander AMIR IRMA, and, of interest to some, ALES-SALE. ATES-SATE is not quite what it appears: ATE means infatuation, so SATE makes a semantic Connoisseur's Ladder, as might VILE-LEVI.

Among ladders between reversals, we have FEAR-RAEF (=plunder) with forward replacement, and SLAP-PALS and ELAM-MALE with backward replacement.

It is quite rare under such restrictions to find a ladder consisting entirely of common words.

"Snakes and Ladders" in the May 1998 Word Ways reports a number of ideal ladders between heterogrammatic reversals, but none offers sequential change of letters. This is true also of PETS-STEP, which does however have the special quality that the whole ladder is palindromic, i.e., the intermediate words are reversals of each other (see Leonard Gordon's examples in the February 1991 Kickshaws).



Selection has been done mainly on the basis of common terminal words, or of terminal words that bear some meaningful relation to one another. Words in the following lists are OED headwords or obvious derivations thereof unless marked otherwise. The first word in the ladder is earlier in the alphabet than the last. Ch = Chambers, EDD = English Dialect Dictionary, Pcon = Palindromicon, TNWD = The New Welsh Dictionary, and vf = variant form.

**Connoisseur's Ladders with terminal words which are permutations of each other (10% selected)  
forward replacement**

AIN'T—NINT (vf)—NANT—NATT (vf)—NATI (vf = argot)  
 AIRS—SIRS—SARS (vf)—SAIS—SAIR  
 ALES—LLES (The New Welsh Dict)—LAES (vf)—LASS—LASE  
 ARSE—ERSE—EASE—EARE (vf)—EARS (two human parts)  
 BALE—EALE (vf)—ELLE—ELBE (German river)—ELBA (Napoleon did bale out to ELBA)  
 BASH—SASH—SH-SH (OED sh!)—SHAH—SHAB (= get rid of)  
 CHAT—THAT—TAAT (Ch Scot Dict)—TACT—TACH (...ometer or clasp)  
 COAT—TOAT—TAAT (EDD)—TACT—TACO  
 CODE—DODE (vf)—DEDE (vf)—DECE (vf)—DECO  
 COPE—POPE—PEPE (vf or pers name)—PECE (vf)—PECO (vf = pekoe tea)  
 DALE—LALE (OED)—LELE (vf)—LEDE—LEDA (and the swan, or celestial body)  
 DARE—RARE—RERE—REAE (W70-200 pl of REA, or river in Oxfordshire)—READ  
 DASH—SASH—SH-SH (OED has SH and SHSHSH)—SHAH—SHAD  
 DATE—TATE—TETE—TEDE (vf)—TEDA (type of tree, OED under torch)  
 DEMO—MEMO—MOMO—MODO (OED)—MODE  
 DIME—MIME—MEME (OED)—MEDE (vf)—MEDI (vf = bribe or reward)  
 DOME—MOME—MEME (OED)—MEDE (vf)—MEDO (vf meadow or mead)  
 DYNE—EYNE—ENNE (TAW)—ENDE—ENDY (vf to finish). First of three for DYNE  
 DYNE—NYNE (vf)—NENE—NEDE (vf)—NEDY (vf = needy)  
 DYNE—NYNE (vf)—NENE—NEYE (vf)—NEYD (vf = need)  
 EARS—SARS (vf)—SERS (vf)—SEAS—SEAR  
 EART (vf, to be)—TART—TERT (Sted)—TEAT—TEAR  
 EAST—TAST (vf)—TEST—TEAT—TEAS  
 EATS—SATS (Saturdays or Scholastic Aptitude tests)—SETS—SEAS—SEAT  
 ELAN—LLAN (Mynydd-Llan, Flintshire etc)—LAAN (OED)—LANN (vf)—LANE  
 ELAN—LLAN (as above)—LEAN—LENN (vf)—LENA (pers name or river)  
 EONS—SONS—SENS—SEOS (vf)—SEON (vf to be)  
 ETAS—STAS (vf)—SEAS—SETS—SETA (animal bristle)  
 FARE—RARE—RERE—REAE (pl rea)—REAF (OED = plunder)  
 FINE—NINE—NENE—NEIE (vf)—NEIF (= serf)  
 GASH—SASH—SHSH (OED sh or shshsh)—SHAH—SHAG  
 GORE—RORE (vf)—RERE—REGE (vf)—RE-GO (OED)  
 HEAT—TEAT—THAT—THET (vf)—THEA (obs tea, or pers name)  
 KATE (pers name, also dialect for various species)—TATE—TETE—TEAE (vf)—TEAK  
 LATE—TATE—TETE—TEAE (vf)—TEAL  
 LEAP—PEAP (OED)—PAAP (EDD)—PALP—PALE  
 LEAS (untilled land)—SEAS—SAAS (EDD)—SALS—SALE  
 LEOS (vf, = lions)—SEOS (vf)—SOOS (vf)—SOLS—SOLE  
 LIAM (vf, leash for hounds, also pers name)—MIAM (vf)—MAAM (bird)—MALM—MALI  
 LIES—SIES (vf)—SEES—SELS (OSPD)—SELI (vf, strange, wonderful)  
 LIMA (eg Lima bark)—MIMA—MAMA—MAIA (OED)—MAIL. Also—MALA—MALI  
 LINE—NINE—NENE—NEIE (vf)—NEIL (vf, also pers name)  
 LOAM—MOAM (vf)—MAAM (bird)—MALM—MALO (Web3, Hawaiian loincloth)  
 MANE—NANE—NENE—NEME (vf)—NEMA (Web3, tubular filament)  
 MARE—RARE—RERE (vf)—REAE (pl rea)—REAM  
 MASH—SASH—SHSH (OED sh or shshsh)—SHAH—SHAM  
 MATE—TATE—TETE—TEAE (vf)—TEAM  
 MESH—SESH (OED)—SHSH (OED sh or shshsh)—SHEH (vf)—SHEM (OEHD = seam)  
 MONA—NONA—NANA—NAMA (vf)—NA MO (vf = no more)  
 NITE—TITE—TETE—TEIE (vf)—TEIN (vf = harm)



