SIXTEEN-LETTER TRANSPOSAL PAIRS

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Long transposal pairs, especially those in which the letters of one word must be thoroughly rearranged to form the other, have always fascinated logologists; in the February 1976 issue of Word Ways, I presented a list of well-mixed transposal pairs of 13 letters or more. A well-mixed transposal pair is defined as one in which at most three consecutive letters in one word appear in the other; for example, both words of the 17-letter transposal pair baSIPaRACHromATin - mar-SIPoRAnCHiATa contain the trigram SIP and the bigrams CH, RA and AT, but no others. This transposal pair, discovered by Charles Holding and first appearing in The Enigma in 1972, is the longest well-mixed one known; in fact, the February 1976 article and the May 1976 Colloquy listed no 16-letter well-mixed pairs, four 15-letter well-mixed pairs, and eleven 14-letter well-mixed pairs (plus one well-mixed triple). Since then, John Edward Ogden discovered in 1978 the 16-letter well-mixed pair HEmatocrystallin - tHErm.onaSTicaLLy, with three bigrams HE, ST and LL; furthermore, a well-known 15-letter well-mixed pair can be pluralized to obtain megachiropteraRAns - cinematogRAPhers.

Prior to 1973, most long transposals were discovered by chance; in that year, Dennis Ritchie of Bell Telephone Laboratories used a computer to sort the boldface words of Webster's Second into a transposal dictionary (more precisely, that subset of Webster's Second on a computer tape produced by the Air Force in the 1960s, later used to produce a four-volume reverse dictionary). This revealed numerous transposal pairs not previously discovered, including many that were well-mixed (but none of more than 14 letters).

I decided that it might be worthwhile to see how many transposal pairs had been overlooked by the Ritchie survey, either inferred forms not on the Air Force tape (plurals, past tenses of verbs, participles, etc.) or outside Webster's Second. One word list seemed especially suited for this undertaking. Jack Levine's three-volume list of pattern words (which groups together words having the same letter-pattern, such as EXCESS and BAMBOO) contains all boldface words in Webster's Second and Third, plus their inferred forms; furthermore, part of the transposal sorting job had already been done. In Levine, any transposal pair must appear in a group of words containing the same distribution of letters (for example, the 1000+ 16-letter words such as CIrCumNAvIgAtloN and m.ISuNDerStaNDINg which have one letter repeated three times and three other letters repeated twice). However, in view of the potential transposal pairs, the list must be scanned more than 10 (or more than 10, as cited above!)

After weeding fourteen transposal pairs of short ones. The full list of more-or-less complete混usion identifies the past tenses and of Webster's Third, with other tenses and past tenses of Webster's Second enclosed by parentheses; the past tenses of Webster's Second are tagged with an asterisk.

Complete Mixings:

hematocrystallin
R petroglyphs
R incontroversial
R cinema
R pretransposal

Transposal pairs:
R misconfigured
R misconceived
R misused
R misused

Add prefix or suffix:
R intracisternal
R interlaminar
R improbable
R improbable
R German:
R unnamable
R present

Create prefix or suffix:
adiadochokinesis

Transposal pair:
reproduce

Variant spellings:

R streptothricin
in view of the fact that much sorting was still necessary to winnow out potential transposal pairs, I decided to restrict myself to words of 16 letters, the longest ones in Levine. (Even so, there were 19 lists with more than 100 words apiece to be sorted, including the monster list cited above!)

After weeding out keypunch errors, my survey of Levine yielded only fourteen transposal pairs not detected by Ritchie (or not plurals or past tenses of shorter pairs detected by Ritchie)-- alas, no new well-mixed ones. The full list of transposal pairs is presented below, sorted into more-or-less-logical categories. The digit 2 or 3 following a word identifies the edition of Webster in which it was found. Plurals and past tenses are routinely indicated (in lightface run-on entries) in Webster's Third but not in Webster's Second; all unverified plurals are enclosed by parentheses. Plurals of 15-letter transposal pairs, or past tenses of 14-letter ones, are indented. All Ritchie transposals are tagged with the letter R.

Complete Mixing

hematocrystallin 2 - thermonastically 3
R petrographically 23 - pterylographical 23
R incontrovertible 23 - introconvertible 2
R cinematographers 23 - megachiropeteran(s) 23
R pretransmission(s) 2 - transimpression(s) 2

Transpose prefix, move to suffix

R misconfiguration 2 - configurationism 23
R misunderstander(s) - remisunderstand(s) 2
R misconstruction(s) - constructionisms 23

Add prefix or suffix to transposed root

intracisternally 3 - intracrystalline 3
R interlamination(s) 23 - internationalism 23
R impressivenesses 23 - permissivenesses 23
R impressibilities 23 - permissibilities 23
R Germanification(s) 2 - remagnification(s) 2
R unnameableness(es) 2 - unnamenableness(es) 2
R presentiveness(es) 2 - pretensiveness(es) 2

Create prefix out of variant suffix spelling

adiadochokinesis 2 - diadochokinies 3

Transpose prefix or suffix

perchlorination(s) 23 - prechlorination(s) 3

Variant spellings

R streptothricosis 23 - streptotrichosis 23
Interchange of components in compound words

R streptothricoses 23 - streptotrichoses 23
micromillimeters 23 - micromillimetres 23
lacklusterness(es) 2 - lacklustreness(es) 2

ANSWERS

OCCUPATION

1. jeweler: craftsman
3. antique dealer: enthusiast
6. railroad worker: engineer
8. attorney's assistant: secretary
10. seamstress: tailor
13. Elk mentor: guide
15. dissected, maimed: butcher
16. unscrupulous: crook
17. interested, devoted: enthusiast

GEMS FROM THE LAND

1. serene 2. sagacious 3. wise
6. sagacious 7. astute 8. keen
12. unsophisticated 16. austere 19. refined
21. diabetes 22. diathesis

KICKSHAWS

Quickie Puzzle

dON Edward NEsbit, an author,
in the name

A four-by-four grid
of many cooked foods
spelled out
No doubt other

Carrollian Word

Equivalent for
in which the letters

R WG are the