Category Mismatches in Coordination Vindicated

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Bruening and Al Khalaf (2020) deny the possibility of coordination of unlike categories. They use three mechanisms to reanalyze such coordination as involving same categories: conjunction reduction, supercategories, and empty heads. We show that their proposal leaves many cases of unlike category coordination unaccounted for, and we point out various methodological, technical, and empirical problems that it faces. We conclude that the so-called Law of the Coordination of Likes is a myth. Instead, all conjuncts must satisfy any external restrictions on the syntactic position they occupy. Such restrictions may be rigid, resulting in categorial sameness, but when they are underspecified or disjunctive, category "mismatches" may arise.

Keywords: unlike category coordination, empty heads, supercategories, conjunction reduction, coordination

1 Introduction

The view that only the same grammatical categories may be conjoined (e.g., Chomsky 1957:36), elevated to the status of a universal law (Williams 1981:sec. 2), has been repeatedly questioned (e.g., Sag et al. 1985, Bayer 1996). At present, a more frequent view—concisely expressed in the following quotation from *The Cambridge Grammar of the English Language* (*CGEL*)—seems to be that any constituents may be coordinated, as long as each is licensed in the syntactic position occupied by the coordinate structure:

(1) If (and only if) in a given syntactic construction a constituent X can be replaced without change of function by a constituent Y, then it can also be replaced by a coordination of X and Y. (Huddleston and Pullum 2002:1323)[1]

Any apparent "sameness" requirements result from the fact that each conjunct must satisfy the constraints imposed on the syntactic position occupied by the coordinate structure. These constraints may be rigid, resulting in the sameness of categories of all conjuncts. However, when

such constraints are underspecified or disjunctive, each conjunct may satisfy these in a different way, leading to category mismatches.

Bruening and Al Khalaf (B&AK) (2020) deny the possibility of coordination of unlike categories. To reanalyze category mismatches in coordination as involving the same categories, they use three mechanisms: conjunction reduction (CR), supercategories (SCs), and empty heads (EHs).

B&AK use CR—coordination of larger constituents and subsequent ellipsis—for coordination of arguments with modifiers, as in (2a), where the coordination of an NP (*meat*) and a PP (*at restaurants*) is claimed to actually involve two VPs, as shown in (2b), contrary to what the placement of *neither . . . nor . . .* might suggest.

(2) a. I eat neither meat nor at restaurants.
      (Zhang 2009:187, (7.24c))
    b. I [$_{VP}$ [$_{VP}$ eat neither meat] nor [$_{VP}$ ~~eat~~ at restaurants]].

B&AK do not say much about CR; instead, they concentrate on SCs and EHs.

B&AK introduce two supercategories (SCs): Pred (inspired by PredP; Bowers 1993) for predicative phrases, as in (3), and Mod (inspired by ModP; Rubin 2003) for modifiers, as in (4). Such predicative or modifier constituents have complex categories consisting of an SC and the usual basic category (NP, AP, etc.), for example, Pred:NP or Pred:AP. In such cases, the identity of the SCs is sufficient for coordination to be licensed.

(3) a. Pat is a Republican and proud of it.
      (Sag et al. 1985:117, (2b))
    b. Pat is [$_{Pred:\{NP,AP\}}$ [$_{Pred:NP}$ a Republican] and [$_{Pred:AP}$ proud of it]].

(4) a. We walked slowly and with great care.
      (Sag et al. 1985:140, (57))
    b. We walked [$_{Mod:\{AdvP,PP\}}$ [$_{Mod:AdvP}$ slowly] and [$_{Mod:PP}$ with great care]].

B&AK use empty heads (EHs) in subcategorization violation examples such as (5a), where one conjunct is a CP, even though the verb subcategorizes for the preposition *on* followed by an NP (see (5b)), and not a CP (see (5c)). On B&AK's analysis in (6), $\emptyset_N$ is a phonetically and semantically empty nominal head, converting a CP into an NP.

(5) a. You can depend on my assistant and that he will be on time.
       (Sag et al. 1985:165, (124b))
    b. You can depend on my assistant.
    c. *You can depend (on) that he will be on time.

(6) You can depend on [$_{NP}$ [$_{NP}$ my assistant] and [$_{NP}$ $\emptyset_N$ [$_{CP}$ that he will be on time]]].
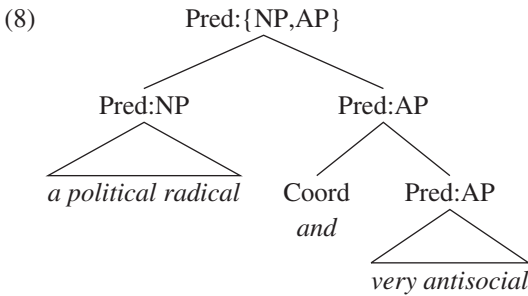
In sections 2–3, we show that both strategies, SC and EH, face numerous empirical, technical, and methodological problems. Though these problems suffice to invalidate B&AK's proposal, in section 4 we further refute B&AK's empirical arguments against unlike category coordination

and present new data supporting the existence of coordination of unlike categories, in accordance with the *CGEL* quotation in (1). While we follow B&AK in relying on data from English, similar arguments could be made on the basis of other languages.[2]

2 Supercategories

Consider (7)–(8) (B&AK 2020:25, (85) and (84), respectively); (8) represents coordination in (7a), and the representation of (7b) would be analogous.

(7) a.   Danny became$_{C:NP/AP}$ [$_{Pred:\{NP,AP\}}$ a political radical and very antisocial].
    b.   *Danny became$_{C:NP/AP}$ [$_{Pred:\{NP,PP\}}$ a political radical and under suspicion].

(8)   Pred:{NP,AP}

         Pred:NP   Pred:AP

     a political radical   Coord   Pred:AP
                             and
                                    very antisocial

The "C:NP/AP" index on *became* indicates that this verb c-selects an NP or an AP. This requirement is satisfied in (7a), as each of the base categories within the complex category Pred:{NP,AP} is either an NP or an AP, but not in (7b), because of the violating base category PP. So, for the purpose of categorial selectional restrictions, base categories do count as syntactic categories. By contrast, if SCs are present, base categories do not count as syntactic categories for the purpose of the same-category coordination schema in (9) (B&AK 2020:24, (82)); for example, Pred:NP and Pred:AP in (8) are taken to be the same category α in (9).

(9) α

        α α
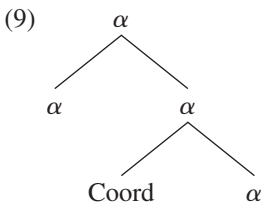
              Coord α

2.1 Technical Problems: Complexity, Vagueness, and Inconsistency

The deceptively simple schema in (9) hides this underlying complexity of B&AK's analysis. It faithfully reflects only the situation where the same simple categories are coordinated. In the case

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[2] See, for example, Dik 1968:28 for early examples of unlike category coordination in French and Latin, Hartung 2012:157 for some examples from German, and Przepiórkowski and Patejuk 2012 and Patejuk 2015:chap. 4 for Polish.

of SCs, as in (8), it must instead be interpreted as follows:[3] (a) SCs of all constituents apart from Coord must be the same (see Pred in (8)); (b) the complete complex categories of the sister of Coord and its mother must be the same (see Pred:AP); (c) the set of base categories within the complex category of the coordination contains exactly the base categories of its daughters (see {NP,AP}).