OARS—SARS (vf)—SORS—SOAS (OED)—SOAR  
 OAST—TAST (vf)—TOST—TOAT—TOAS (vf = to separate ore)  
 OURS—SURS (vf)—SORS (Pull)—SOUS—SOUR  
 PARE—RARE—RERE (vf)—REAE (pl rea)—REAP  
 PATE—TATE—TETE—TEAE (vf)—TEAP (= male sheep)  
 PATE—TATE—TETE—TEPE (vf, or Tio Pepe sherry)—TEPA (= insect sterilant)  
 PEAT—TEAT—TAAT (EDD)—TAPT (Pull)—TAPE  
 PIES—SIES (vf)—SPES—SPIS (vf)—SPIE (= spy)  
 PISH—SISH—SHSH (OED sh or shshsh)—SHIH—SHIP  
 PORE—RORE (vf)—RERE (vf)—REPE (vf)—REPO (OED)  
 PURE—RURE (vf)—RERE (vf)—REUE (vf)—REUP (= re-enlist)  
 RATE—TATE—TETE—TEAE (vf)—TEAR  
 RISE—SISE—SESE (vf)—SERE—SERI (vf = tropical shrub)  
 RITE—TITE—TETE—TEIE (vf)—TEIR (vf = tear)  
 ROSE—SOSE (vf)—SESE (vf)—SERE—SERO (= late)  
 ROTA—TOTA (Pull)—TATA (vf)—TARA—TARO (= food plant)  
 SATE—TATE—TETE—TEAE (vf)—TEAS  
 SEAT—TEAT—TAAT (EDD)—TAST (vf)—TASE (vf = takes)  
 SHAT—THAT—TAAT (EDD)—TAST (vf)—TASH (= mustache)  
 SHOT—THOT (vf)—TOOT—TOST—TOSH (obs tusk)

