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On the non-existence of non-constituent coordination and non-constituent ellipsis

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1. Introduction

Sentences such as (1) appear to involve coordination of non-constituents (underlined):

(1) I [[$_{VP}$ spoke [$_{PP}$ to John]] [$_{PP}$ on Thursday]] and Mary on Friday.

The second conjunct comprises *Mary*, the complement of a P selected by the verb, alongside *on Friday*, a PP-adjunct adjoined to VP, but these do not form a constituent in the base structure by any (other) constituency test. The existence of this sort of "non-constituent coordination" (NCC) presents a problem for one of the most basic and universally-held notions in syntactic theory: grammatical phenomena such as coordination are only capable of manipulating constituents.

This problem has not gone unnoticed in the literature, and a number of different analyses have been proposed. One prominent type of approach derives the apparent non-constituency of the second conjunct by a process of "conjunction reduction", whereby the second conjunct is actually a large structure that is reduced by a string deletion operation that some have called "Left Edge Ellipsis" (LEE) (see Yatabe 2002; Crysmann 2003; Beavers & Sag 2004, and Hofmeister 2010 for HPSG approaches, and Wilder 1994, 1997 for a Minimalist approach).[1] Under this sort of analysis, (1) would have a structure like that in (2), where LEE operates on the struck-through string to render it unpronounced:

(2) [I spoke to John on Thursday] and [~~I spoke to~~ Mary on Friday]

An operation of this sort can derive examples like (1) without coordination of non-constituents, but at the cost of requiring *ellipsis* of non-constituents. Given the growing body of work convincingly showing that ellipsis is licensed in the syntax (Lobeck 1995, Merchant 2001, Aelbrecht 2010, Thoms 2010, Craenenbroeck & Lipták 2011, Sailor 2012), this outcome is just as conceptually undesirable as non-constituent coordination, the problem LEE is meant to overcome. Therefore, an alternative approach to examples such as (1) is desirable.

We propose that the non-constituent nature of NCC is illusory, arising from the successive application of two constituent-based operations: movement and ellipsis. Thus, we add NCC to the growing class of "move-and-delete" phenomena in the literature, which also includes pseudogapping and gapping (Jayaseelan 1990; Toosarvandani 2012, a.o.), as well as (multiple) sluicing, stripping, and fragment answers (Merchant 2001, 2003, 2004, a.o.). In support of this, we show that the second conjunct in NCC is bigger than it looks: the pronounced constituents are moved individually from their base positions to the leftmost edge of the conjunct XP, followed by ellipsis of the evacuated constituent, leaving just the moved elements. Our analysis of (1) is sketched in (3):[2]

(3) [$_{XP}$ [I spoke to John on Thursday]] and [$_{XP}$ [Mary]$_i$ [on Friday]$_j$ ~~[I spoke to t_i t_j]~~]

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[1] Another type of approach (which we will not discuss here) involves adopting a non-standard conception of constituency such that the second conjunct in (1) is in fact a constituent (Steedman 1996; Pesetsky 1995, a.o.).

[2] Our proposal has similarities to Frazier et al.'s (2012), but they differ in several important ways: see section 4.1.

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This structure involves "high" coordination (XP $\approx$ CP), but we show later that NCC can also involve "low" coordination (of e.g. vPs; cf. Potter this volume on gapping). We provide evidence for both movement and ellipsis in the structure of NCCs, and we show that the full range of data cannot be handled by the previous approaches which allow the grammar to act upon non-constituents.

2. Preliminaries

2.1. Core data

The key cases which we concentrate on involve apparent coordination under P, as in (1).[3] Pretheoretically, we refer to the two constituents which make up the second conjunct as "chunks", as depicted below for sentence (1):

(4) I [[$_{VP}$ spoke [$_{PP}$ to John]] [$_{PP}$ on Thursday]] and [Mary] [on Friday].
↑ *first "chunk"* ↑ *second "chunk"*

The first chunk of an NCC may be a subconstituent of DP (5)-(6) or CP (7)-(8), as well as PP.[4] In most cases, the second chunk is interpreted as an adjunct to the (highest) VP or TP, even though no such structure appears to be present in the second conjunct. To illustrate the problem more clearly, we underline the non-constituent strings that appear to be coordinated in the examples below.

(5) Mary [[$_{VP}$ took [$_{DP}$ pictures of dogs]] [$_{PP}$ on Thursday]] and cats on Friday.

