The curious case of a two-headed phrase: the symmetrical syntax of co-compounds

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Background. Coordinative compounds (co-compounds, henceforth CCs), available e.g. in Hungarian and Khanty (Uralic; all data elicited), are pairs of morphosyntactically parallel and semantically related elements (Wälchli 2005). This is exemplified in (1-3) for Hungarian:

(1) *János adta-vette a használt autókat.* (2) *Anti fel-alá-sétált.*
     John sold-bought the used cars   Tony up-down-walked
     'John was trading used cars.'   'T. was walking around.'

(3) *János megosztotta velem ügyét-baját.*
     John shared me.with affair.3SG.ACC-problem.3SG.ACC
     'John shared all his concerns with me.'

CCs have mostly been analysed as asyndetic coordination. In contrast, we argue that CCs do not involve coordination and, instead, are an instance of two heads undergoing Merge and being dominated by a shared layer of functional projections (cf. Borise & É. Kiss 2022). While endocentricity and the projection principle (Chomsky 1993) have been taken to mean that *exactly* one X^0 projects and heads a phrase, we argue that, as long as certain conditions (that CCs are subject to) are met, a two-headed phrase is unproblematic for the standard theoretical assumptions.

Data. CCs consist of juxtaposed lexical elements (1-3). The two components of a CC are obligatorily adjacent and closely related semantically, e.g., as taxonomic sisters (3) or antonyms/reverses (1-2). Contextually licensed CCs (e.g., the two protagonists of a story), are possible in Khanty (not in Hungarian), but here, too, a semantic relationship is required (7). In both languages, inflectional morphemes appear on both elements, with strict morphological parallelism (4, Hungarian; cf. 3; in Khanty CCs formed by countable nouns, this is manifested by obligatory dual marking, 7). An overt coordinator is prohibited (5, Surgut Khanty):

(4) **ügy-é-t - baj-a-i-t*   (5) *xɐ:nti xo (*pɐ:nə) xɐ:nti ne:*
     affair-3SG-ACC – problem-3SG-PL-ACC   Khanty man and   Khanty woman
     intended: 'his concerns'   '(Kh.) people (lit. Kh. men – Kh. women)

Analysis. We propose that a CC is formed by two syntactic heads undergoing Merge, and the morphological properties of CCs are a by-product of agreement of both CC-components with a c-commanding head. The parallel morphology results from M(orphological)-Merger (Halle & Marantz 1993), with the affixes lowering to the heads post-syntactically. We support this analysis by demonstrating that (i) if a complement is present, the two CC-components necessarily share it and (ii) any higher functional projections necessarily apply to/modify both CC-components. We further (iii) address the issue of labelling and (iv) provide arguments against treating CCs as asyndetic coordination, exocentric compounds, *pace* Scalise et al (2019), or serial verb-like constructions (the latter two points not shown here). Finally, (v) we discuss the two semantic types of CCs, which we label conjunctive and superordinating, and address the non-referentiality/quantificational nature of the superordinating nominal CCs.

(i) In Hungarian, verbal particles act as phrasal complements to the verb (É. Kiss 2002 a.o.). A verbal CC selects for a single verbal particle, which shows that the CC-components cannot have independent complements:

(6) *János el-tett-(*el-)vett a konyhában.*
     John PRT-put.down-PRT-pick.up the kitchen.in
     'John whiled away the time by moving stuff around in the kitchen.'

(ii) The components of a nominal CC cannot have different possessors; in an adjectival CC, the components cannot be modified by different adverbials. Similarly, if a modifying adjective is present, it necessarily applies to both components of a nominal CC (7, Surgut Khanty):

(7) *Mɐ: ənəɬ sɒ:rt-ɣən ɐ:ɣər-ɣən qɒ:tɬ-əm.*
     1SG big pike-DU ide-DU catch-PST.1SG
     'I caught a big pike and [a big] ide.' (not: 'a big pike and an ide.')

(iii) We propose that the two CC-components are separate in the numeration (that is, CCs are not stored in the lexicon), and are combined in syntax via symmetric Head-Head Merge ([$_\alpha$ H$_1$ H$_2$]. The two heads are equidistant from α, but, since they contribute the same category, this is not problematic. This is in line with <u>Chomsky (2013: 43)</u>, who shows that the labelling problem plaguing symmetric structures (cf. <u>Kayne 1994</u>) does not arise if the two heads are (non-accidentally) identical in the relevant respect, providing the same label. If the two heads have identical subcategorization properties and theta-grids, they, together, project the (extended) phrase. Further on, α functions as a single head for the purposes of e.g., movement, with the exception of post-syntactic suffixation, for which both heads are visible. The elements being symmetrical, their linearization is free in syntax: it is determined by phonology (in Hungarian, the front-vowel CC-member precedes the back-vowel member, and the shorter one precedes the longer one) or by semantic primacy/lexical frequency.

(iv) We argue against approaching CCs as asyndetic coordination. Firstly, overt coordinators are prohibited in CCs, (5). Second, stipulating a silent conjunction/disjunction predicts empirically unavailable interpretations and excludes empirically available ones: most CCs (except contextual ones) denote a superordinate term and do not involve a conjunctive or disjunctive interpretation (8, Surgut Khanty):

(8) *ńoł-səm*
     nose-eye
     ✓'face (=the totality of the parts of the face)' ✗'nose and eye' ✗'nose or eye'

In the full paper, we discuss further evidence against treating CCs as coordination (the interpretation of dual marking in CCs in Khanty, the strict morphosyntactic parallelism between the CC-elements, and the unavailability of disjoint readings in CCs in yes-no questions).

(v) All CCs in Hungarian and most in Khanty have a superordinating interpretation, whereby the meaning of a CC as a whole is a superordinating term of the two CC-elements (cf.1-3,5,8). Additionally, in Khanty, conjunctive CCs, whose meaning is identical to that or coordination of the two CC-elements, are possible (cf.7). Superordinating nominal CCs in Hungarian and Khanty obligatorily lack number marking (even when denoting a plurality; cf.3,5). We propose that they are bare nominals that lack the DP layer, which dovetails with their interpretation as quantificational rather than referential: superordinating CCs are obligatorily universal in Hungarian and universal or existential (depending on context) in Khanty. Accordingly, we propose that, in Hungarian, CCs are Heimian indefinites that obligatorily undergo local universal closure (cf. <u>Postma 1995</u> and <u>Corblin 2012</u>), (9). In Khanty, local universal closure is optional; in its absence, sentence-level existential closure ensues (<u>Heim 1982</u>):

(9) *ügy-baj*   -superordination-> λx.CONCERN(x) -$\forall$-closure-> λQ$\forall$x.(CONCERN(x)->Q(x))
     affair-trouble   concern   every concern
(10) *kɒːpə-ʃɐːj* -superordination-> λx.DRINK(x)   -$\exists$-closure-> $\exists$x.[… DRINK(x)…]
     coffee-tea   drink   some drink

In the full paper, we argue that conjunctive CCs in Khanty are a vestigial phenomenon that preceded the recent emergence of coordination in the language; they are being replaced by coordination but protected from quick extinction by a morphosyntactic property that distinguishes them from superordinating CCs: the availability of number marking (PL/DU; cf.7).

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