Unfortunately, it is not clear what theoretical mechanism makes it possible to collect base categories into sets, nor is it clear what theoretical properties complex categories such as Pred: {NP,AP} have. The theoretical vagueness surrounding complex categories is striking, given that the proposed mechanisms are completely new and crucial for B&AK's claim that there are no categorial mismatches in coordination. Also, the fact that base categories within such complex categories do count as syntactic categories for the purpose of categorial selectional restrictions of the verb, but at the same time do not count as syntactic categories for the purpose of the claim that coordination involves the same categories, reveals internal conceptual inconsistency.

2.2 Empirical Problem: Semantically Specified Arguments

Let us consider some attested examples[4] (from the English Web 2015 corpus[5] and Google, some simplified) involving the verbs *treat* (in (10)–(11)), *word* (in (12)–(13)), and *behave* (in (14)–(17)).

(10) Do you treat the four museums [[$_{AdvP}$ individually] or [$_{PP}$ as a collective]]?

(11) . . . not all of us treat our animals [[$_{PP}$ with respect] and [$_{AdvP}$ humanly]]!

(12) While we agree that the reply from the Ministry could have been worded [[$_{AdvP}$ differently] and [$_{PP}$ in the way CAA suggested]] . . .

(13) . . . information . . . worded [[$_{AdvP}$ clearly] and [$_{PP}$ in a straightforward manner]].

(14) I know the basics of matting, but how do I make a footage behave, alternately, [[$_{AdvP}$ normally] and [$_{PP}$ like a matte]]?

(15) . . . individual components may behave [[$_{PP}$ in unforeseen ways] and [$_{AdvP}$ even maliciously]] either intentionally or not.

(16) WIP reserves the right to disqualify any entrant who . . . behaves [[$_{AdvP}$ inappropriately] or [$_{NP}$ a way that is not consistent with the Code of Conduct]].

(17) Many in DC behave [[$_{NP}$ this way] or [$_{AdvP}$ worse]].

All these verbs take an argument expressing manner. In all three cases, it is clear that the relevant dependent is an argument, not a modifier: it is obligatory; that is, without it the sentence becomes ungrammatical or the verb changes its meaning.[6] While the argument/modifier distinction is no-

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[3] A fully explicit rendering of B&AK's view would be even more complex, as it would have to take into account the fact that, in nested coordination, base categories may be sets, not atoms.

[4] We have consulted with native speakers of English regarding all attested examples cited in this article.

[5] Accessible via SketchEngine (http://www.sketchengine.eu; Kilgarriff et al. 2008, 2014).

[6] Also, B&AK (2020:16) explicitly state that *behave* "selects an adverb."

toriously murky, it is generally accepted that obligatory dependents are arguments.[7] This manner argument may bear various syntactic categories: not just AdvP (e.g., *individually*), but also at least PP (e.g., *with respect*) and NP (*this way*). As the above examples show, manner phrases of different categories may be coordinated in these argument positions. How could B&AK account for such examples?

The EH strategy—postulating an empty nominal head converting a CP into an NP, discussed in section 3—is unavailable, as such manner arguments are not canonically nominal and, besides, there are no CPs in these examples that could be analyzed as NPs.[8]

The CR strategy also fails here; for example, the hypothetical input to ellipsis in the case of (14) would be flawed.

(14′) ? . . . how do I make a footage [[$_{VP}$ behave, alternately, normally] and [$_{VP}$ ~~behave, alternately,~~ like a matte]]?

Moreover, many of these examples are clearly nonelliptical according to B&AK's tests because coordinate structures behave as constituents and, in particular, may form the pivot of (inverted) pseudoclefts, as in the following cases:[9]

(11′) . . . [[$_{PP}$ with respect] and [$_{AdvP}$ humanly]] is not how all of us treat our animals!

(13′) . . . [[$_{AdvP}$ clearly] and [$_{PP}$ in a straightforward manner]] is how the information provided is worded.

So the only possibility left is to use the SC strategy. However, these manner arguments are not predicates, nor are they modifiers. Nonetheless, given that the functional projection MannerP has been postulated in the literature (e.g., in Scott 2002:104 and Alexeyenko 2012), one might—slightly modifying a statement in B&AK 2020:10—"propose that there was something right about the MannerP analysis" and introduce a new supercategory, Manner.[10]

Similarly, predicates like *reside* take obligatory locative arguments, including NP and PP arguments, as in the pseudocleft examples in (18)–(19) (from English Web 2015).

(18) [$_{NP}$ Cleveland] is where my heart resides.

(19) [$_{PP}$ Behind these shops] is where many families reside.

(20) [[$_{NP}$ That place] and [$_{PP}$ behind these shops]] are where many families reside.

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[7] The following quotations are typical (we assume that *modifier* and *adjunct* are synonyms): "[C]omplements tend to be obligatory, whereas adjuncts are always optional" (Borsley 1999:67); "[I]n contrast to arguments, adjuncts are never obligatory" (Ackema 2015:264).

[8] The EH strategy could be extended by postulating a variety of empty heads "converting" one category into another (say, an empty Adv combining with an NP or a PP and making it an AdvP), but—as discussed in section 3.4—this move would make such an account unfalsifiable.

[9] See Munn 2000:14 for an early application of this test, as well as Peterson 2004:648 for a similar argument based on topicalization.

[10] In fact, Sag et al. (1985:143) suggest that the MANNER feature could be used to account for unlike category coordination of manner modifiers in (4a) (*We walked slowly and with great care*), and they also discuss the TEMP feature for temporal modifiers (as in *They wanted to leave tomorrow or on Tuesday*).

Given that a coordination of such locative NP and PP arguments may form a pivot in pseudoclefts, as in (20), this is a genuine case of coordination of unlike categories by B&AK's standards, one that is not covered by their analysis—unless yet another SC mimicking a functional projection (e.g., LocP in Kim 2019:chap. 4) is assumed.

The same argument can be made on the basis of predicates that select for durative arguments, such as *last*, as in the following attested (English Web 2015 and Google) examples illustrating various combinations of categorially unlike conjuncts:

(21) I feel like my stay in Vienna lasted [both [$_{\text{AdvP}}$ forever] and [$_{\text{NP}}$ no time at all]].

(22) Immunity may last [[$_{\text{NP}}$ 10 years] or [$_{\text{AdvP}}$ longer]].

(23) A chronic disease lasts [[$_{\text{PP}}$ for months] or [$_{\text{AdvP}}$ longer]].

(24) Bouts in the early rounds will last [either [$_{\text{NP}}$ three minutes] or [$_{\text{CP}}$ until someone scores five points]].

(25) . . . this promotion will only last [[$_{\text{PP}}$ for 3 days] or [$_{\text{CP}}$ until all stocks run out]].

Again, it is possible to construct corresponding pseudocleft sentences (so that CR is not applicable) and to reverse the order of conjuncts (so that EH is not applicable). And again, B&AK's approach could be "rescued" by postulating yet another SC inspired by a functional projection (e.g., DurativeP in Kratzer 2004:412).

