TRANPOSITIONS

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Transposition of the chemical element names is not elementary—often, they are extraordinarily difficult to find. Wordways articles by Darryl Francis in November 1977 and Jeremy Morse and Edward Wolpow in February 1978 tacitly recognize the obstacles by allowing transadditions of element names instead: rearrangements after one or more letters have been added.

Yet, it is in the nature of logology to strive for perfection. This article reports on more than four months of unrelenting search for the best possible transposition of each element name. The results are given in the lists below.

For each element, the first transposal shown is the best one, taking all relevant factors into consideration jointly: commonness, source from which obtained, word as opposed to name, current term as opposed to an obsolete one, "dictionary" entry rather than a derived term, solid spelling as opposed to broken spelling, English-sounding as opposed to foreign-sounding, etc. Depending upon the particular circumstances, one or another of these factors has carried the greatest weight. In various instances, a current name has been given precedence over a word long obsolete.

Each transposition in the list is followed by a number, denoting its category according to the following definitions:

1. English words or terms found in one or more of the standard unabridged dictionaries (Merriam-Webster, Random House, Funk & Wagnalls, Oxford English Dictionary), including their standard inflectional forms or found in specialized dictionaries.
2. English words or terms of a derivative nature, formed in accordance with specific dictionary sanctions, including their standard inflectional forms.
3. Proper names (geographical placenames, surnames and first names) actually found in English-language reference works, including the plurals of such names; genus names; language names.
4. English-language or foreign-language proper names not authenticated in reference works available to me.
5. Foreign-language words in dictionaries.
6. Proper names found only in foreign-language dictionaries.
7. Personal names consisting of a first name or first initial, but no middle initial, the components found in English-language reference works.

Some of the names do not include a language prefix, taking, for example, 10,000 boys' born facts, one word.

0. NEUTON
1. HYDROG
2. HELIUM
3. LITHIUM
4. BERYLL
5. BORON
6. CARBON
7. NITROG...
8. Personal names consisting of a first name or first initial, including a middle initial, the components found in English-language reference works.

9. Place names (city + state, or city + country), the components found in English-language reference works.

10. Acronyms, initialisms, abbreviations, and other shortened forms of words or names.

11. Transpositions of a special nature, not fitting into any of the previous categories:
   a. prefixing a noun with its definite article: astatine / a saturation
   b. use of a prefix or suffix as a word: radon / andron
   c. omission of the terminal G from a word ending in -ing (see Mencken's The American Language, 4th edition, p. 348): polonium / uploomin
   d. omission of an unlettered initial vowel from a word (aphesis): mendelevium / 'leven medium (a shoe size)
   e. substitution of a letter of similar shape: niobium / Rio Muni (R for B)
   f. two alternate spellings of a word: actinium / minu(t/c)ia (shorthand for the evolution of the Latin word minutia into the Spanish cognate minucia)
   g. use of a letter in the element name to denote a list entry, and transposal of the rest: lithium / h. mutili (to be regarded as the eighth word in a list like the present one)

Foreign-language words and proper names are further identified by a capital letter following the category number (F = French, G = German, I = Italian, L = Latin, LL = Late Latin, M = Maltese, ML = Modern Latin, S = Spanish). The source of many unusual words or names is given by a lower-case letter key; the corresponding reference works are given at the end of this article. Words underlined thus are reversals.

