"Nonmorphological Derivations" and the Four Main English Learner's Dictionaries

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Abstract: This article addresses the problem of "nonmorphological derivations" in English and its consequences for pedagogical lexicography, i.e. learner's dictionaries. The term "nonmorphological derivation" refers to cases such as *sun — solar*, *moon — lunar*, *cat — feline*, and in general to all cases where instead of, or in addition to, native derivational processes (*sunny*, *moony*, *catty*) English frequently uses borrowings especially from Romanic sources (Latin/French) and from Greek. The paper suggests that for such cases learner's dictionaries should give more active guidance and support, in view of the fact that many foreign learners will be from linguistic backgrounds where different, more native morphological processes are more common. An appendix lists the major examples of such derivatives.

Keywords: LEARNER'S DICTIONARIES, PEDAGOGICAL LEXICOGRAPHY, DICTIONARY DESIGN, FOREIGN LANGUAGE TEACHING, MORPHOLOGY, MORPHOLOGICAL OPACITY AND TRANSPARENCY, STRUCTURE AND CHARACTER OF THE LEXICON.

Opsomming: "Niemorfologiese afleidings" en die vier vernaamste Engelse aanleerderswoordeboeke. Hierdie artikel bespreek die probleem van "niemorfologiese afleidings" in Engels en die uitwerking daarvan op die pedagogiese leksikografie, d.w.s. aanleerderswoordeboeke. Die term "niemorfologiese afleiding" verwys na gevalle soos *sun — solar*, *moon — lunar*, *cat — feline*, en oor die algemeen na alle gevalle waar in plaas van of ter aanvulling van, natuurlike afleidingsprosesse (*sunny*, *moony*, *catty*) Engels dikwels ontlenings gebruik veral aan Romaanse bronne (Latyn/Frans) en aan Grieks. Die artikel doen aan die hand dat aanleerderswoordeboeke in sulke gevalle meer aktiewe leiding en bystand behoort te gee, gesien die feit dat baie van die vreemde aanleerders van linguistiese agtergronde sal wees waar ander, meer inheemse morfologiese prosesse meer algemeen is. 'n Bylae lys die belangrikste voorbeelde van sulke afleidings.

Sleutelwoorde: AANLEERDERSWOORDEBOEKE, PEDAGOGIESE LEKSIKOGRAFIE, WOORDEBOEKONTWERP, VREEMDETAALONDERWYS, MORFOLOGIE, MORFOLOGIESE ONDEURSIGTIGHEID EN DEURSIGTIGHEID, STRUKTUUR EN KARAKTER VAN DIE WOORDEBOEK.

1. Introduction[1]

English, as is well-known, unites strands of vocabulary from many sources, due to the checquered political, social, cultural and therefore linguistic history

of the English-speaking peoples. One of the specific consequences of this history is the remarkably rich, versatile and flexible vocabulary of English, which often gives the user a choice of several words with subtle and useful differences in meaning. One of the *disadvantages* of this development is the frequently opaque character of the English vocabulary, which not only presents problems to the learner but occasionally to the native speaker as well.[2]

The mixed origins of English have led to a situation where words with obvious semantic links are frequently *formally* totally unrelated in cases where other languages such as Dutch and German have both a semantic and a formal link by means of morphological derivation and composition. Take for example the adjective to the Dutch noun *koning* "king", which is *koninklijk* "royal, regal". This adjective is semantically clearly motivated and comparatively transparent, because it is morphologically (so *formally*) largely nonopaque,[3] whereas the English near-equivalents *royal* and *regal* are not, though the *-al* suffix to some extent does at least suggest that the words are adjectives. The fact that English, in addition, also has the transparently derived adjective *kingly* demonstrates on the one hand the richness of the English vocabulary, and on the other hand the choices with which the speakers of English, and especially the nonnative ones, are confronted. For though the three words are semantically related, they are certainly not synonymous.