2.3 Methodological Problem: Unfalsifiability

A methodological problem with the SC strategy is that, once SCs loosely inspired by functional projections are generally admitted, the claim that only same categories may be coordinated becomes unfalsifiable. The reason is this. While—as we endeavor to demonstrate in this article— there is no requirement that only same categories may be coordinated, conjuncts are "same" by virtue of occupying the same syntactic position: they bear the same grammatical function, the same semantic role, or—in some constructions—at least the same information-structural status. Given the multitude of functional projections proposed since the 1980s, there is a good chance that for any grammatical, semantic, or pragmatic property that unlike category conjuncts can share, there exists a corresponding functional projection. If so, another "supercategory" may be postulated, loosely inspired by that functional projection, which "explains" the "apparent" co- ordination of unlike categories.

Hence, unless the applicability of this strategy is limited in a principled way, B&AK's claim that there are no categorial mismatches in coordination becomes unfalsifiable and, as such, is of limited scientific value (Popper 1935).[11] For this reason, in what follows we assume that the

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[11] This danger is real—see Goodall 1987:43–46. There, "archicategories" Manner, Time, and Predicate are introduced following suggestions in Chomsky 1965, playing the same role as B&AK's SCs Mod and Pred, but then a new archicategory is added in an ad hoc manner for (5a) and similar examples.

SC strategy is limited to Pred and Mod. But then (10)–(17) and (20)–(25) constitute genuine counterexamples to B&AK's analysis.

2.4 Empirical Problem: Modifier and Argument

Consider the verbs *die* and *reside. Die* takes only one argument (the subject), and any locative phrase is an optional modifier, so—for B&AK—*in Rome* in (26) has the complex category Mod: PP. By contrast, *reside* takes two obligatory arguments (**St. Peter did reside* is ungrammatical), so *in Rome* in (27) has the simple category PP.

(26) St. Peter did die [$_{\text{Mod:PP}}$ in Rome].

(27) St. Peter did reside [$_{\text{PP}}$ in Rome].

What, then, is the category of the shared dependent *in Rome* in (28): PP or Mod:PP?

(28) St. Peter did reside and die [$_{???}$ in Rome].
      (English Web 2015)

Such examples provide another kind of empirical counterargument against SCs.

2.5 Empirical Problem: Coordination of Unlike Supercategories

Consider (29) (B&AK 2020:11, (35b)), which involves coordination of two predicative modifiers. B&AK mark conjuncts with the SC Mod, adding that they could perhaps be marked with the SC Pred "in place of or in addition to" Mod.

(29) [[$_{\text{Mod:PP}}$ In jeans and a T-shirt] and [$_{\text{Mod:AP}}$ sporting two days' growth on his chin]], John presented a less than inspiring figure.

This is another place where B&AK are vague about the exact properties of one of the two main mechanisms—SCs and EHs—they invoke to claim that there are no category mismatches in coordination: it is left undecided whether the SC of predicative modifiers is Mod (as in (29)), Pred, or {Mod,Pred}. The last possibility seems most intuitive—the other two seem arbitrary—but it faces empirical problems.

Consider example (30) involving coordination of two modifiers.

(30) Reluctantly and embarrassed, the white officer released the Black man . . .
      (Theodore Kirkland, *Spirit and Soul: Odyssey of a Black Man in America*, 339)

The first modifier, *reluctantly*, is an unambiguous adverb and cannot predicate of the subject. By contrast, the other modifier, the adjective *embarrassed*, is predicative.[12] Hence, on the most intu-

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[12] It is uncontroversial that *embarrassed* may act as a predicative adjective, as it may occur with verbs such as *become*, *seem*, *look*, and *appear.* Other predicative adjectives may also be coordinated with adverbs, as in (i).

(i) Reluctantly, and full of tears, I threw in the towel and got a cab . . .
     (http://endduchenne.co.uk/london2cambridge/)

itive interpretation of B&AK's SC mechanism, the relevant constituent in (30) would have the structure in (31).[13]

(31) $[_{\{Mod,???Pred\}:\{AdvP,AP\}}$ $[_{Mod:AdvP}$ Reluctantly] and $[_{\{Mod,Pred\}:AP}$ embarrassed]] . . .

However, (30) should be ungrammatical on this interpretation because the two conjuncts in (31) bear different supercategories, Mod and {Mod,Pred}, violating the schema in (9).[14]

Similarly, one of the two arbitrary possibilities mentioned by B&AK, that of assigning just Pred to predicative modifiers, would also lead to coordination of unlike SCs, as illustrated in (32).

(32) $[_{???:\{AdvP,AP\}}$ $[_{Mod:AdvP}$ Reluctantly] and $[_{Pred:AP}$ embarrassed]] . . .

Only the second arbitrary possibility, that of assigning just Mod to predicative modifiers, leads to a grammatical structure (obeying the schema in (9)), shown in (33).

(33) $[_{Mod:\{AdvP,AP\}}$ $[_{Mod:AdvP}$ Reluctantly] and $[_{Mod:AP}$ embarrassed]] . . .

Still, nothing in B&AK's analysis predicts that the coordinate constituent in (30) has the structure in (33) rather than (31) or (32); another assumption is needed to ensure this.[15]

2.6 Theoretical Weakness: Lack of Independent Motivation

The final problem with the SC strategy is its lack of independent motivation. When proposing the SCs Pred and Mod, B&AK refer to Bowers 1993 and Rubin 2003, respectively. However, the SCs Pred and Mod have little in common with the original functional projections PrP (henceforth, PredP) and ModP, and arguments for those functional categories do not automatically carry over to the similarly named supercategories.

In fact, some of the original empirical arguments *for* PredP and ModP can be interpreted as arguments *against* the SCs Pred and Mod. In particular, both functional heads—usually phonetically empty—were argued to have lexical realizations in some constructions in some languages (see Bowers 2001:sec. 1.6 on Pred and Rubin 2003:sec. 3 and references there on Mod). If so, the original functional projections PredP and ModP may be properly—lexically—larger than the embedded predicates or modifiers of category NP, PP, AP, and so on. This should be contrasted with the supercategories Pred and Mod, which are coextensive with the underlying NPs, PPs, APs, and so on.

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[13] On B&AK's approach, examples such as (30) must be analyzed as involving SCs. CR is not viable, as the coordinate structure is a fronted constituent, that is, not a result of ellipsis. EHs, postulated by B&AK, are also not fit for the job: the adverbial EH, turning APs into AdvPs, does not operate in syntax proper, but is confined to the lexical entries of adverbs that are not morphologically related to adjectives (as discussed in section 3.6). The adverb *reluctantly* is morphologically related to the adjective *reluctant.*

[14] One way to defend the structure in (31) is to loosen B&AK's requirement that the SCs be identical and only require that they be compatible (i.e., have nonempty intersection). However, this would further complicate the account and make the schema in (9) even more at odds with the actual analysis.

[15] It could be said that all three variants are in principle possible, that is, that predicative modifiers may bear any of the three SCs: Mod, Pred, or {Mod,Pred}. However, this would lead to spurious ambiguities in examples such as (29), which would receive three synonymous and homophonous structures.