#### reverse replacement

ABEL (vf)—ABEE (vf)—ABLE—AALE (vf)—BALE  
 ADEL (vf)—ADEE (OED mitten 1880 quote)—ADLE (vf)—AALE (vf)—DALE  
 AERG (Ch, Old Eng whence eerie)—AERE (vf)—AEGE (vf)—AAGE (vf)—RAGE  
 AGER—AGEE—AGGE (vf)—AAGE (vf)—RAGE  
 AGES—AGEE—AGGE (vf)—AAGE (vf)—SAGE  
 AGET (vf)—AGEE—AGTE (OED)—AATE (Sted)—GATE  
 AGEW (vf)—AGEE—AGGE (vf)—AAGE (vf)—WAGE  
 ALED (vf)—ALEE—ALLE (vf)—AALE (vf)—DALE  
 ALEM—ALEE—ALLE (vf)—AALE (vf)—MALE  
 ALEN—ALEE—ALNE (vf or in N Yorks)—AANE (vf)—LANE  
 ALES—ALEE—ALLE (vf)—AALE (vf)—SALE  
 ALET (vf)—ALEE—ALLE (vf)—AALE (vf)—TALE  
 ALEY—ALEE—ALLE (vf)—AALE (vf)—YALE  
 ALIR (vf)—ALIA (inter alia)—ALRA (vf)—AIRA (OED air n)—LIRA  
 AMIR (Indian commander, like emir)—AMIA—AMMA—ARMA (Arma Christi, OED emblem)—IRMA (eg I la Douche)  
 ANEL (Old Fr, OED under aneus)—ANEN (vf)—ANAN—ALAN—ELAN  
 ARED—AREE (vf)—ARRE (vf)—AARE (vf)—DARE  
 AREF (OED)—AREE (vf)—ARRE (vf)—AARE (vf)—FARE. Same central three words: AREM (OED)—MARE, AREP (OED)—  
 PARE, ARES—SARE  
 ARES—AREE (vf)—ARSE—AASE (Med)—RASE  
 ARET—AREE (vf)—ARRE (vf)—AARE (vf)—TARE  
 ARET—AREE (vf)—ARTE—AATE (Sted)—RATE  
 AREW (vf)—AREE (vf)—ARRE (vf)—AARE (vf)—WARE. Same central three words: AREY (vf)—YARE  
 ASEL (Web2)—ASEA—ASSA (vf)—ALSA (vf)—ELSA (E Martinelli, film actress)  
 ASEL (Web2)—ASEE (OED)—ASSE—AASE (Med)—LASE  
 ASET (vf)—ASEE (OED)—ASTE (Official Std Names Gaz)—AATE (Sted)—SATE  
 ATEL (OED)—ATEE (OED)—ATLE—AALE (vf)—TALE  
 ATES (OED, infatuation)—ATEE (OED)—ATTE (vf)—AATE (Sted)—SATE. Same central three words: ATEF—FATE, ATEL  
 (OED)—LATE, ATER (vf)—RATE  
 AWEN (vf)—AWEE—AWNE (vf)—AANE (vf)—WANE  
 AWER (vf)—AWEE—AWRE (vf)—AARE (vf)—WARE  
 BATU (Pull)—BATA (Pull)—BABA—BUBA—TUBA  
 BEDU—BEDE—BEBE (OED)—BUBE (OED aborigines 1864 quote)—DUBE (vf). Same central three words: BELU (vf)—LUBE,  
 BEUL (port a beul, OED port-a-beul 1964 quote)—LUBE  
 CELA (hardyment a cela, OED step v 1530 quote)—CELE (vf)—CECE (vf)—CACE (vf)—LACE  
 CEPA—CEPE—CECE (vf)—CACE (vf)—PACE  
 CERA (Sted, or Latin whence cerin)—CERE—CECE (vf)—CACE (vf)—RACE  
 COMA—COMO (Italian Lake, city)—COCO—CACO (vf)—MACO