Some of the names in Categories 7 and 8 may seem unusual; yet that does not mean that individuals bearing these names do not exist. Take, for example, my own name -- DMITRI occurs less than once in 10,000 boys' names in various English-speaking countries (1950 births), according to Dunkling's First Names First, and the surname BORGANN occurs in only 24 entries in telephone directories of cities containing 10 per cent of the United States population. From these facts, one would logically conclude that I cannot exist -- yet here I am!
8. OXYGEN Geonyx 4, X. Yonge 7
9. FLUORINE neurofil 1, four-line 1, fournell 1, fur-lined 1
10. NEON none 1, Enon 3r78, Nen 3tig, Onen 3tig, Onne 3tig
11. SODIUM modius 1, odiums 1
12. MAGNESIUM gum animés or gums animé 1, animé-gums 1
13. ALUMINUM animulum 5L
14. SILICON Cilnes 6L, collin's 11
15. PHOSPHORUS surphospho 2, Horus Hopp's 7w2
16. SULFUR Rufus L 3tig-10, surful 1
17. CHLORINE Leon Rich 3td, onlicher 1
18. ARGON groan 1, orang 1, organ 1, goran 1, angor 1, grano 1, nagor 1, rogan 1, Rango 3, Gorga 3tig, Ngora 3tig, Grona 3tig, Agron 3tig, Ogarn R 3tig-10
19. POTASSIUM assumptio 5L, Postumias 6L
20. CALCIUM calicum 5L, Luci Cam 7
21. SCANDIUM muscadin 1, Munciads 2, muscadin 5F
22. TITANIUM intuitam 5L
23. VANADIUM Maud Ivan 7
24. CHROMIUM microhum 2, Imo Murch 7dgm
25. MANGANESE magnesane 1, enmanages 2, Gen Seaman 7
26. IRON noir 1, Rion 3tig, inro 1, roin 1, .::ori 1, Orin 3tig, Inor 3ca
27. COBALT abiot 5F, lactob. 2-10 (lacto- + b(acillus))
28. NICKEL licken 1, nickle 1, clinke 1, Ecklin 3tig
29. COPPER Pope Cr 3r78-10, croppe 1
30. ZINC NIZC 10aid, Nicz 4
31. SILVER livers 1, livres 1, servill, sliver 1, levirs 1, rivels 1
32. GERMANIUM gramineum 5L, unigramme 2- SF
33. ARSENIC carnis 1, cerasine 1, acerins 1, cearins 1, Racines 3r78, Enricas 3, cearins 1, caris 1, caires 1, cranies 1, scenari 1, craines 1
34. SELENIUM seminule 1, seminule 1
35. BROMINE M. O'Brien 3td, embrion 1, birdmen 11
36. KRYPTON Tony Prk 7as, Ty Pronk 7
37. RUBIDIUM Bud 8, Bidi Muir 7bbdm
38. STRONTIUM Muir Notts 7wntb, most Turin 1
39. YTTRIUM Ty T. Muir 8
40. ZIRCONIUM Ciro Muniz 7, Muir C. Zion 8wntb, nyts
41. CENTURION Ciro Muniz 7, Ciorn C. Zion 8wntb, nyts
42. ADAMOF Ciro Muniz 7, Ciorn C. Zion 8wntb, nyts
43. NIABOMI Bionium 4, Rio Muni 11
44. MOLYBENUM Boydum Lumn 7, Elmo M. Bundy 8
45. TECHNETIUM Municette 4, Minette Chu 7
46. RUTHENIUM Muir E. Hunt 7wntb, Muir Hunte 7wntb
47. RHODIUM humidor 1, mid-hour 1
48. PALLADIUM Mila D. Paul 8wntb, Padua Mill 4
49. SILVER, Livres 1, Livres 1, servil 1, silver 1, levirs 1, rivels 1
50. CADMIUM musdaim 5L
51. INDUMDI Di Muni 7gbnb, umndi 2
52. TIN nit 1, int 1
53. ANTIMONY antimony 1, My Nation 4 (a song title?), Ty Manion 7nyt
54. TELLURIUM multirule 2, multilure 2, multirole 11, Lurleitum 2-5G ("Loreleidom")
55. CESIUM miscue 1, music 5L
56. BARIUM Umbria 3, rubiam 5L, Rumibia 3tig, Amburi 3tig
57. LANTHANUM Hal Nutman 7dews, Nathan Ulm 7nyt
58. CERIUM uremic 1, M. Curie 3 (co-discoverer of radium and polonium), murice 5S
59. PRASEODYMIUM Sammie O. Purdy 8
60. NEOODYMIUM Emmy U. Dion 8as
61. PROMETHIUM Primo T. Hume 8wnb
62. SAMARIUM Sammie O. Purdy 3cad, summaria 5L
63. EUROPINIUM Muir U. Poe 8wnb
64. GADOLINIUM Mogul India 9caw, Ida G. Moulin 8as
65. TERBIUM burmite 1, imbute 1, Umbri 3nyt, Tiberum 6L, Umbrerti 6L
66. DYSPROSIUM Moss I. Purdy 8wnb
67. HOLMIUM Milo Hum 7dews
68. EREBIUM imbire 1, imbuer 2, ebrium 5L
69. THULIUM Uthi Ulm 7kjv, ny. tumuli 11, h. tumuli 5L-11
70. YTTERBIUM Betty Muir 3td (Eliz. Muir), tubimetry 2
71. LUTECIUM (in Funk & Wagnalls) cumulite 1
72. HAFNIUM Ina F. Hum 8dews
73. TANTALUM tantalum 5L, Alma Nutt 3td
74. TUNGSTEN Gunnetts 3nyt, Nugent St 3h-10
75. RHENIUM inhumer 1, Hürme In 3tig
76. OSMIUM Mounsis 3cad, musimo 5L
77. IRIDIUM Di I. Muir 8gbnb
78. PLATINUM Munitalp 4, Lu Pitman 7gbnb
79. GOLD log'd T, glod 1, ogl'd 1, LDGO 10aid
80. MERCURY Em Curry 3td (Emma Curry)
81. THALLIUM Mill Utah 9usgb, Tim U. Hall 8
82. LEAD dale 1, Eldad 3db, deal 1, dael 1, Leda 3, adel 1, Dela 3rd78, Elda 3tig
83. BISMUTH Thimbus 3tig, Tim Bush 3td
84. POLONIUM Mo Poulain 7nyt, Mo Lupino 7, uploomin' 11
85. ASTATINE sanitate 1, a satinet 11, a steatin 11, in a state 1, satanité 5F, tea stain 2
86. RADON adorn 1, and/or 1, or/and 1, drona 1, NORAD 10wbd, andro- 11, Rodna 3tig, ronda 5S, nardo 5S, Ardon 3tig, Donar 3tig, Donar 3nyt, Drano 3tm, Ordan 3tig
87. FRANCIUM Ina C. Frum 8nyt
88. RADIUM aridum 5L, márída 5S, Marudi 3tig, Murdia 3ca
89. UNIMATIC Unimatic 3tm, minu(t/c)ia 5L, 5-11
90. THORIUM Tim O. Uhr 8nyt
91. PROMACTINUM Court I. Pitman 8nyb
92. URANIUM Una Muir 7
93. NEPTUNIUM menu-input 2, Ume Putnin 7, unpinetum 2
94. PLUTONIUM Upton I. Ulm 8nyt, Upton I. Lum 8, Lupinotum 2-5G
95. AMERICIUM Mia M. Curie 8nfyb
96. CURIUM Mucuri 3tig
97. BERKELIUM umberlike 2, brumelike 2
98. CALIFORNIIUM fornicalium 4L, Muir I. Falcon 8wnb
Three element names may be unfamiliar to the reader. EKARHENIUM is a temporary designation for element 107, pending confirmation of its discovery by the Soviet scientist G. Flerov. The name HYPON has already been assigned to the as yet undiscovered element 118, according to Hackh’s Chemical Dictionary (4th edition, 1969). The same source states that the correct name for element 0 (consisting entirely of neutrons) is NEUTON.