The mainly French, Latin and Greek foreign heritage of the English language has made huge zones of its vocabulary (relatively) unmotivated, or one might also say, morphologically "opaque", i.e. morphologically and hence semantically unanalysable. As a further example, the words *opaque* and *transparent* themselves might be considered. The "derived" nouns to these adjectives are *opacity* and *transparency* respectively, somewhat less than productive formations. The adjectives themselves are totally unmotivated as well, apart maybe from the fact that the *-ent* of *transparent* may be intuited as an adjectival ending. Perhaps the "prefix" *trans-* also adds some modest amount of semantic motivation, or at least some suggestion of morphological complexity.

The Dutch equivalents are *doorzichtig* and *ondoorzichtig* respectively, meaning roughly "through-see-able" and "un-through-see-able".[4] The derived nouns are *doorzichtigheid* and *ondoorzichtigheid*, "through-see-able-ness" and "un-through-see-able-ness", formed by means of adding the nominalising suffix *-heid*. German, of which the vocabulary in this respect is often even more systematic and hence morphologically transparent than that of Dutch, offers the example of the four words *Jahr*, *Jahrzehnt*, *Jahrhundert* and *Jahrtausend*, for which English has *year*, *decade*, *century* and *millennium*, which concisely sum up the origins of English (from Germanic, Greek, and Latin (twice) respectively).[5]

Though speakers of English may consider such words ponderous, this is certainly not the view of speakers of other languages such as Dutch and German, who find it strange that the adjective to *sun* is *solar*, as in *solar eclipse*, which to them is simply "sun-darkening" or "sun-darkness", cf. Dutch *zonsverduistering* and German *Sonnenfinsternis* respectively.[6] The words *sun* and *solar* still have the initial consonant in common, but the situation is more difficult in

most other cases, for example in *filial devotion*, where there is phonetically no resemblance between *child/son/daughter* and *filial*. Though in such cases learner's dictionaries often offer, by means of keywords in their sense definitions, the direction from adjective to noun (*solar* > *sun*), the opposite normally does not hold. In this article, I intend to examine to what extent the users of such dictionaries can, or cannot, find their way to the nonmorphologically derived words. By "nonmorphologically derived", I somewhat loosely mean cases such as (*sun* >) *solar*, (*dog* >) *canine*, etc. and generally similar cases, where — to put it informally — the semantic description of the "derivative" includes, or refers to, the semantic description of the morphologically absent "base", without there being any formal morphological link, as there clearly is in *sun* > *sunny*. After examining the four main learner's dictionaries, I will formulate a proposal as to how the prevalent situation can be improved and remedied.

2. "Nonmorphological derivations" and the learner's dictionaries

The four best-known learner's dictionaries, the "big four" (OALD, CC, CIDE, LDOCE), are intended for both encoding and decoding purposes, though it seems that recently the latter has been gaining ground at the expense of the former (Cowie 1999: 176). In my opinion, however, one of the tasks of such dictionaries is to make learners (more) aware of the major links between vocabulary items. In this section, I intend to examine how the four dictionaries manage, or do not manage, to link "base" and "derivative" in cases such as *sun* > *solar*. In other words, how can learners speaking Dutch, German or any other language that far less often than English uses Latin and Greek "derivations", find their way from *sun* to *solar*, *moon* to *lunar*, etc. without using a bilingual dictionary? To this end I have checked the entries for a number of test cases drawn from a larger collection listed in the appendix. This list of test cases is mainly based on Van der Meer (2000) with some recent additions.

The following conclusions can be drawn. In most cases it is not too difficult to discover to which English "base" word a Latin or Greek "derived" form belongs, since the sense definitions usually mention the "base", e.g. *feline* (in all four dictionaries) mentions *cat*.[8] It is therefore possible to find one's way back to the "base". However, the compilers of these dictionaries seem unaware that many foreign learners speak languages which show semantic links much more clearly by means of their morphology. Such learners naturally tend to expect the same in English. The consequence of this is that they find it impossible to trace adjectives such as *solar* and *lunar* when starting from the "bases" *sun* and *moon*. Hence any user wishing to form words or word combinations involving *moon* is left guessing and has to consult a bilingual dictionary.

