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On Imaginary English Dvandvas in Relational Adjectives

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1. Typologically Unavailable, but Derivationally Available?

- (1) Dvandva Compounds express “a new unity made up of the whole of the two entities named” (Bauer (2008: 2)).
- (2) Japanese Dvandvas (see Nishimaki (2022: 396))
 - a. *dan-jo* (male-female) ‘male and female’ cf. **male-female*
 - b. *fuu-fu* (husband-wife) ‘husband and wife’ cf. **husband-wife*
 - c. *shin-shin* (mind-body) ‘mind and body’ cf. **mind-body*
- (3) Dvandvas have typological significance because they are widely observed in Asian languages, but not in European languages.
(Bauer (2008), Arcodia et al. (2010), Shimada (2013, 2016))
- (4) “Dvandvas exist in stem-based languages [e.g., Japanese] but not in word-based languages [e.g., English].”
(Shimada (2016: 315), translation ours; see also Kastovsky (2006))
- (5) Relational Adjectives (RAs)
theatrical (< *theater* + *-ical*), *historical* (< *history* + *-cal*), *atomic* (< *atom* + *-ic*)
- (6) RAs with Combining Forms
 - a. *gastrointestinal* ‘of or related to the stomach and intestines’
 - b. *dorsabdominal* ‘relating to the back and abdomen’
 - c. *oesophagogastric* ‘of or relating to the oesophagus and the stomach’
 - d. *psychosomatic* ‘involving or depending on both the mind and the body’
(*OED*, *OALD*)

→These RAs appear to be derived from Neoclassical nominal dvandvas, which are supposed to be typologically unavailable in English (see (7)).

- (7) * *gastrointestine* ‘(a sum of) the stomach and intestines’ (Shimada (2023: 29))
- (8) How can the RAs like those in (6) accommodate an “imaginary” dvandva as a base?
- (9) Nagano (2013, 2015) analyzes RAs as prenominal variants of PPs. Under this analysis, the RAs in (6) also have PPs as their underlying structures, where the nouns can be safely coordinated as in ordinary PPs (e.g., in *Europe and Asia*).

2. Framework: Nagano (2013, 2015)

- (10) a. *presidential plane* b. *plane of the president*
- (11) a. *theatrical dancer* b. *dancer in the theater*
(Nagano (2013: 123; 2015: 6), with slight modifications)

(12) * *a* [PP *near* [DP *Boston*]] residential area (Escribano (2004: 2))

(13) Conflation of N into P (P: category-shifting functional category (Baker (2003)))

a. [P [Comp N]]

b. [N_i + P [t_i]]

(Nagano (2013: 125))

→Given that conflation derives a structure with only one X⁰ node (Baker (2003: 168)) and that the head P is responsible for changing N to A, the resultant structure [N+P] constitutes A⁰ (Nagano (2013: 126)). [N+P] is phonologically realized as an RA, as represented in (14).

(14) [THEATER + P_{in}] > *theatrical* (Nagano (2015: 10))

(15) Motivation behind the Conflation: “direct modifiers should take a form that is fit for agreement with the noun” (Nagano (2013: 117)).

a { *ten-year-old* / **ten-years-old* } *girl*

(*a girl who is* { *ten years old* / **ten-year-old* })

(Nagano (2013: 117))

→A singular form, a default word-form without a specific Number feature, which does not interfere with the modifier-head noun agreement (Watanabe (2010)). A⁰-size modifiers satisfy this condition.

3. Analysis: Coordination under P

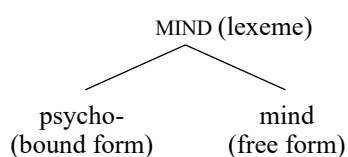
3.1. Proposal

(16) If RAs are derived from the PP structure in (13a), then it is not surprising that coordinated nouns occur in the N position.

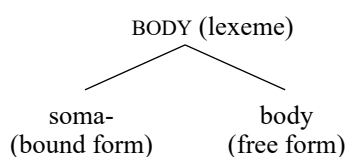
(17) A combining form is a bound word form of a given lexeme.