(6) I [[$_{VP}$ told [$_{DP}$ stories about my family]] [$_{PP}$ for a few minutes]] and my pets for a few hours.

(7) He [[$_{VP}$ told them [$_{CP}$ that he knew Spanish]] [$_{PP}$ on Thursday]] and Italian on Friday.

(8) I [[$_{VP}$ claimed [$_{CP}$ that I was a spy]] [$_{TP}$ to impress John]] and an astronaut to impress Bill.

Thus, in terms of the categories it can operate in, NCC is a diverse phenomenon.[5]

Importantly, all NCC examples should be derived equally easily by LEE (though not by literal coordination, as in e.g. Pesetsky 1995). In section 3, we will see that this is not a desirable outcome; first, though, we present some background on LEE.

2.2. On Left Edge Ellipsis

Wilder (1997)[6] argues that coordination always and only involves CPs. The appearance of coordination anywhere lower in the tree (at VP, DP, etc.) is illusory: such cases reflect a CP conjunct that has been reduced by LEE, a PF deletion operation which applies from the left edge of a CP rightward, deleting a string under phonological identity. This non-constituent deletion derives all coordinations, including NCC.

Widler claims that a deletion operation with these properties is needed independent of NCC, citing examples from "aux drop" (9) and "diary drop" (10) phenomena in English (following Haegeman 1990):

(9) ~~Has~~ anyone got a pen?

[3] Throughout, we restrict our attention to examples that provide the strongest challenge to a constituent-based analysis of NCC. By doing this we exclude coordination of pairs of arguments in distransitives (i-a), and coordination of one VP-argument and one VP-adjunct (i-b), since each plausibly has a simple constituent-based analysis involving coordination of VP-shells (as in Larson 1988):

(i) a. I gave John a book and Mary a pencil.
b. I bought books on Thursday and pencils on Friday.

[4] Data were chosen to control for relevant attachment of adjuncts and arguments (e.g. in (5), the idiom *take pictures* helps rule out the irrelevant reading where *cats* is an argument of the verb).

[5] Cf. Frazier et al. (2012), who treat NCC in PP only.

[6] Wilder's paper is the most-developed version of the LEE approach in a Minimalist framework, so we direct our attention to his work for the sake of providing a suitably direct comparison with our proposal. The criticisms we level should also apply to the related proposals in HPSG.

(10) ~~I~~ came home. ~~I~~ went to bed. ~~I've~~ been tired all day.

However, subsequent work argues convincingly against an LEE analysis for such data: for example, Haegeman (2007) shows that diary drop is attested in non-initial positions, meaning LEE undergenerates (and see Fitzpatrick 2006 for arguments against LEE in aux drop):

(11) Tomorrow ~~I~~ will go to the gym.

Thus, LEE may lack support independent of NCC. In the next section, we show that LEE is not the correct analysis for NCC either, as it overgenerates.

3. NCC involves movement

In this section, we provide evidence that the chunks of the second conjunct in NCC undergo movement. This movement plays a crucial role in the analysis we present in section 4 (sketched above in (3)). We concentrate on the first chunk in this section, returning to the second chunk in section 4.2.

3.1. Islands

Surprisingly, if the first chunk's focus correlate is inside an island in the initial conjunct, then NCC is ungrammatical. Its correlate clearly does not undergo movement in the examples we have seen, which suggests that the first chunk is responsible for the island violation – it undergoes movement. We illustrate this with a variety of islands below. Crucially, a violation is not incurred if the entire island serves as the first chunk in NCC, shown below.

First, consider **possessive DPs**, which are typically islands to extraction (12).[7] Example (13-a) shows that possessive DPs can themselves be NCC chunks, but (13-b) shows that subconstituents presumed to originate inside possessed DPs cannot be.[8]

(12) *?Which sport did John write your favourite song about?

(13) a. John wrote everyone's favourite song about football in 2001 and everyone's favourite song about basketball in 2012.
b. *?John wrote everyone's favourite song about football in 2001 and basketball in 2012.

Importantly, the surface configuration in (13-b) is essentially the same as the one seen in the NCC in (5): here, the first chunk *basketball* is string-adjacent to the second chunk *in 2012*, just as the first chunk in (5) *cats* is string-adjacent to the second chunk *on Friday* there. The only difference is that the former example involves an island, while the latter does not.

The same effect can be replicated with **relative clause islands**, which are typically very strong in English. Example (15-a) is the control, where the first chunk is itself a relative clause; (15-b) shows that the first chunk cannot be a subpart of that relative clause.