Also, as made clear in the extensive critique of PredP in Matushansky 2019, the original *theoretical* arguments for this functional projection are void in current versions of mainstream generative grammar; on the contrary, theoretical arguments may be constructed against the usefulness of PredP in contemporary linguistic theory. Similarly, a critique of the original motivation for ModP may be found in Song 2020:sec. 3. Hence, the original functional projections PredP and ModP do not provide either empirical or theoretical motivation for the SCs Pred and Mod proposed by B&AK. Since B&AK do not adduce any independent motivation for these SCs, we conclude that such SCs are a completely new mechanism, motivated solely by the use to which B&AK put it: to work around unlike category coordination.

3 Empty Heads

The second strategy used by B&AK to avoid unlike category coordination is to assume two EHs whose effect is to "convert" one category into another: a null N converting (within syntax proper) CPs into NPs and a null Adv (present only in the lexicon, apparently inactive in syntax proper) converting adjectives into adverbs. The EH strategy is invoked in the analysis of unlike category coordination of arguments, where the argument farther from the head violates this head's selectional restrictions, that is, for situations schematically shown in (34).

(34) a. H [A_1 Coord A_2]   (where H A_1 is acceptable, but H A_2 is not)
       b. [A_1 Coord A_2] H   (where A_2 H is acceptable, but A_1 H is not)

B&AK provide (5a), repeated here as (35), as an example of (34a), and (36) as an instance of (34b).

(35) You can depend on [[$_{A_1}$ my assistant] and [$_{A_2}$ that he will be on time]].
      (Sag et al. 1985:165, (124b))

(36) [[$_{A_1}$ That she got third place] and [$_{A_2}$ her injury in the final round]] notwithstanding,
      she felt good about her performance in the Olympics.
      (B&AK 2020:14, (43a))

In both examples, the CP is reanalyzed as an NP headed by the semantically and phonetically empty $\emptyset_N$ (cf. (6)).

3.1 Methodological and Empirical Problem: Subcategorization Violations

The main methodological problem with this part of B&AK's argumentation is that it is limited to—and draws far-reaching conclusions from—the very narrow range of data related to subcategorization violations, a phenomenon that "has nothing to do with coordination per se" (Bayer 1996:585n7). But, even focusing on unlike category coordination in nonpredicative argument positions, for which the EH strategy was designed, the vast majority of cases involve coordination of unlike category arguments that do satisfy selectional restrictions and that may occur in any order within coordinate structures (subject to general restrictions such as the weight of conjuncts).

One case in point are arguments expressing manner, location, or duration, discussed in section 2.2. It is also easy to find examples of coordination of NP and CP arguments that are similar to (35) but do not violate any subcategorization requirements: for example, arguments of *convey* (see (37)), *mean* (see (38)), *understand* (see (39)), *suggest* (see (40)), and *show* (see (41)), among many other verbs. ((37)–(41) are from the English Web 2015 corpus.)

(37) . . . a stance which conveyed [both [$_{NP}$ power] and [$_{CP}$ that he was at ease]].

(38) That meant [either [$_{NP}$ a pardon] or [$_{CP}$ that her appeal would be expedited]].

(39) I understand [[$_{NP}$ those concerns] and [$_{CP}$ that they are sincerely held]].

(40) . . . suggesting [either [$_{NP}$ false modesty] or [$_{CP}$ that even they don't really understand what they've done]] . . .

(41) This boycott would show [not only [$_{NP}$ unity] but [$_{CP}$ that there is a price to pay for killing us]].

Since the conjuncts in these examples are nonpredicative arguments, the SC strategy is not applicable here. What speaks against the CR analysis is not only the placement of *both . . . and . . .* , *either . . . or . . .* , and *not only . . . but . . .* , but also the possibility of forming pseudoclefts, as in (42) (cf. (41)).[16]

(42) [Not only [$_{NP}$ our great unity in the face of oppression] but also [$_{CP}$ that there is a price to pay]] is what this boycott would show.

Crucially, what speaks against the EH analysis and thus makes such sentences genuine counterexamples to B&AK's analysis is the possibility of changing the order of conjuncts, as illustrated in (43) (again, cf. (41)).

(43) This boycott would show [not only [$_{CP}$ that there is a price to pay] but also [$_{NP}$ our great unity in the face of oppression]].

Many more examples involving coordination of categorially unlike arguments are provided in sections 3.2 and 4.

3.2 Empirical Problem: Order of Conjuncts

B&AK's analysis predicts that whenever coordination of an NP and a CP is possible, and it cannot be accounted for via CR or SCs, only one order of conjuncts is possible, with the "true" NP closer to the selecting head (see section 3.5 for technical details). For example, while (44) is fine, B&AK simply judge (45) as "less acceptable" and do not scrutinize it more closely.

(44) Pat remembered [[$_{NP}$ the appointment] and [$_{CP}$ that it was important to be on time]]. (Sag et al. 1985:165, (123a))

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[16] Some modifications were introduced in (42)–(43) to balance weights of conjuncts.

(45) ??Pat remembered [[$_{CP}$ that it was important to be on time] and [$_{NP}$ his resumé]].
      (B&AK 2020:19, (69a))

We agree that (45) is less acceptable, but we claim that it is still fully grammatical. The diminished acceptability is a matter of relative weights of the two conjuncts. For example, Sag et al. (1985: 167n34) cite examples such as (46)–(47) (their (i)–(ii)), where the two conjuncts have similar weights, as both acceptable.

(46) I didn't remember until it was too late [[$_{NP}$ John's inability to get along with Pat], and [$_{CP}$ that he had no background in logic]].

(47) I didn't remember until it was too late [[$_{CP}$ that John had no background in logic], and [$_{NP}$ his inability to get along with Pat]].

Sag et al. (1985:167n34) note that their theory (just like B&AK's account) would predict (47) to be grammatical only under the ellipsis (CR) analysis, which would in turn predict the impossibility of topicalization of (47) (in contrast to (46)). They construct topicalized versions of (46)–(47), mark the latter with one question mark, and ask readers to "assess for themselves the accuracy of this prediction." However, it is well-known that—"outside of some very well-rehearsed examples such as *Beans, I like*" (Davies and Dubinsky 2009:122)—topicalization structures are often less acceptable than their nontopicalized versions for processing reasons, and it is difficult to compare acceptability of sentences that are not fully acceptable to begin with. Therefore, let us consider the following pseudocleft versions of these examples:

(48) [[$_{NP}$ John's inability to get along with Pat] and [$_{CP}$ that he had no background in logic]] is what I didn't remember until it was too late.

(49) [[$_{CP}$ That John had no background in logic] and [$_{NP}$ his inability to get along with Pat]] is what I didn't remember until it was too late.

(48)–(49) are both acceptable and, if (49) seems a little more awkward, this is expected given that it is syntactically more ambiguous and so more difficult to process.[17]

    In summary, contrary to B&AK's claim, any order of NP and CP conjuncts within the propositional argument of *remember* is possible. Combined with the pseudocleft facts in (48)–(49) and with the lack of appropriate supercategories in this case, this means that none of B&AK's strategies is available. That is, verbs such as *remember*, selecting for an NP or a CP (or a coordination thereof), contradict B&AK's analysis.

3.3 Empirical Problem: Overgeneration

Probably the starkest empirical problem that this part of B&AK's analysis faces is overgeneration. The analysis predicts that any predicate that combines with an NP will also combine with the

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[17] When *and his* is processed, the NP can be (incorrectly) hypothesized to be conjoined with the noun *logic*, rather than with the preceding CP.

coordination of an NP and a CP, even if it does not combine with a CP directly. That is, every such predicate behaves like *depend* (*on*) in (5).