Occasionally, however, certain links *are* presented, but this is not due to a real policy but entirely coincidental, and based on synonymy rather than derivational considerations. Thus, at *body* CIDE uses *physical structure* as a "guideword", which would allow the attentive learner to find their way to *physical*. In other cases certain jumps are made possible from the Anglo-Saxon derived

form to the foreign "derived" adjective, as in the case of *eatable*, where both OALD and CIDE cross-refer the user to *edible*. Reversely, CIDE and LDOCE, but not OALD, also allow the user to go from *edible* to *eatable*.

CIDE, in a quite unpredictable and unexplainable way, occasionally offers some help: under *flower* the reference "See also FLORAL" is given. Since CIDE, under *father*, *mother*, *brother* and *moon*, for example, does not provide such a reference, this is apparently a random, though not quite unique, hit: CIDE does the same under *hell* (where there is a cross-reference to *hellfire*; *hellhole*; *infernal*) and under *night* (where there is a rather unexpected reference to *nocturnal*).[9]

There are also some apparently random cases where a cross-reference is given from the one foreign adjective to the other, as at *regal* and *royal*: from *regal* the OALD gives a reference to *royal*, and *vice versa*. Likewise, LDOCE refers *royal* to *regal*, though, rather inconsistently, not back again. For all four dictionaries the *male*, *masculine*, *female*, *feminine* group also involves a certain amount of cross-referencing (in the case of CC in the extra column, as was to be expected).[10]

The emerging picture is clear, however: not one of the four learner's dictionaries is really concerned with helping the user find the way from *moon* to *lunar* and similar cases, though there are some random exceptions. The possibly relevant cross-references characteristically involve synonymy instead of derivational relations. Even in OALD, which in its latest edition has introduced the novelty of "word families" that "show all words related to the headword", this usually means only families linked by strictly formal, morphological, relations. The only other family members recognised by OALD are synonyms and antonyms. Moreover, the word family boxes are comparatively rare.

One would have expected that CIDE, the only learner's dictionary left with nesting of derived forms whenever alphabetical order is not disturbed too dramatically, and hence with a certain awareness of important semantic links, would have shown the greatest awareness of the strong links between e.g. *moon* — *lunar*, yet this is not the case. The links that do occur are obviously haphazard.

3. Suggestions for improvement

Learner's dictionaries, with their focus on encoding and vocabulary building in addition to decoding, should have shown a greater awareness of the need of foreign learners in this particular respect. The character of English, with its large Latin and Greek vocabulary, is such that it often relies on foreign roots and borrowings in comparison with other languages with a different linguistic history. Learners from other European languages with a certain common classical linguistic heritage may still be able to overcome this particular hurdle in English, since not all English "nonmorphological derivatives" will be unfamiliar to them. Yet they too would be better served by a learner's dictionary which does recognise this problem. And learners from non-European backgrounds would, I suspect, need help in this respect even more.

This particular problem could therefore be solved in one of two possible ways. The first and most natural possibility would be to make liberal use of cross-references from e.g. *sun* to *solar*, possibly, though not necessarily, from *sun* to *sunny*, and certainly also from *sunny* to *solar* and *vice versa*. To the extent that the definitions and possible examples would not sufficiently discriminate between *solar* and *sunny* short usage notes might be inserted explaining when to use which. A second, though much less preferred solution would be to list the most important cases in an appendix to the dictionary. Its disadvantage would be that dictionary users usually do not seem to consult such appendices because they are often unaware of them.