COTA (OED under coterie)—COTO—COCO—CACO (VF)—TACO  
 DANE—DAND—DAAD (EDD)—DEAD—NEAD (vf)  
 DARE—DARD (OED)—DAAD (EDD)—DEAD—READ  
 DEIH (vf)—DEIE (vf)—DEDE—DIDE (vf)—HIDE. Same central three words: DEIR (vf)—RIDE, DEIS (vf)—SIDE, DEIT (vf)—TIDE  
 DELI—DELD (vf)—DEED—DIED—LIED  
 DEMA (vf)—DEME—DEDE—DADE—MADE  
 DEMO—DEME—DEDE—DODE (vf)—MODE  
 DENU (vf)—DENE—DEDE—DUDE—NUDE  
 DENY—DENE—DEDE—DYDE—NYDE (vf)  
 DERI (vf)—DERE—DEDE (vf)—DIDE (vf)—RIDE  
 DERO (OED under leet n)—DERE—DEDE (vf)—DODE (vf)—RODE  
 DESA (Pull)—DESE (vf)—DEDE (vf)—DADE—SADE  
 DESI—DESE (vf)—DEDE (vf)—DIDE (vf)—SIDE  
 DEWA (Pull)—DEWE (vf)—DEDE (vf)—DADE—WADE  
 DEYR (vf)—DEYE (vf)—DEDE (vf)—DYDE (vf)—RYDE (vf, or in Isle of Wight)  
 DILO—DILL—DIOL—DDOL (in Flintshire)—IDOL  
 DIRE—DIRD—DIED—DRED (vf)—IRED (vf)  
 DOLI (Web2)—DOLL—DOOL—DDOL (in Flintshire)—IDOL  
 DOLI (Web2)—DOLO (Latin, whence sedulous)—DODO—DIDO—LIDO  
 DOME—DOMO (vf)—DODO—DEDO—MEDO (vf)  
 ELAM (vf)—ELAE (Med)—ELME (vf)—EAME (vf)—LAME  
 ELAN—ELAE (Med)—ELNE (vf)—EANE (vf)—LANE  
 ELSA (eg E Martinelli, film actress)—ELSE—ELLE—EALE (vf)—SALE  
 ELVA (pers name, OED shook 1960 quote)—ELVE (OED)—ELLE—EALE (vf)—VALE  
 ENKI (a god, BI)—ENKE (vf)—ENNE (TAW)—EINE (vf)—KINE  
 ENOW—ENON (vf)—ENEN (vf)—EWEN (vf)—OWEN (vf)  
 ENSA (vf)—ENSE—ENNE (TAW)—EANE (vf)—SANE  
 ERLI (vf)—ERLE (vf)—ERRE (vf)—EIRE (Pull)—LIRE  
 ERLY (vf)—ERLE (vf)—ERRE (vf)—EYRE—LYRE  
 ERMA (pers name, OED throbb 1892 quote)—ERME—ERRE (vf)—EARE (vf)—MARE  
 ESPY—ESPE (vf)—ESSE—EYSE (vf)—PYSE  
 EVIN (vf)—EVIE (in UK, or pers name)—EVNE (vf)—EINE (vf)—VINE  
 EVIR (OED)—EVIE (in UK, or pers name)—EVRE (vf)—EIRE—VIRE  
 GATO (Pull)—GATA—GAGA—GOGA (Pull)—TOGA  
 KALE—KALK (vf)—KAAK (vf)—KEAK (OED)—LEAK  
 KEIL (vf)—KEIE (vf)—KEKE (vf)—KIKE—LIKE. Same central three words: KEIM (author, OED outpost 1870 quote)—MIKE, KEIP (vf)—PIKE  
 KEPI—KEPE (vf)—KEKE (vf)—KIKE—PIKE  
 KERA (vf)—KERE—KEKE (vf)—KAKE (vf)—RAKE  
 KETA—KETE (vf)—KEKE (vf)—KAKE (vf)—TAKE  
 KEYS—KEYE (vf)—KEKE (vf)—KYKE—SYKE  
 LAIN—LAIA (Latin America Integration Assn)—LA-LA—LILA (OED)—NILA (OED under lilac)  
 LAZO (Pull)—LAZA (BI)—LA-LA—LOLA ("whatever L wants", song)—ZOLA (Emile Z, Fr novelist)  
 LEIM (Mod Ger, OED lime)—LEIE (vf)—LELE (vf)—LILE—MILE. Same central three words: LEIN (vf)—NILE (vf or river),  
 LEIP (vf)—PILE, LEIR (Pull)—RILE, LEIT (vf)—TILE, LEIV (vf)—TILE  
 LEMA (Sted)—LEME (vf)—LELE (vf)—LALE (OED)—MALE  
 LEPA (Web2)—LEPE (vf)—LELE (vf)—LALE (OED)—PALE  
 LEPI (OED)—LEPE (vf)—LELE (vf)—LILE—PILE  
 LERI (Med)—LERE (Pull)—LELE (vf)—LILE—RILE  
 LESA (OED under lease)—LESE (vf)—LELE (vf)—LALE (OED)—SALE  
 LETA (vf)—LETE (Web2)—LELE (vf)—LALE (OED)—TALE  
 LETI (Roget)—LETE (Web2)—LELE (vf)—LILE—TILE  
 LEVA—LEVE—LELE (vf)—LALE (OED)—VALE  
 LEVI (vf)—LEVE—LELE (vf)—LILE—VILE  
 LINE—LINI (Sted, or toppus lini, OED top)—LILI (The New Welsh Dict)—LELI (vf)—NELI (vf)  
 LISA (my daughter)—LISI (Pull)—LILI (The New Welsh Dict)—LALI (Pull)—SALI (= dirty, OED signifying 1956 quote)  
 LIVE—LIVI (vf)—LILI (The New Welsh Dict)—LELI (vf)—VELI (Sted, or Latin whence veliform)  
 LOSE—LOSS—LOES (vf)—LLES (The New Welsh Dict)—OLES (OSPD)  
 MARE—MARM—MAAM—MEAM (Roget, or Latin accus fem sing my)—REAM  
 MARO—MARA (vf)—MAMA—MOMA (NY Museum Mod Art)—ROMA (vf)  
 MARO—MARM—MAAM—MOAM (vf)—ROAM  
 MENU—MENE (Pull)—MEME (OED)—MUME (Pull)—NUME (OED)