(14) *What language did you meet the guy that knows?

(15) a. I taught the guy that knows Icelandic how to dance and the guy that knows Faroese how to sing.
b. *I taught the guy that knows Icelandic how to dance and Faroese how to sing.

Again we can rule out this effect being due to some boundedness condition on NCC, since (7) previously showed that NCC chunks can originate inside complement CPs. The present example crucially shows that this does not hold for island CPs.

Other islands show the same pattern: the first chunk of NCC exhibits island sensitivity, strongly indicating that it undergoes movement. We turn now to evidence of movement from other sources.

[7] Note that DP islands (at least those not involving extraction from relative clauses) are generally quite variable, with some extractions more acceptable than others. See Davies & Dubinsky (2003) for much relevant discussion.

[8] Using modified DPs discourages an NP-coordination (*football and basketball*) reading, making the judgments clearer. Judgments are muddier when such readings are not controlled for, perhaps as the result of a parsing difficulty.

3.2. P-stranding

If a movement analysis of NCC is correct, then the derivation of examples such as as (1) (sketched in (3)) involves P-stranding in the second conjunct. This predicts that languages prohibiting P-stranding will disallow NCC of the kind seen in (1). This is correct, as shown for Russian (16) by Frazier et al. (2012) (who also list Basque, Palestinian Arabic, Romanian, Kazakh, Malayalam, Japanese, French, Korean, and Romanian):[9]

(16) Askar sprosit u Daset-a segodnja i *(u) Ermek-a zavtra
Askar will.ask to Daset-ACC today and to Ermek-ACC tomorrow
"I will ask Daset today and Ermek tomorrow."

The same is seen with Italian and Slovenian:[10]

(17) Ho parlato a Maria martedì e ?*(a) Tommaso giovedi
I.have speak.PP to Maria on-Thurs and to Tomasso on-Friday
"I spoke to Maria on Thursday and Tomasso on Friday." (Italian)

(18) Govoril sem s Tino v četrtek in ??(s) Tomom v petek.
talked AUX.1SG with Tina.INST in Thursday and with Tom.INST in Friday
"I spoke to Tina on Thursday and Tom on Friday." (Slovenian)

Critically, other languages besides English that allow P-stranding also allow versions of (1), including Swedish (19) (and some dialects of Welsh: Frazier et al. 2012):

(19) Robin ska prata med Kim idag och (med) Björn imorgon.
Robin will talk with Kim today and with Björn tomorrow.
"Robin will talk with Kim today and (with) Björn tomorrow." (Swedish)

These data show that NCC is not a phenomenon peculiar to English, but in fact is widely attested; and, in each language it is found, it exhibits the hallmarks of movement.

3.3. Other immovable elements

Other elements that typically resist A′-movement similarly cannot serve as NCC chunks. We present two such cases here, bolstering the evidence that NCC requires movement.

First, consider **TP complements of an overt C**. As Abels (2003) argues, such TPs are normally immobile, as in (20) (the effect is much stronger than that of a weak island, so the *wh*-island created by *whether* in (20-b) is not the crucial factor):

(20) a. *He knows Icelandic, I'm sure that.
b. *He knows Icelandic, I'm not sure whether.

Turning to NCC, the first chunk can be a full CP, as in (21-a), but it cannot simply be a TP, as in (21-b):

(21) a. The witness will testify to whether John knew Icelandic tomorrow and whether he knew Faroese next week.
b. *The witness will testify to whether John knew Icelandic tomorrow and he knew Faroese next week.

[9] Susi Wurmbrand (p.c.) points out that head-final languages like German are hard to test for this, since NCC with P-stranding could be indistinguishable from Right Node Raising (which allows P-stranding in at least some non-P-stranding languages). Frazier et al. do not provide full data for all of these languages listed, so we are unsure about the status of the head-final languages among them.

[10] Pesetsky (1995:157, fn.37) states that P-stranding is possible in Spanish and Italian in such cases when the P is heavy and does not incorporate the definite article of its complement, but he does not provide examples or report more precisely on judgments. Our test cases involve NP complements, with no D to incorporate, and they were rejected by our consultants (and Frazier et al.'s Spanish consultants).

Such examples can only be construed as involving TP-coordination below *whether*. That a sensible reading is perfectly available in the NCC in (21-a) indicates that the problem with (21-b) is a structural one, namely the aforementioned constraint on TP movement.