4. Conclusion

In the appendix, I have listed the 166 words with "nonmorphological derivatives" I was able to find by introspection and by more direct searches. A number of them will not be directly relevant to learners but in my opinion most of them will. Since I have also included cases such as *calf — veal*, the notion of "derivative" should not be interpreted too strictly. The number of such cases is, however, small, and the majority of cases listed are examples of "derived" adjectives — sometimes verbs — taken from either Latin (directly or by way of French) or Greek, thus from a foreign source. Frequently, the base is an Anglo-Saxon word (e.g. *blood*) or an originally borrowed word (e.g. *bishop*, itself ultimately from Greek) which has become part of the ordinary "core" vocabulary. The "nonmorphological derivatives" are then occasionally the less adapted forms from the same source (such as *episcopal*) or forms from a totally different source (e.g. *ventral*, adjective to *belly*).

The list clearly reveals the character of the English vocabulary: derived from a number of highly diverse sources and, in addition to and alongside morphological derivation proper for its word formation, frequently using borrowings from another language. The degree of morphological transparency is therefore irregular, depending on whether there is real derivation (e.g. *breakable*) or not (e.g. *fragile*). Since *breakable* clearly connects with *break*, it is not only morphologically but also semantically dependent on *break* in a way *fragile* is not. English, in comparison to Dutch, seems to have a vocabulary with a higher percentage of what can be termed "semantically independent" words, by which I mean words such as *fragile* which have no morphological links. It also seems that English more often has a separate word for each different meaning. Thus, where most languages would say "pig meat", English has *pork*, and where many languages would have a derived adjective "feelable", English has *palpable* and *tangible*. This has, as I have argued, consequences for learners from languages with a different character. It will be interesting to see how the morphologically derived and "nonmorphologically derived" forms have semantically diverged (or not) and what particular divergence patterns can be observed.

Appendix

List of words and their "nonmorphological derivations"

1. air — aerial (assault, photography)
2. animal — bestial (cf. beast)
3. ape (cf. monkey) — simian (forehead)
4. avoid — inevitable, (un)avoidable
5. back — dorsal (fins)
6. bad — deteriorate (health), worsen (political situation)
7. ball — spherical (object)
8. beast — bestial (savagery), beastly (cf. animal)
9. beginning — initial (stages)
10. believe — credible (alternative), believable (explanation)
11. belly — ventral
12. bend — flexible (rules), bendable
13. bird — avian (malaria)
14. bishop — episcopal (duties)
15. blood — sanguinary (wars), bloody
16. body — physical (defect), corporeal (needs), corporal (punishment), somatic (cells), bodily (functions)
17. bone — ossiferous, bony; ossify
18. brain — cerebral (haemorrhage), brainy
19. break — fragile (china, peace), breakable
20. brother — fraternal (feelings), brotherly
21. calf — veal
22. carry — portable (phone), carryable
23. cat — feline (grace), catty (comment)
24. century — centennial, centenary (celebrations)[11]
25. chalk — calcareous (shells), chalky
26. chest — pectoral (muscles), chesty
27. child — infantile (diseases, behaviour), puerile (jokes, behaviour), childish, childlike
28. church — ecclesial (teachings), ecclesiastic(al) (history), churchy
29. citizen — civil (strife, disobedience)
30. city — urban (development)
31. coast, shore — littoral (forests)
32. compel — compulsive (liar, eating), compelling (novel), compulsory (education, subject, test)
33. correct — corrigible
34. country(side) — rural (community), rustic (farmhouse, idyl)
35. cow — bovine (diseases, stupidity); beef
36. daughter — filial (duties), daughterly
37. day — diurnal (rhythms, clock), daily