MERO—MERE—MEME (OED)—MOME—ROME (vf)  
 MESA—MESE—MEME (OED)—MAME (vf)—SAME  
 META—METE—MEME (OED)—MAME (vf)—TAME  
 MONA—MONO—MOMO—MAMO—NAMO (vf)  
 MONE—MONO—MOMO—MEMO—NEMO (OED). Same central three words: MORE—REMO (San R, Italy)  
 MOTE—MOTO—MOMO—MEMO—TEMO (OED draught-tree 1789 quote)  
 NAIT—NAIA (vf)—NANA—NINA (pers name)—TINA. Also NATI (vf)—NATA—  
 NAWE (vf)—NAWN (vf)—NAAN (vf)—NEAN (OED)—WEAN  
 NEIP (vf)—NEIE (vf)—NENE—NINE—PINE. Same central three words: NEIS (vf)—PINE  
 NEPA (spider, OED water 1861 quote)—NEPE (Pull)—NENE—NANE—PANE  
 NERO (Claudian emperor)—NERE—NENE—NONE—RONE  
 NETI—NETE (Web2)—NENE—NINE—TINE  
 NEUT (vf)—NEUE (vf)—NENE—NUNE (vf)—TUNE  
 NEVA (Old Frisian, whence neve)—NEVE—NENE—NANE—VANE  
 NEVI—NEVE—NENE—NINE—VINE  
 NEYT (OED)—NEYE (vf)—NENE—NYNE (vf)—TYNE (OSPD)  
 OSEL (vf)—OSEE (Lo, or Osee prophet see OED favour 1526 quote)—OSLE (vf)—OOLE (vf)—SOLE  
 PARE—PARP (OED)—PAAP (EDD)—PEAP (OED)—REAP  
 PATE—PATA—PAPA—PEPA (vf)—TEPA  
 PERA (Latin pear, Greek purse, or in Wallachia)—PERE—PEPE (vf)—PAPE—RAPE  
 PERI—PERE—PEPE (vf)—PIPE—RIPE  
 PERO (Pull)—PERE—PEPE (vf)—POPE—ROPE  
 PESO—PESE (vf)—PEPE (vf)—POPE—SOPE  
 PETA (Pull)—PETE—PEPE (vf)—PAPE—TAPE  
 PETO—PETE—PEPE (vf)—POPE—TOPE  
 PETY (vf)—PETE—PEPE (vf)—PYPE (vf)—TYPE  
 PORE—PORO—POPO (OED)—PEPO—REPO (OED)  
 REAW (vf)—REAE (pl of rea, see OED mens rea)—RERE (vf)—RARE—WARE. Same central three words: REAT (vf)—TARE  
 REUS (Pull)—REUE (vf)—RERE (vf)—RURE (vf)—SURE  
 REVI (OED)—REVE—RERE (OED)—RIRE (OED fou rire)—VIRE  
 REWA (Webster's New Geographic Dict)—REWE (vf)—RERE (vf)—RARE—WARE  
 ROTA—ROTO—RORO (OED)—RARO (Ro, or OED seldom 1440 quote)—TARO  
 SATE—SATS (pl Sat, or Scholastic...)—SAAS (EDD)—SEAS—TEAS. Same central three words: SAYE (vf, or Save As You Earn)—YEAS  
 SETH—SETS—SEES—SHES—THES (vf or pl the). Same central three words: SETI (Search for Extra-Terrestrial Intelligence)—TIES  
 SHAT—SHAH—SHSH (OED Sh or ShShSh)—SASH—TASH. Same central three words: SHAW—WASH  
 SUDE (vf)—SUDD—SUED—SSED (vf)—USED  
 SUER—SUES—SURS (vf)—SERS (OSPD)—UERS (vf)  
 SYEN (vf)—SYES (vf)—SYNS (vf)—SENS—YENS  
 TOUR—TOUT—TOOT—TROT—UROT (vf)  
 TWAI (OED under tway)—TWAT—TWIT—TAIT—WAIT