This prediction is wrong: verbs such as *withdraw* and *strengthen* select for an NP that may express a proposition, and yet this NP cannot be coordinated with a CP, as shown in the following examples:

(50) {He withdrew/This strengthens} {this claim / the claim that Homer is a genius}.

(51) *{He withdrew/This strengthens} that Homer is a genius.

(52) *{He withdrew/This strengthens} this claim and that Homer is a genius.

This is a known issue, pointed out in Bayer's (1996:585–586) critique of Sag et al. 1985, which makes the same wrong prediction.

> Even allowing for semantic restrictions, this prediction is incorrect. The preposition *despite*, for example, permits NP complements which denote facts or propositions, but not [CP] complements, and conjuncts containing [CP] are disallowed as well.
>
> [(53)] a. Despite LaToya's intransigence, Michael signed the contract.
> b. Despite the fact that all the musicians quit, Michael signed the contract.
> c. *Despite that all the musicians quit, Michael signed the contract.
> d. *Despite LaToya's intransigence and that all the musicians quit, Michael signed the contract.
>
> If we require the complement of *despite* to be an NP, and reject any attempts to compromise this requirement, the ungrammaticality of [(53d)] follows immediately.

While B&AK refer to Bayer 1996, they do not address this problem. We see no way of accounting for such examples within B&AK's set of assumptions.

3.4 Methodological Problem: Multiple Nominalizing Empty Heads and Unfalsifiability

As mentioned earlier, the nominal EH crucial for B&AK's account is semantically empty; it cannot bear any s-features, so it cannot head an argument that is semantically selected. However, in footnote 27 B&AK also admit the existence of other—semantically contentful—nominal EHs. One such EH should be responsible for nominalizing question CPs; since they may occur as objects of prepositions, including the object of (*depend*) *on* (see (54)), the EH nominalizing such question CPs cannot be semantically empty.

(54) The price and the quality depend on how desperate you are.
 (English Web 2015)

This semantically contentful EH would be the second null head responsible for the coordination of NPs and CPs, namely, for cases involving question CPs, as in (55) (B&AK 2020:20n24).[18]

---

[18] The alternative mentioned in the same footnote, namely, that NPs such as *the things he can do* in (55) are of category CP, is not viable, as they may—bearing the same meaning—occur as subjects, which B&AK assume to be uniformly NPs (see immediately below). This alternative would also leave (54) unexplained.

(55) It's amazing how tall he is and the things he can do.
       (Munn 1993:119, (3.24a))

In footnote 25, B&AK assume that "CPs can occur in subject position, but they must be NPs with a null N head when they do." In this context, consider (56)–(57).

(56) *[_CP That he was late all the time] resulted in his being dismissed.
        (B&AK 2020:13, (40a))

(57) [[_CP That he was late all the time] and [_NP his constant harassment of coworkers]]
       resulted in his being dismissed.
       (B&AK 2020:13, (41a))

B&AK's unacceptability marking of (56) is misleading. In footnote 7, they say that "[i]n an informal poll of approximately seven speakers, two had the pattern of judgments described here," while five accepted (56). If so, is the nominalizing EH at work in (56) in the language of the five speakers who accept it the same as the EH at work in (57) in the language of the two speakers who accept (57) but not (56)?

    B&AK seem to assume (in the same footnote) that these are the same EHs, that is, that there is just one nominal null head able to convert a CP[*that*] into an NP. But, given that this null head is semantically empty, this means that such subjects cannot be semantically selected; in particular, they cannot be specified as [−animate] or [−sentient]. This is counterintuitive and hence should be carefully justified; B&AK do not provide such a justification.

    The alternative is that the five speakers (the majority) accepting (56) have another—semantically contentful—nominalizing EH. But then, given that this EH behaves differently from the EH that nominalizes question CPs (question CPs, but not declarative CPs, may be immediate objects of prepositions), this would be yet another—third—EH crucial in B&AK's attempt to eliminate unlike category coordination, one that is not constrained by the various properties that B&AK assume, not correlated with short answers, and so on. This would take us one step forward on the slippery slope toward the possibility of postulating "category converting" EHs at will, that is, toward unfalsifiability.
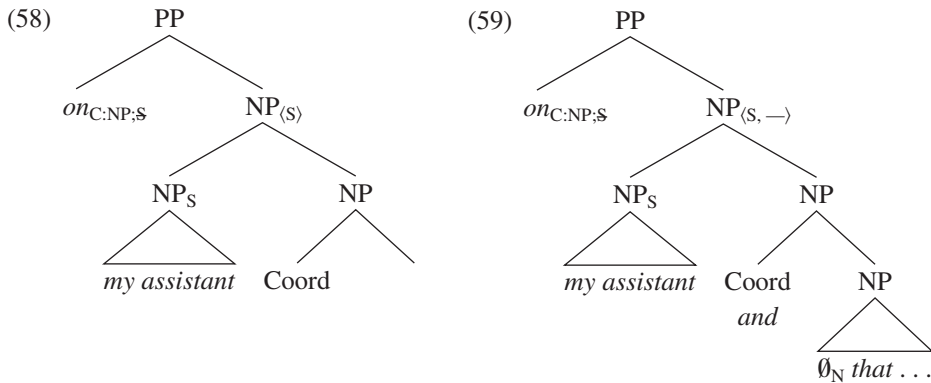
3.5 Technical Problems: Complexity, Vagueness, and Inconsistency

In their analysis, B&AK assume that trees are built from left to right rather than from the bottom up. For example, there is a derivational stage of (35) where a partial tree for *you can depend on* is constructed, and another stage, corresponding to *you can depend on my assistant*, with only partial representation of the coordinate structure (see B&AK 2020:26). While we find this part of the proposal unobjectionable and quite intuitive from the perspective of analysis (but not synthesis), B&AK make a number of nonstandard and vague assumptions about features, resulting in a rather complex analysis.

    First, features are divided into syntactic and semantic. The nominal EH at work in (35)–(36) may bear syntactic features (number, gender, etc.), but not semantic features (animacy, sentience, etc.). Second, when a coordinate structure is built, features of particular conjuncts—it is not clear
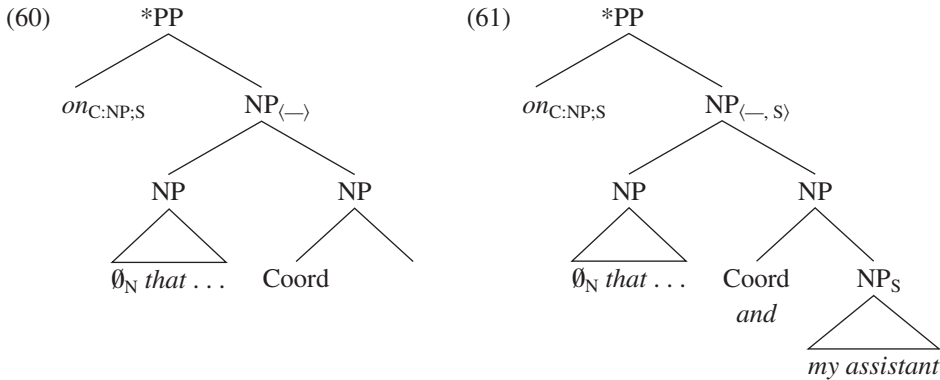
whether only semantic features or all features[19]—are collected into a stack, rather than a set. At any stage of the derivation, the root of the coordinate structure contains the current stack. Third, the lack of semantic features on the EH does not mean that no features are added to the stack; rather, it means that a special element (feature?) "—" is added. Fourth, semantic feature checking "must take place as soon as it can" (B&AK 2020:27) and, if checking fails at this vague point, the derivation crashes.