38. death — lethal (weapons, blow), mortal (wound, enemy), deathly, deadly
39. deceive — deceptive (appearances)
40. do — feasible, practicable; doable
41. dog — canine (tooth, behaviour), doggy, doglike
42. donkey, ass — asinine (remark)
43. ear — aural (test)
44. earth — terrestrial (TV channels), earthly, earthy
45. east — oriental (art), easterly, eastern
46. eat — edible (snails, fungi), eatable
47. eighty — octogenarian[12]
48. empire — imperial
49. enemy — hostile (attitude), inimical (climate, conditions, influence)
50. eagle — aquiline
51. eye — ocular (defects)
52. fast — accelerate (rate of growth), speed up
53. father — fatherly, paternal (authority); fatherhood, paternity
54. feel — palpable, tangible
55. fever — febrile (activity), feverish
56. flesh — carnal (desires, knowledge), fleshy
57. flower — floral (pattern), florid (style), flowery
58. forget — oblivious; forgetful
59. fox — vulpine; foxy
60. friend — amicable (settlement), friendly
61. god — divine (wisdom, inspiration), godlike, godly
62. good — improve (health), ameliorate (working conditions)
63. hair — hirsute (animals), hairy
64. hear — audible
65. heart — cordial (smile), cardiac (arrest), hearty
66. heat — thermal (energy)
67. heaven — celestial (bodies, beauty), heavenly
68. heavy — gravity, heaviness
69. hell — infernal (heat, machine), hellish
70. horse — equine; hors(e)y
71. ice — glacial; icy
72. iron — ferrous (metals), iron (constitution, determination)
73. island — insular
74. joke — jocular (remarks), jocose, jokey
75. king — regal (splendour), royal (family), kingly (bearing) (cf. queen)
76. language — linguistic, lingual
77. laugh — risible, ridiculous, laughable
78. law — legal, juridical
79. lie — recumbent (figure), lying
80. life — vital (functions, organs), lively
81. light — luminous (paint), illuminate

82. lion — leonine (head)
83. lips — labial (sounds), lippy
84. love — amorous (looks, advances), loving, lovely
85. lung — pulmonary
86. man — male (child, voice); masculine (face, word); virile (body), manly; human, humane[13]
87. many — multitude, mass; multiply, proliferate
88. marriage — nuptial (bliss, ceremony), connubial
89. marry — nubile; marriageable
90. middle — medial; median
91. milk — lactic, lacteal; milky
92. mind — mental (image, process)
93. mistake — erroneous (beliefs, conclusions), mistaken(ly)
94. money — pecuniary (gains, advantage), financial (gains), monetary
95. monkey (cf. ape) — simian (forehead), monkeyish
96. moon — lunar (eclipse)[14], moony
97. mother — maternal (grandfather, love), motherly; motherhood, maternity
98. mouth — oral (examination, sex), mouthy
99. move — mobile (phone, home), movable (goods, items)
100. neglect — negligible, neglectful
101. new — novelty, newness
102. night — nocturnal (visit, animal), nightly
103. north — boreal (forests), northerly (winds), northern
104. nose — nasal (voice, sounds), nos(e)y
105. old — senescence, senescent
106. owner — (proprietor) proprietorial (air, rights)
107. peace — pacific (community), peaceful; pacify
108. people — popular (vote, misconception, wisdom)
109. pig — porcine (aroma), piggish; pork
110. place — local (authorities, hero)
111. queen — regal (splendour), royal (family), queenly (bearing) (cf. king)
112. plough — arable
113. pope — papal; popish
114. punishment — penal; penalise
115. rain — pluvial (weather conditions), rainy
116. read — legible (signature, hand), readable
117. receive — receptive (audience, market), recipient, receiver
118. river — fluvial (deposits), riverine
119. river bank — riparian (wildlife); fluvial, fluviatile
120. rule — regular (routine, intervals)
121. salt — saline, salty (solution, taste)
122. sea — marine (biologist, pollution, habitat)
123. see — visible, seeable
124. sheep — ovine (offal), sheepish; mutton