Next, we consider **verb-particle constructions**, such as (22-a). The particles in such sentences cannot be A′-moved by themselves, as (22-b) shows, nor can the particle and the object DP be fronted together, as shown in (22-c):

(22) a. I blew up the inflatable chair.
b. *Up, I blew the inflatable chair.
c. *Up the inflatable chair, I blew.

Examples such as (22-c), alongside several other sources of negative evidence, are traditionally taken to indicate that verb particles do not form constituents with the adjacent object DPs. Assuming this is correct, now consider the behavior of coordination in verb-particle sentences:

(23) a. John blew out the candle and blew up the inflatable chair.
b. *John blew out the candle and up the inflatable chair.

If NCC is able to coordinate (apparent) non-constituents, why is (23-b) ungrammatical? Under an LEE approach, this cannot be explained. However, given what we now know about NCC, the answer can be found in (22). An NCC derivation for (23-b) would require the particle *up* to be the first chunk (and the object the second), but this is impossible: as we have seen throughout this section, NCC requires its chunks to undergo movement, but (22-b) independently shows that verb particles cannot move. In other words, NCC is correctly predicted to be impossible in (23-b) if, as we have seen, immovable elements cannot serve as chunks in NCC.

3.4. Summary

So far we have shown that the first chunk of NCC can be a subpart of PP, DP and CP, but only if that subpart is able to undergo A′-movement in such a configuration. This indicates that the first chunk undergoes movement in order to be part of the NCC, as in (3). It is important to stress that none of these facts follows straightforwardly from LEE, an in-situ string deletion process. In fact, LEE (as defined by Wilder 1997) incorrectly predicts all of the ungrammatical NCC examples above to be good:

(24) a. ...and [$_{CP}$ ~~I taught the guy that knows~~ Faroese how to sing] (15-b)
b. ...e [$_{CP}$ ~~ho parlato a~~ Tommaso giovedi] (17)
c. ...and [$_{CP}$ ~~he will testify to whether~~ he knew Faroese on Friday] (21-b)
d. ...and [$_{CP}$ ~~he blew~~ up the inflatable chair] (23-b)

Note that we cannot save the LEE analysis by making it unable to penetrate the relevant domains (e.g. DPs, CPs, *v*P shells) since this would make it unable to generate regular NCCs. This indicates that LEE is not the right mechanism for deriving NCC, and that movement (followed by some other kind of deletion) should be invoked instead. In the next section, we consider exactly where the relevant elements are moving to, what sort of structure they originate in, and what sort of ellipsis reduces the end result.

4. A move-and-delete account of NCC

The preceding section provided evidence of movement in the derivation of NCC, but the nature of that movement has, to this point, been unclear, with its effects seemingly vacuous: that is, no words are reordered in the second conjunct. In this section we propose that movement is essential to the derivation of NCC, as NCC is a member of the family of move-and-delete phenomena which also includes sluicing, stripping, fragment answers, and (pseudo)gapping (Merchant 2001, 2003, 2004; Depiante 2000; Jayaseelan 1990; Toosarvandani 2012, a.o.).

Assuming for now that NCC always involves clausal ellipsis, a sketch of our analysis is in figure 1:

(25) I spoke to John on Thursday and Mary on Friday.