### Connoisseur's Ladders with terminal words which are reversals of one another (18% selected)

ANUS—SNUS (solar neutrino units, or Dutch whence snush)—SUUS (Web3, Latin)—SUNS—SUNA (vf = sun) The sun shines out of...  
 BRAD—DRAD—DAAD (EDD)—DARD (OED)—DARB (whence drub)  
 CIRÉ (smooth, polished)—EIRE (vf or country)—ERRE (vf)—ERIE (vf or lake)—ERIC (pers name or cure)  
 CRAW—WRAW—WAAW (EDD)—WARW (Lo, also hundreds of times in OED as Guy W)—WARC (vf = work)  
 DEAL—LEAL—LAAL (EDD)—LAEL (Ch, Old Eng whip)—LAED (vf = lead metal)  
 DIES—SIES (vf)—SEES—SEIS (vf)—SEID (vf = Arab lord)  
 DRAT—TRAT—TAAT (EDD)—TART—TARD (vf = tarred)  
 DRAW—WRAW—WAAW (EDD)—WARW (Guy W, OED)—WARD  
 ENUS (OED = once)—SNUS (see ANUS above)—SUUS (Latin, Web3)—SUNS—SUNE (= sin)  
 FEAR—REAR—RAAR (Dutch = strange)—RAER (vf)—RAEF (vf = plunder)  
 FEIS (assembly or Celtic festival)—SEIS (vf)—SIIS (vf)—SIES (vf)—SIEF (OED = Arab confection)  
 GNUS—SNUS (see ANUS above)—SUUS (Latin, Web3)—SUNS—SUNG  
 HEAL—LEAL—LAAL (EDD)—LAEL (Ch, Old Eng whip)—LAEH (vf = tell fibs)  
 LEON (vf = lion)—NEON—NOON—NOEN (vf)—NOEL. Lion—Xmas, or two people  
 LIAM (pers name or leash for hounds)—MIAM (vf)—MAAM—MAIM—MAIL  
 LIER—RIER—REER (vf)—REIR (OED)—REIL (vf = rail or reel)  
 NEAR—REAR—RAAR (Dutch = strange)—RAER (vf)—RAEN (vf = Royal power)  
 NOUS—SOUS—SUUS (Web2, Latin)—SUOS (Roget, Latin accusative pl)—SUON (vf = swan)



PRAT—TRAT—TAAT(EDD)—TART—TARP  
 PRAW (vf = Malay boat)—WRAW—WAAW (EDD)—WARW (Guy W in OED)—WARP  
 SWAT—TWAT—TAAT (EDD)—TAWT (vf)—TAWS (= thou or pl leather, marble, fibre)