125. shore — littoral
126. side — lateral (branch, pressure)
127. sight, see — visual (field, arts, image), sightly
128. sister — sisterly, sisterhood, sorority
129. sit — sedentary (life), sitting
130. skull — cranial (nerve, injury)
131. sleep — dormant (inflation, giant), somnolent (cat, village), sleepy, sleeping
132. slow — decelerate, slow down
133. snake — serpentine (course of a river), snaky
134. son — filial (duty, love)
135. sound — phonetic (alphabet, elements), phonic (skills), acoustic (properties, possibilities), sonic (waves, boom)
136. south — austral (winter), southern, southerly
137. space — spatial (awareness), spacious (room, kitchen), spac(e)y
138. spider — arachnoid, spidery
139. split — fissile, splittable
140. spring — vernal (equinox, grove)
141. star — stellar (constellations, performance, career), sidereal (day, zodiac), astral (bodies, navigation), starry
142. sun — solar (eclipse, temple), sunny
143. table — tabular (form)
144. three — *predet.* treble (the usual charges), *adj.* treble (line), triple (murder, jump), triplet(s)[15]
145. time — temporary (accommodation), temporal (perspective, distance), timely
146. tooth — dental (surgeon, treatment), toothy
147. touch — tangible, tactile, palpable; touchable, touchy
148. town — urban (development)
149. ree — arboreal (birds)
150. two — double (figures), duplicate
151. uncle — avuncular (manner)
152. understand — intelligible (English), understandable
153. voice — vocal (chords, performance)
154. wall — mural (design)
155. war — martial (arts, law), warlike
156. water — aquatic (sports, environment), aqueous (lotions), watery
157. west — occidental, westerly, western
158. whale — cetacean (anatomy)
159. winter — hibernal, wintry; hibernate, (over)winter
160. wolf — lupine (pack), wolfish
161. woman — womanly, female (animal), feminine (voice, figure), effeminate (manners), womanhood, femininity, womanliness
162. word — verbal (abuse, skills), verbose (style), wordy
163. world — global (warming, problems), mundane (life, matters), worldly
164. year — annual (salary, report), yearly

165. young — rejuvenate
166. youth — juvenile (delinquency, offender), youthful

Endnotes

1. This part of my article is an elaboration of Van der Meer (2000).
2. Cf. the frequent error of *mitigate against* instead of *militate against* in English newspapers, caused by the phonetic similarity of two otherwise formally opaque, i.e. morphologically unmotivated, words.
3. "Largely", because the (second) [k] in *konin**k**lijk* is due to historical conditions, and no longer productive.
4. Strictly speaking, *-zicht-* is a noun meaning "vision", so that the gloss might instead be "*through-sight-ish(-ness)*", etc.
5. See Fill 1980: 136 for this example. This quite original study compares English with German word transpaency. *Wortdurchsichtigkeit* in the title of Alwin Fill's book, to illustrate my point once again, translates literally as "word-through-see-able-ness".
6. Incidentally, the word *eclipse* itself, when compared with Dutch *verduistering* (consisting of the prefix *ver-*, the adjective *duister* and the nominalising suffix *-ing*) might also be called opaque and hence "unmotivated". This too is an example of how many loanwords reduce what might be called the "morphological content" of a language.
7. Aptly called "noncognate relationships" by Heuberger (2000).
8. In some cases, e.g. *aural*, the compilers themselves may not have felt any strong connection between *ear* and *aural*, since none of the four learner's dictionaries uses *ear* in the definition.
9. Also cf. *nose* where *nasal* is pointed out.
10. CC uses the extra column for synonyms and antonyms, so that this column occasionally provides the looked for "base".
11. Though strictly speaking this is Latin from Latin, I have included a couple of such cases because these derivations, too, are not so easy for foreign learners.
12. Also cf. *hexagenarian*, *septuagenarian* and of course *nonagenarian.*
13. Here man as a "human being" is meant.
14. There is even a futher complication in *selenography*, where the combining form *seleno-* (from Greek) is used, where Dutch, for example, would simply have *maanbeschrijving* "moon description".
15. Cf. *quadruplet (four)*, *quintuplet (five)*, *sextuplet (six)*, etc.

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