(Nagano and Shimada (2014: §4.2))

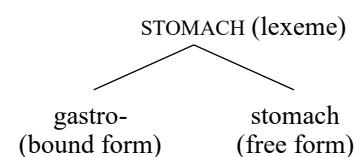
(18)



(19)



(20)



((18): Shimada and Nagano (2011: 83))

(21) Collateral Adjectives

a. *dental* *disease* < *disease of teeth* (Nagano (2013: 123))

b. *vernal* (~ *spring*), *aestival* (~ *summer*), *feline* (~ *cat*) (Koshiishi (2011: 6))

→Direct modification is the environment that often triggers suppletion.

(22) a. *gastrointestinal* *condition* b. *condition of the stomach and intestines*

(23) a. [STOMACH&INTESTINE + P_{of}] > *gastrointestinal*

b. [MIND&BODY + P_{of}] > *psychosomatic*

(24) “English belongs to the set of languages in which new neoclassical formations can be formed.” (Panoková and ten Hacken (2020: 45–46))

3.2. Supportive Evidence

3.2.1. Coordination for the Prenominal Modification?

(25) *mother-child relationship, the Leeds-Newcastle match* (Bauer (2008: 6))

(26) a. ?* *psycho-soma relationship* b. *psycho-somatic relationship*
cf. *mind-body relationship*

3.2.2. The Absence of Co-synonymic and Co-hyponymic Dvandvas

(27) If two combining forms could be directly combined, it would be expected that the semantic subtypes of dvandvas attested in dvandva-rich languages could also be observed in English.

(28) Co-synonymic: [Lezgian] *kar-k'walax* (job work) 'job, business'
(cited from Bauer (2008: 10))

(29) a. * *gastrostomachic* < *gastro-* + *stomach*
b. * *enterointestinal* < *entero-* + *intestine*

(30) Co-hyponymic: [Punjabi] *bas-kaar* (bus-car) 'vehicles'
(cited from Bauer (2008: 9))

(31) [Japanese] *shin-shin* (mind-body) 'mind and body' / 'every fiber of one's being'
→The potential counterpart to this dvandva, *psychosomatic*, simply denotes the sum of *mind* and *body*.

(32) *gastrointestinal tract* = *digestive tract*

(33) *gastrointestinal radiography* = *radiography of the stomach and intestines*
≠ *radiography of the entire digestive tract*

(34) Compromise: *north-east* (Bauer (2008: 10))

(35) a. *theadric*
'[...]; partaking of both the human and the divine' (OED, s.v. *theadric*)

b. *therianthropic*
'Combining the form of a beast with that of a man; of or pertaining to deities represented in the combined forms of man and beast, as dog- or eagle-headed divinities.'
(OED, s.v. *therianthropic*)

4. Implications from the Lack of Neoclassical Dvandvas

(36) Verbal Compounds in English are typologically unattested in the sense that N-V compounds are not directly formed by two lexemes (see (37)). However, they can be obtained by applying back-formation to synthetic compounds (see (38)).

(37) * *Mary truck-drives all day long.* (Ackema and Neeleman (2004: 61))

(38) a. *to air-condition*_V < *air-conditioning*_N
b. *to tape-record*_V < *tape-recorder*_N

- (39) Why is back-formation applicable to synthetic compounds but not to the RAs in (6)?
 **gastrointestine*_N < *gastrointestinal*_A
- (40) Possible Answer (i): Blocking by the phrasal competitor
 a. **gastrointestine* vs. *stomach and intestines*
 b. **male-female* vs. *male and female* (cf. Nishimaki (2022))
- (41) Possible Answer (ii): RAs are the realization forms that the structure [P+N] is forced to take in the syntactic context of direct modification. In this sense, the formal alternation from PP to RA is “closer to inflection” (Nagano (2013: 113)), although the resulting word has the status of a derivative.
- This difference may determine the applicability of back-formation; the outputs of syntactic context-triggered (i.e., inflection-like) word-formation, but not those of syntax-/semantics-driven word-formation, are likely to resist undergoing back-formation.
- (42) Myers’ Generalization: “[N]o derivational suffixes may be added to a zero-derived word, just as no such suffix may be added to an inflected word.” (Myers (1984: 66))