The soul or essence of a word or name resides in its consonants rather than its vowels, which are merely a kind of cement holding the consonants together. This is in line with the principle of the Tetragrammaton, where the name of Jehovah is visibly represented only by the four consonants JHVH. This theory enables one to posit a concept called the virtual transposition. In a virtual transposition, the total number of letters remains the same, all consonants remain the same, and all vowels except one remain the same; this vowel is permitted to be transformed into any other vowel, including Y. For example, by changing an A to an U, RUMANIA virtually transposes to URANIUM.

In practice, certain refinements on this basic principle are permitted. One refinement stipulates that, if a word or name happens to contain two identical vowels, both of them may be converted to another vowel, provided that they are replaced by a pair of identical vowels. Another refinement permits closely related consonants to be interchanged: between corresponding voiced and unvoiced consonants, such as B for P or D for T, and between other closely related consonants such as L for R or M for N. Finally, if a word includes one consonant of one kind and two consonants of another kind, it is allowable to shift the excess so that there are two consonants of the first kind and only one consonant of the second kind.

To show what can be done, here is a selection of virtual transpositions of element names:

- **AMERICIUM** Erica Muir 7
- **BERYLLIUM** Beryl Muir 7
- **CADMIUM** modicum 1
- **CALCIUM** comical 1
- **CALIFORNIIUM** fornacalium 5L
- **CHROMIUM** chummier 1
- **COLUMBIUM** bucolicum 5L
- **EINSTEINIUM** unanimities 2
- **EUROPIUM** opiumier 1
- **FERMIUM** muffer 1
- **HYDROGOL** dispel 1
- **LAWRENCIUM** Lucy Merwin 7
- **MAGNESIUM** unseaming 1
- **MOLYBDENUM** unmobbedly 2
- **NEODYMIUM** Ione Mundy 7

PALLADIUM
- PLATINUM
- PROMETHEUM
- TELLURIUM

Finally, transaddition thus is also transaddition.