Let us see how this analysis is intended to work. First, consider example (35) (*You can depend on my assistant and that he will be on time*). The preposition *on* (or perhaps the combination *depend on*; B&AK are not clear on this) syntactically selects an NP and has semantic features to check. According to B&AK (2020:26), semantic features are checked when the coordinate structure contains the first conjunct: at this point, the root of this structure contains the stack $\langle S \rangle$,[20] and the (verb plus) preposition checks its semantic features; see (58). When the second conjunct—headed by the semantically contentless empty $\emptyset_N$—is merged, the root contains the stack $\langle S, — \rangle$ (assuming that the top of the stack is on the right). At this stage, the preposition sees the lack of semantic features (—), but this is not an issue because its semantic features have already been checked; see (59). If the order of the conjuncts were different, that is, if the clausal NP were the first conjunct, then at the crucial point the stack would be $\langle — \rangle$, and checking would fail; see (60). The fact that the stack would change to $\langle —, S \rangle$ once the whole coordinate structure is built does not matter because the derivation has already crashed; see (61).

(58) PP / on_{C:NP;S̶} NP_{⟨S⟩} / NP_S (my assistant) / NP / Coord

(59) PP / on_{C:NP;S̶} NP_{⟨S, —⟩} / NP_S (my assistant) / NP / Coord and / NP / $\emptyset_N$ that . . .

---

[19] This is important for B&AK's analysis: if all features are within the same stack, additional mechanisms are necessary to make sure that semantic features are always on top, above any syntactic features.

[20] *S* seems to stand for a number of semantic features, but it is not clear whether they are a single element of the stack (as a bundle), or whether particular semantic features are successive elements of the stack.

(60)   *PP

$on_{C:NP;S}$ $NP_{\langle-\rangle}$

     NP   NP

     $\emptyset_N$ *that . . .*   Coord

(61)   *PP

$on_{C:NP;S}$ $NP_{\langle-,\,S\rangle}$

     NP   NP

     $\emptyset_N$ *that . . .*   Coord NP_S
             and   *my assistant*

In (36) (*That she got third place and her injury in the final round notwithstanding . . .*), when the left-to-right derivation reaches the postposition *notwithstanding*, the coordinate structure is fully built and its root contains the stack ⟨—, S⟩. As S is the top of the stack, the postposition can check its s-features. If the order of conjuncts were reversed, the stack at that point would be ⟨S, —⟩, and the derivation would crash.

For this analysis to work, it is crucial which parts of the structure are built exactly when. For example, assuming that a single (i.e., connected) partial tree is present at each stage,[21] a skeletal coordinate structure is built for (35) at the stage of *you can depend on my*, when only a part of the first conjunct is constructed. Presumably, this is the earliest stage when s-features of the selector may—and, thus, must—be checked. But are the semantic features of the first conjunct already in the root stack at that stage, even though the source of such features, the noun, is not present yet? It would seem that at that point the stack at the root should still be empty, so the derivation should crash. Unfortunately, the presentation of B&AK's analysis is too vague to decide this matter.

However, it is relatively clear that "s-feature checking at the earliest opportunity" leads to inconsistency, given that B&AK bind their analysis of coordination with short answers. Consider the dialogue in (62), with the short answer *That he will be on time.*

(62) Q: What can you depend on?
     A: ~~You can depend on~~ [NP $\emptyset_N$ [CP that he will be on time]]}.

On B&AK's analysis, (62) is acceptable because the selector is elided before PF, so the fact that its s-features have not been checked by then does not matter. But, according to B&AK's set of assumptions, unchecked s-features lead to a crash not at PF, but much earlier: when the selector has the first opportunity to check its s-features and fails to do so. Clearly, in the case of (62),

---

[21] If not, that is, if partial trees can be built before they are merged, then it should be possible to build a tree for the whole coordinate structure, with S at the top of the stack, before it is merged with the tree containing the selector. This would invalidate B&AK's analysis.

this opportunity arises when the CP is merged into the tree, before ellipsis takes place. But, given that this CP is really an NP headed by a semantically contentless EH, that is, given that the stack of this CP is ⟨—⟩, the selector cannot check its s-features, so the derivation crashes. This means that B&AK's analysis does not account for subcategorization violations in short answers, despite their claims.

On the other hand, if s-feature checking could wait until PF, there is no reason why (35) with the order of conjuncts reversed is unacceptable: s-feature checking could wait until the full coordinate structure is built, with the resulting stack ⟨—, S⟩. In short, there is a conflict between B&AK's analysis of coordination and their analysis of short answers—the two phenomena that they strive to account for in a uniform manner.

3.6 Non-ly Adverbs

B&AK extend the EH analysis to cases such as *The Once and Future King*, *The Now and Future Caliphate*, and *A Soon and Distant Christmas* (B&AK 2020:14–15, (44a), (48b), (47c)). The first example receives the analysis in (63) (B&AK 2020:31–32).

(63) the [N′ [N′ [~~Adv~~ [Adj once] ~~∅Adv~~] [~~N′ king~~]] and [N′ [Adj future] [N′ king]]]

This analysis is based on the assumption that—like *-ly* adverbs (e.g., *crucially*), which are composed of an adjective (e.g., *crucial*) and the Adv head *-ly*—non-*ly* adverbs such as *once* also contain an adjective and an Adv head, but this head is semantically and phonetically empty (see ∅_Adv in (63)), so it may be elided, as shown in (63).

On this analysis, all non-*ly* adverbs should pattern with *once*, *now*, and *soon*. However, this prediction is false: as shown in (64)–(68), many non-*ly* adverbs behave differently.

(64) *the here and very expensive shop   (cf. *the local and very expensive shop*)

(65) *a there but reasonable shop   (cf. *a distant but reasonable shop*)

(66) *the well and wise man   (cf. *the good and wise man*)

(67) *a perhaps but not certain outcome   (cf. *a possible but not certain outcome*)

(68) *the together and equal liability   (cf. *the joint and equal liability*)

B&AK's analysis also predicts a strong correlation between coordination and displacement: (69) is supposed to show that non-*ly* adverbs, even though they apparently cannot occur immediately prenominally (we will refute this claim of B&AK forthwith), are acceptable as nominal modifiers when displaced (while *-ly* adverbs can never be understood as nominal modifiers, even when displaced).

(69) a. *I was expecting a soon visit.
      b. How soon a visit are you expecting?
      c. I wasn't expecting that soon a visit.
      d. A visit so soon would be wonderful.
          (B&AK 2020:31, (96))

However, this presumed correlation breaks down in the case of other non-*ly* adverbs, such as *here* and *there*, which cannot occur prenominally and cannot be coordinated with an adjective (see (64)–(65)), yet may occur postnominally, as in (70)–(71).