**reverse replacement**

ARES—AREA—ARRA—AERA (vf)—SERA  
 ARIL—ARIA—ARRA—AIRA (Ch, genus of grass)—LIRA  
 DAEH (vf)—DAED (vf)—DAAD (EDD)—DEAD—HEAD  
 DAEL (vf)—DAED (vf)—DAAD (EDD)—DEAD—LEAD  
 DAER—DAED (vf)—DAAD (EDD)—DEAD—READ  
 DAIS—DAID (OED)—DAAD (EDD)—DIAD—SIAD (OED)  
 DARG—DARD (OED)—DAAD (EDD)—DRAD—GRAD  
 DART—DARD—DAAD (EDD)—DRAD—TRAD  
 DEAF—DEAD—DEED—DAED (vf)—FAED (vf)  
 DEAL—DEAD—DEED—DAED (vf)—LAED (vf)  
 DEAR—DEAD—DEED—DAED (vf)—RAED (vf)  
 DEIL—DEID (vf)—DEED—DIED—LIED. With the same centre three words: DEIG (Old Norse, related to dough)—GIED,  
 DEIH (vf)—HIED, DEIT (vf)—TIED, DEIV (vf)—DIED  
 ELAM (vf, or land of Elamites)—ELAE (Med)—ELLE—EALE (vf)—MALE. Same centre three words: ELAN—NALE (vf),  
 ELAT (vf)—TALE, ELAY (OED)—YALE  
 ELIT (vf)—ELIE (E de Beaumont, Fr geologist)—ELLE—EILE (vf)—TILE. Same centre three words: ELIM (Isle of Anglesey)—MILE  
 ERIS (Ch, goddess of discord, or OED obs eeries)—ERIE (vf or great Lake)—ERRE (vf)—EIRE—SIRE  
 ESIL (OED)—ESIE (OED)—ESSE—EISE (vf)—LISE (vf)  
 GANS (OED)—GANG—GAAG (Manx Dict)—GNAG (vf)—SNAG  
 GORT (OED)—GORG (vf)—GOOG—GROG—TROG  
 HEAR—HEAH (vf)—HEEH (EDD)—HAEH (vf)—RAEH (OED). Same centre three words: HEAL—LAEH (vf), HEAT—TAEH (vf)  
 HOLS—HOLH (vf)—HOOH (EDD)—HLOH (vf)—SLOH (vf)  
 KART—KARK (vf)—KAAK (vf)—KRAK (vf)—TRAK (vf)  
 LAES (vf)—LAEL (Ch, Old Norse whip, connected to laldie)—LAAL (EDD)—LEAL—SEAL. Same centre three words: LAEM (vf)—  
 MEAL, LAEP (OED under seed-lip)—PEAL, LAER (OED path 900 quote)—REAL, LAET—TEAL  
 LEAT—LEAL—LEEL (vf)—LAEL (see above)—TAE. Same centre three words: LEAN—NAEL, LEAP—PAEL (OED pall 900  
 quote), LEAS—SAEL (vf)  
 MAIS (vf)—MAIM—MAAM—MIAM (vf)—SIAM (now Thailand)  
 NOES—NOEN (vf)—NOON—NEON—SEON (vf)  
 PALS—PALP—PAAP (EDD)—PLAP—SLAP  
 PERT—PERP—PEEP—PREP—TREP (vf)  
 RAES (vf, or pl prs name)—RAER (vf)—RAAR (Pcon)—REAR—SEAR. With same centre three words: RAET (vf)—TEAR  
 REIT—REIR (OED)—REER (vf)—RIER—TIER  
 SEIT—SEIS (vf)—SEES—SIES (vf)—TIES

**Group of four Connoisseur's Ladders with terminal words which are permutations of one another,  
 with a common terminal word (forward replacement)**

ALES—LLES (TNWD)—LAES (vf)—LASS—LASE  
 ALES—LLES (TNWD)—LEES—LESS—LESA (W71-006)  
 ALES—SLES (vf)—SEES—SEAS—SEAL  
 ALES—SLES (vf)—SEES—SELS (obs cell)—SELA (vf)