- **ALUMINIUM**
- **AMERICIUM**
- **BERYLLIUM**
- **CADMIUM**
- **CALIFORNIIUM**
- **CHROMIUM**
- **COBALT**
- **COLUMBIUM**
- **CURIUM**
- **DYSPROSIUM**

Is this the way to react to successful virtual compounds?
Finally, here is a list of very short but previously unpublished transadditions upon the chemical element names. Words underlined are letter insertions or letter prefixions rather than genuine transadditions.

<table>
<thead>
<tr>
<th>Element</th>
<th>Transaddition</th>
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| Alumini
| umatum 5L |
| Americi
| um, Miller 7 |
| Cadmi
| um, pump 1 |
| Chromi
| um, Mich. 9-10 |
| Cobalt | back lot 1 |
| Columbi
| um, MI 9-10 |
| Curi
| um, Urumchi 3 |
| Diysprosio
| m, Rudy Simpson 7 |
| Eisenstei
| um, Urumchi 3 |
| Eka rheni
| um, Muir E. Hanken 8 |
| Europi
| um, Eutropium 6L |
| Fermi
| um, fremitum 5L |
| Hydrogen | greyhound 1 |
| Indium | Numidia 3 |
| Iridi
| um, rhipidium 1 |
| Krypton | Repton, KY 9-10 |
| Kurchatovi
| um, Maud Turkovich, Kurmacheva, Soviet Union 9 |
| Lanthanum | lanthanum 1 |
| Lawrenci
| um, Lucia Merwin 7 |

Is this, at last, the end of the long, long trail? No, all I have done is to reach another starting point. There is a literally infinite number of successive improvements that can and must be made in the individual components of the above list, each improvement typically being of
almost infinitesimal magnitude. Petr Demianovitch Ouspensky closed his classic work, Tertium Organum: A Key to the Enigmas of the World, with the thought that the meaning of life is found in eternal search. Let future logologists search -- I rest in peace.

REFERENCES


as Smith, Eladon C. American Surnames, New York: Chilton Book Company, 1969


cad Cooper, William R. An Archaic Dictionary From the Egyptian, Assyrian, and Etruscan Monuments and Papyri, London: Bagster, 1876

caw Cram’s Modern Atlas of the World (New, Unrivaled, Indexed), Chicago and New York: George F. Cram, 1903


usgb Sixth Report of the United States Geographic Board, 1890 to 1932,
A NEW BOOK ON LANGUAGE PLAY

Word Ways does not ordinarily review college-level textbooks on linguistics, but an exception must be made for the paperback book Language Play: An Introduction to Linguistics (Newbury House Publishers, Rowley, MA, 1978; $9.95). Written by Don and Alleen Nilsen of Arizona State University, the book is organized around the concept of language play, defined as "any use of language that is creative and unusual, that has a purpose beyond the mere communication of basic information." Their two basic premises are (1) a good percentage of what we hear or see in the mass media is at least partially language play, the newest frontier of American English, (2) it is largely because of advertising and what it does to support the mass media that language play is such a significant development. The remainder of the book elaborates on these premises with examples organized in classic linguistic fashion -- sound, spelling, word-formation, sentence-formation, meaning.

Academic writers ordinarily look askance at writers of advertising copy because the latter are all-too-willing to break rules of spelling or grammar to create an attention-getting message, accelerating the process of language change (some would say, of language degradation). It is unusual to find a linguistics text which points out that copy writers, far from being illiterate hacks, are among the most skilled and creative users of language in America today, valuing its power and flexibility fully as much as their academic colleagues. As the authors point out, language change is initiated or aided by many different groups, and cannot be blamed solely on advertising; they cite the pragmatic view that language is a tool of man's own making which should be altered to fit new communications needs, not cast in an unchanging mold. (How many people know the proper use of shall and will, a grammatical nicety apparently little-needed in contemporary discourse?)

Washington, D.C., United States Government Printing Office, 1933


gbnb 3500 (Girls' and Boys') Names for Baby, New York: Dell Publishing Company, Dell Purse Book # 8859, 1962