(70) A visit there is all Bart wants.

(71) A war here is not what Springfield needs.

B&AK's analysis is also based on the incorrect assumption that *once*, *now*, *soon*, and so on, cannot occur immediately prenominally. Attested counterexamples abound, such as (72)–(75).

(72) The Once-King of Penn State
(https://archive.nytimes.com/www.nytimes.com/interactive/2011/11/10/sports/ncaa football/paterno-timeline.html)

(73) Twice Winner of the Man Booker Prize
(front cover of Hilary Mantel's *Wolf Hall*)

(74) Many years ago Korn's father had dealings with the now president.
(Steve Cavanagh, *The Devil's Advocate*, 313)

(75) They call him the Thane of Glamis, Thane of Cawdor, and the soon king.
(https://quizlet.com/265292369/macbeth-act-1-quiz-review-flash-cards/)

These empirical problems are fatal for the part of B&AK's analysis that is concerned with non-*ly* adverbs. But their analysis is also based on a number of nonstandard assumptions, in addition to those concerning the nominal EH(s).

The first such assumption is that adverbs such as *once*, *now*, and *soon* are prefabricated syntactic trees projected from $\emptyset_{Adv}$ *in the lexicon*. Second, $\emptyset_{Adv}$ is assumed to be active *only* within the lexical entries of non-*ly* adverbs. That is, it does not occur in the lexicon on its own; it is not active in syntax proper because, if it were, it could turn any adjective into an adverb so that any adjective could occur in strictly adverbial positions. This distinguishes $\emptyset_{Adv}$ from $\emptyset_N$, which operates only in syntax proper. Third, as shown in (63), ellipsis does not just make parts of the structure phonetically unrealized; instead, it nonmonotonically alters the structure already built, so that now the remaining constituent [$_{Adj}$ once]—rather than [$_{Adv}$ [$_{Adj}$ once] $\emptyset_{Adv}$]—is an immediate constituent of N′. Fourth, B&AK posit a special constraint, (76) (their (99)), which must be checked only at PF, as it is violated in (63) before ellipsis applies.[22]

---

[22] Note that this constraint would also be satisfied by the ellipsis of the first [$_{N'}$ king] alone in (63), as the remaining N′ would then have the structure [$_{N'}$ Adv], which would not violate (76). But then a similar analysis, with ellipsis of [$_{N'}$ king] alone, would license any Adv constituents under N′, including -*ly* adverbs, so the analysis would incorrectly predict the grammaticality of, say, **the formerly and future king*. A simple way to repair this aspect of B&AK's analysis is to reformulate (76) by saying that an Adv cannot be an immediate constituent of the N′ (regardless of the presence of other immediate constituents).

(76) *[$_{N'}$ Adv N′]

Fifth, B&AK must assume that the ellipsis of [$_{N'}$ king] may extend to the Adv head only because it is semantically and phonetically empty. Otherwise, the same analysis would be available for -*ly* adverbs, whose head is not phonetically empty.

In brief, B&AK's analysis of constructions such as *the once and future king* is based on wrong empirical generalizations and makes wrong empirical predictions, besides making controversial and insufficiently justified assumptions. Hence, it does not provide independent evidence for an analysis of unlike category coordination in terms of EHs.

4 Empirical Arguments against Coordination of Unlike Categories?

In sections 2 and 3, we refuted B&AK's analysis on empirical, technical, and methodological grounds. In this section, we provide further arguments for what we consider to be the standard view—summarized in (1), the quotation from *CGEL*—and refute what may be interpreted as B&AK's arguments against this standard view.

B&AK never actually refer to this standard view. Instead, they provide arguments against a superficially similar claim, namely, that it should be sufficient for a selecting element to permit a coordination of X and Y if it permits X and Y separately (B&AK 2020:9, 18–19). This putative claim significantly differs from that of *CGEL*: it lacks the key requirement that X and Y have the same function. Without this requirement, the claim considered by B&AK is obviously false. For example, as shown in (77), while *give* may combine with a theme and a goal, these two arguments cannot be coordinated, even if they have the same categories, simply because they bear different functions.

(77) a. Marge gave [$_{NP}$ Homer] [$_{NP}$ a donut].
b. *Marge gave [[$_{NP}$ Homer] and [$_{NP}$ a donut]].
(* on the intended reading)

Nevertheless, some of the examples provided by B&AK are more subtle and might be interpreted as potential counterexamples to the *CGEL* position, so it is important to show that they do not contradict the view expressed in (1). The complete list of such counterexamples—see B&AK's (64)—is given in (78) (in a different order, reflecting the ensuing discussion, but retaining B&AK's unacceptability judgments).

(78) a. *She splashed wine and on Sarah.
b. *She lost the match and to an underdog.
c. *She's speaking nonsense and with Sarah.
d. *She agreed to leave and with Sarah.
e. *She met Bill and with Sarah.
f. *She fights tyranny and against injustice.
g. *I've never heard his stories or of him.
h. *He believes her claim and in fairy creatures.
i. *He believes that Santa exists and in fairy creatures.

Examples (78a–b) are similar to (77b): an attempt is made to coordinate two different grammatical functions of the same verb. Compare (78a–b) with the following examples:

(78′) a. She splashed wine on Sarah.
       b. She lost the match to an underdog.

Examples (78c–g) are of a different nature: as confirmed by general and valence dictionaries, they involve two different meanings of the verbs *speak*, *agree*, *meet*, *fight*, and *hear*, so an attempt to coordinate their arguments results in zeugma. For example, in the case of *speak* in (78c)—an example important for B&AK, as it is cited twice in their article (their (25) and (64b))—*A Valency Dictionary of English* distinguishes four general senses of this verb, with *speak nonsense* exemplifying sense A and *speak with Sarah*, sense C (Herbst et al. 2004: 790–792); relevant senses of *speak* are also distinguished by online valence dictionaries such as VerbNet, FrameNet, and PropBank (all accessible at https://uvi.colorado.edu/uvi_search) and by general dictionaries (e.g., meanings 12–13 and 3 in https://www.dictionary.com/).[23]

When meanings expressed by two homophonous predicates are sufficiently close, some speakers may assume the existence of just one predicate, so examples of the kind B&AK consider to be ungrammatical may be found in corpora. This is true of *hear* (see (79)), but also *fight* (see (80)) (both examples from English Web 2015).

(79) As always we look forward to hearing [[$_{NP}$ your feedback] and [$_{PP}$ of any bugs you find]] . . .

(80) He then stated a number of ways people can fight [[$_{NP}$ the intolerance] and [$_{PP}$ against those who twist religion to use it for evil]] . . .

Finally, in contrast to (78a–g), we consider examples (78h–i), involving the verb *believe*, to be grammatical: there is a meaning of *believe* associated with a valence frame in which one of the positions may be realized as a CP[*that*], an NP, or a PP[*in*].[24] Here are some relevant attested examples (all from English Web 2015):

(81) . . . as long as you believe [[$_{NP}$ the right things] and [$_{PP}$ in absolute truth]] . . .

(82) Xenocrates . . . believed [[$_{CP}$ that stars are fiery Olympian Gods] and [$_{PP}$ in the existence of sublunary daimons and elemental spirits]].

(83) We all believe [[$_{PP}$ in positive energy] and [$_{CP}$ that what you give comes back]].