References: Ackema, Peter & Ad Neeleman. 2004. *Beyond Morphology: Interface Conditions on Word Formation*. Oxford: Oxford University Press. / Arcodia, Giorgio F., Nicola Grandi & Bernard Wälchli. 2010. Coordination in Compounding. In Sergio Scalise & Irene Vogel (eds.), *Cross-disciplinary Issues in Compounding*, 177–197. Amsterdam: John Benjamins. / Aronoff, Mark. 1994. *Morphology by Itself: Stems and Inflectional Classes*. Cambridge, MA: MIT Press. / Baker, Mark C. 2003. *Lexical Categories: Verbs, Nouns, and Adjective*. Cambridge: Cambridge University Press. / Bauer, Laurie. 2008. Dvandva. *Word Structure* 1. 65–86. / Escribano, José Luis González. 2004. Head-Final Effects and the Nature of Modification. *Journal of Linguistics* 40. 1–43. / Kastovsky, Dieter. 2006. Typological Changes in Derivational Morphology. In Ans van Kemenade & Bettelou Los (eds.), *The Handbook of the History of English*, 151–176. Oxford: Blackwell. / Koshiishi, Tetsuya. 2011. *Collateral Adjectives and Related Issues*. Bern: Peter Lang. / Myers, Scott. 1984. Zero-derivation and Inflection. In Margaret Speas & Richard Sproat (eds.), *MIT Working Papers in Linguistics* 7, 53–69. / Nagano, Akiko. 2013. Morphology of Direct Modification. *English Linguistics* 30(1). 111–150. / Nagano, Akiko. 2015. Eigo-no Kankei-Keiyoshi (Relational Adjectives in English). In Tetsuo Nishihara & Shin-ichi Tanaka (eds.), *Gendai-no Keitairon to Onseigaku/On'inron-no Shiten to Ronten* (Perspectives and Arguments of Present-day Morphology and Phonetics/Phonology), 2–20. Tokyo: Kaitakusha. / Nagano, Akiko & Masaharu Shimada. 2014. Morphological Theory and Orthography: Kanji as a Representation of Lexemes. *Journal of Linguistics* 50. 323–364. / Nishimaki, Kazuya. 2022. Coordinated Phrases as Dvandas: A Competition-Theoretic Perspective. In Lotte Sommerer & Evelien Keizer (eds.), *English Noun Phrases from a Functional-Cognitive Perspective*, 395–427. Amsterdam/Philadelphia: John Benjamins. / Panocová, Renáta & Pius ten Hacken. 2020. Neoclassical Compounds between Borrowing and Word Formation. In Pius ten Hacken & Renáta Panocová (eds.), *The Interaction of Borrowing and Word Formation*, 32–48. Edinburgh: Edinburgh University Press. / Shimada, Masaharu. 2013. Coordinated Compounds: Comparison between English and Japanese. *SKASE Journal of Theoretical Linguistics* 10(1). 77–96. / Shimada, Masaharu. 2016. Eigo-ni okeru Toifukugogo-no Seiki-nitsuite (The Occurrence of Coordinated Compounds in English). In Yoshiki Ogawa, Akiko Nagano & Akira Kikuchi (eds.) *Kopasu-kara Wakaru Gengohenka/Hen'i-to Gengoriron* (The Linguistic Change / Variation as seen from Corpora, and Linguistic Theories), 307–323. Tokyo: Kaitakusha. / Shimada, Masaharu. 2023. Dvandva Fukugogo-no Kozo-o Kangaeu (Considering the Structure of Dvandva Compounds). In Hiroshi Yonekura, Akiko Nagano & Masaharu Shimada (eds.), *Eigo-to Nihongo-niokeru Toifukugogo* (Coordinated Compounds in English and Japanese), 191–239. Tokyo: Kaitakusha. / Shimada, Masaharu & Akiko Nagano. 2011. *Zi-nouns in Japanese and Related Issues. Studies in Language and Literature: Language* 59. 75–106. / Watanabe, Akira. 2010. Eigo-no Koto-wa Eigo-dake Miteitemo Wakaranai—Keiyoshi-o Megutte (English from a Typological Viewpoint: The Case of Adjectives). Lecture delivered at Tsuda College.
 OALD: *Oxford Advanced Learner's Dictionary* <<https://www.oxfordlearnersdictionaries.com>>
 OED: *Oxford English Dictionary Online* <<https://www.oed.com/>>

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