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[23] It seems that some speakers of English have yet another, more idiomatic meaning of *speak* (not recorded in the dictionaries we consulted), which allows for both *nonsense* and a PP[*with*] argument.

(i) Whereas it informs when we speak nonsense with someone we love, we can imply that speaking nonsense with someone we do not love has no point.
     (Google)

In such cases, *nonsense* and PP[*with*] have different functions, so their coordination is ruled out for the same reason as in the case of (78a–b).

[24] The relevant entry in Herbst et al. 2004:78 assumes that the NP and the CP have the same function, but also that the PP[*in*] realizes a different function. Corpus examples below contradict this latter view.

(84) There's a comedic element to Kelvin, but the audience also has to believe [[$_{NP}$ his sincerity] and [$_{CP}$ that he really loves Kacie]].

Example (81) involves the same kind of unlike category coordination as (78h), and yet it is fully acceptable. Similarly, (82) has the same structure as (78i), and it is spotless. The reversed order of PP and CP conjuncts is exemplified in (83). Finally, apart from the coordination of an NP and a PP or a CP and a PP, (84) illustrates the third possibility, that is, coordination of an NP and a CP.

B&AK (2020:19) admit that some of the examples in (78) may be acceptable to some speakers, but only with special intonation and interpretation suggesting ellipsis (i.e., the CR strategy). For example, (78b) may have the following structure (cf. B&AK 2020:19, (65) and sec. 2.1):

(85) She [[$_{VP}$ lost the match], and [$_{VP}$ ~~lost it~~ to an underdog]]! (*it* = the match)

We agree that, to the extent that (78b) may be made acceptable, it is an instance of ellipsis with special intonation, as shown in (85). However, examples (81)–(84) are not amenable to such an interpretation: the intonation observed in (85) is absent there and the input to ellipsis of the kind indicated in (85) is ungrammatical, as demonstrated in (81′) and (84′).

(81′) *... as long as you [[$_{VP}$ believe the right things] and [$_{VP}$ believe them in absolute truth]], you are OK ... (*them* = the right things)

(84′) *... the audience also has to [[$_{VP}$ believe his sincerity] and [$_{VP}$ believe it that he really loves Kacie]]. (*it* = his sincerity)

Another argument B&AK advance for the CR analysis of such examples is that these coordinate structures do not behave like constituents: they cannot be fronted or form the pivot of pseudoclefts. (86)–(87) are B&AK's (66a) and (67a), with their judgments.

(86) *Her claim and in fairy creatures, he believes.

(87) *Her claim and in fairy creatures is what he believes.

B&AK do not state whether there are speakers who accept (78h) and fail to accept (86)–(87)—only then could their argument be valid. But even if such speakers exist, there are good independent reasons for the diminished acceptability of (86)–(87). This is most clear in the case of the pseudocleft construction, which is unacceptable with just the PP conjunct; see (88).

(88) *In fairy creatures is what he believes.

This, in line with the *CGEL* quotation in (1), explains the ill-formedness of (87). As to (86), we have already noted (in section 3.2) that topicalization often results in awkwardness (especially out of context), so the diminished acceptability of (86) is to be expected.

In fact, by B&AK's standards, pseudoclefts provide evidence that coordinate structures in at least some of the examples in (81)–(84) are constituents. Consider (84) again. Each of the conjuncts there may form the pivot of a pseudocleft, so, as the *CGEL* condition in (1) predicts, the coordination of NP and CP may also form such a pivot.

(89) . . . his sincerity is what the audience also has to believe.

(90) . . . that he really loves Kacie is what the audience also has to believe.

(84″) There's a comedic element to Kelvin, but [[_{NP} his sincerity] and [_{CP} that he really loves Kacie]] is what the audience also has to believe.

There are many other verbs like *believe*, whose argument may be realized as a CP[*that*], an NP, or a PP—or by a coordination of different subsets of these categories, in various orders. One such verb is *think*, as the following examples from English Web 2015 demonstrate:

(91) On the way there, I kept thinking [[_{NP} positive thoughts] and [_{PP} about how much fun I was having]].

(92) When I think [[_{PP} of my parents] and [_{CP} that they have never been further East than Europe]], I can't help but feel guilty . . .

(93) None of them thought [[_{PP} about budgets] and [_{CP} that money is limited]].

There are also many predicates that combine just with a CP or a PP (to the exclusion of an NP), some of them—*hope*, *boast*, and *ashamed*—discussed in a different context by B&AK. For example, they give (94) as an illustration that subcategorization violations are limited: they state that predicates such as *hope* "only permit CPs" (p. 16), so an NP cannot occur within coordination.

(94) *She hopes [[_{CP} that the defending champs will win] and [_{NP} a good result for the host country]].
(B&AK 2020:16, (49b))

However, B&AK do not mention that *hope* also permits PPs, which may be freely coordinated with CPs, in any order, as shown in (95)–(96) (from English Web 2015).

(95) We hope [[_{PP} for another good year], and [_{CP} that we continue to grow]].

(96) We hope [[_{CP} that 2013 numbers are much higher] and [_{PP} for better performance next year]].

Many other combinations of unlike categories may be found with other predicates. What can be particularly interesting from the point of view of theories of control is the case where one of the conjuncts is a controlled infinitival phrase (InfP), while the other is an NP or a CP, as in the case of verbs such as *want* or *teach*, illustrated in (97)–(101) (from English Web 2015).

(97) "But," as Besemov would conclude, "no one wanted [either [_{NP} my information] or [_{InfP} to open their eyes]]."

(98) We teach them [[_{NP} manners] and [_{InfP} to be respectful]].

(99) This class educates parents on the importance of water safety by teaching children [[_{InfP} to float] and [_{NP} other lifesaving techniques]].

(100) You have taught me [[_{InfP} to rest physically], and [_{CP} that it is okay to work hard]].

(101) You teach me [[_{CP} that hard work pays off] and [_{InfP} to never give up on a goal]].

Such examples provide a new argument against the movement theory of control (Hornstein 1999), based on the fact that, on that theory, control into a single conjunct would violate Ross's (1967: sec. 4.2) Coordinate Structure Constraint (specifically, its "element constraint"; Grosu 1973), so all these examples should be ungrammatical.[25]

5 Conclusion

While Bruening and Al Khalaf (2020) employ three different strategies to deal with what they consider to be only apparent unlike category coordination, their proposal still leaves many different cases of such coordination unaccounted for. These include predicates such as *behave*, *reside*, and *last*, which impose mainly semantic restrictions on their arguments, but also such run-of-the-mill verbs as *believe*, *hope*, *teach*, and so on. In the discussion of B&AK's analysis, we also pointed out a number of methodological, technical, and empirical problems, which we consider to be fatal for their proposal.

We conclude that the Law of the Coordination of Likes, as it is sometimes called, is a myth. Coordination does not impose any such constraint; rather, all conjuncts must satisfy any external restrictions on the syntactic position they occupy. In some cases such restrictions are rigid, resulting in categorial sameness; in other cases they are underspecified or disjunctive, resulting in category "mismatches."

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[25] Kehler's (2002) analysis of some non-"across-the-board" violations of Ross's (1967) constraint in terms of discourse coherence relations is not applicable here, as conjuncts in most examples are discourse-parallel.

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