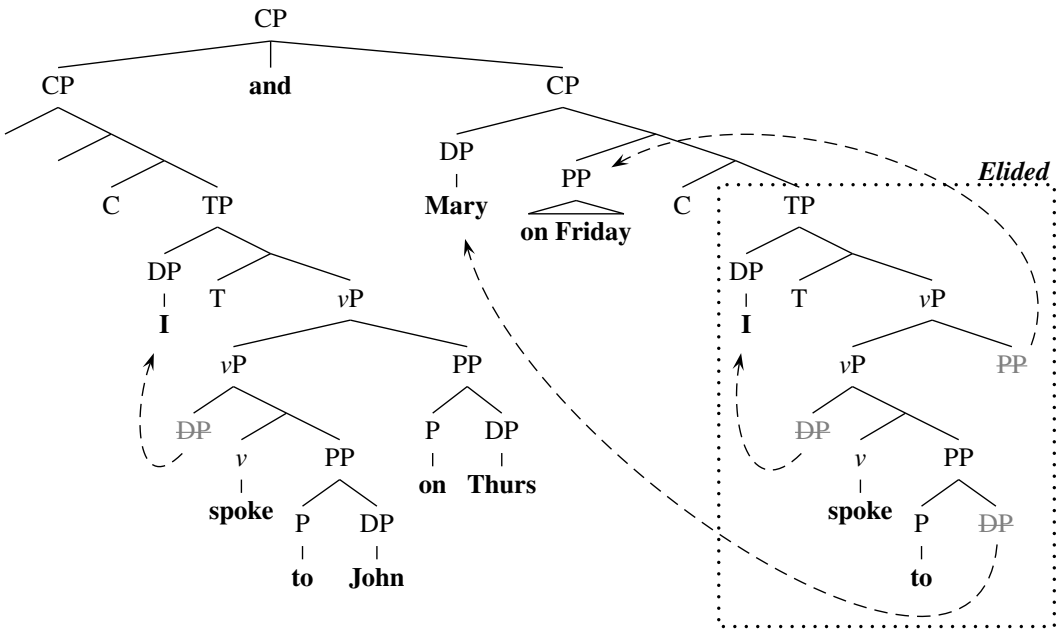

FIGURE 1

This is similar to the analysis in Frazier et al. (2012), and is compatible with the results from the previous section, capturing the role of movement in NCC. Moreover, it brings us closer to unifying NCC with similar ellipsis phenomena like stripping, which Sag (1976), Depiante (2000) and Merchant (2003) argue involves focus-fronting to the left periphery plus TP-ellipsis, as in (26):

(26) Lucie will admit she stole the diamonds, but [$_{CP}$ not the car [$_{TP}$ ~~she will admit she stole t~~]].

In the remainder of this section, we show that this is the right analysis for some instances of NCC, but not all; that is, NCC is not a structurally-uniform phenomenon, and not a fixed 'construction'. We argue that NCC can vary in the height of coordination and the size of ellipsis (cf. subsection 4.1), and it can also vary in the nature of the chunks (cf. subsection 4.2). Despite these variables, the basic empirical profile of NCC we have seen so far remains the same, as predicted by a move-and-delete analysis.

4.1. On the height of coordination and ellipsis in NCC

In this section, we show that NCC is a heterogeneous phenomenon: some cases are derived by CP-coordination, as in Figure 1, and others by lower coordination at the *v*P-level. Our point of departure comes from claims in the gapping literature that some (or perhaps all) instances of gapping involve low coordination (Siegel 1987; Johnson 2004; Toosarvandani 2012, a.o.). For instance, Johnson (2004:43) notes (citing earlier sources) that negation and modals can scope over coordination, allowing (27) to mean "it can't be the case that Ward eats caviar and that his guest eats dried beans":

(27) Ward can't eat caviar and his guest dried beans. (Siegel, 1987:53)

According to Johnson, this requires the coordination involved in gapping to be below the position of negation and modals, meaning coordination is no higher than vP.

Importantly, though, gapping examples like (27) also allow an interpretation in which negation and modals scope *under* coordination (Siegel 1987; Johnson 2004; Hartmann 2000, a.o.). That is, gapping allows negation and modals to be distributed within both conjuncts, meaning (27) is ambiguous: it can also mean "Ward can't eat caviar and his guest can't eat dried beans". By parity of reasoning, then, one might take this reading to arise from a high instance of coordination – say at CP – with distinct instances

of negation and/or modals in each conjunct, followed by elliptical reduction of the second conjunct.[11]

We observe that this same scope ambiguity is seen with NCC (though we only discuss negation here). That is, sentential negation can scope over coordination, but a distributed negation reading is also possible.[12] This is clearest with *or*, but the ambiguity shows up with *and* as well:

(28) John didn't speak to Mary on Thursday or Bill on Friday

a. ... that is, he spoke to neither of them. $\neg$ (A $\vee$ B)

b. ... but I can't remember which one of them he didn't speak to. ($\neg$ A) $\vee$ ($\neg$ B)

(29) John didn't speak to Mary on Thursday and Bill on Friday

a. ... rather, he spoke to Bill on another day. $\neg$ (A $\wedge$ B)

b. ... he hasn't spoken to either of them this week. ($\neg$ A) $\wedge$ ($\neg$ B)

We propose that the distributed-negation readings for NCC – evoked in the (b) examples above – are derived by CP-coordination ("CP-NCC"), while the readings where negation is outside coordination – as evoked in the (a) examples – are derived by coordination below negation, at the vP-level ("vP-NCC"):

(30) He didn't speak to Mary on Thursday or Bill on Friday.

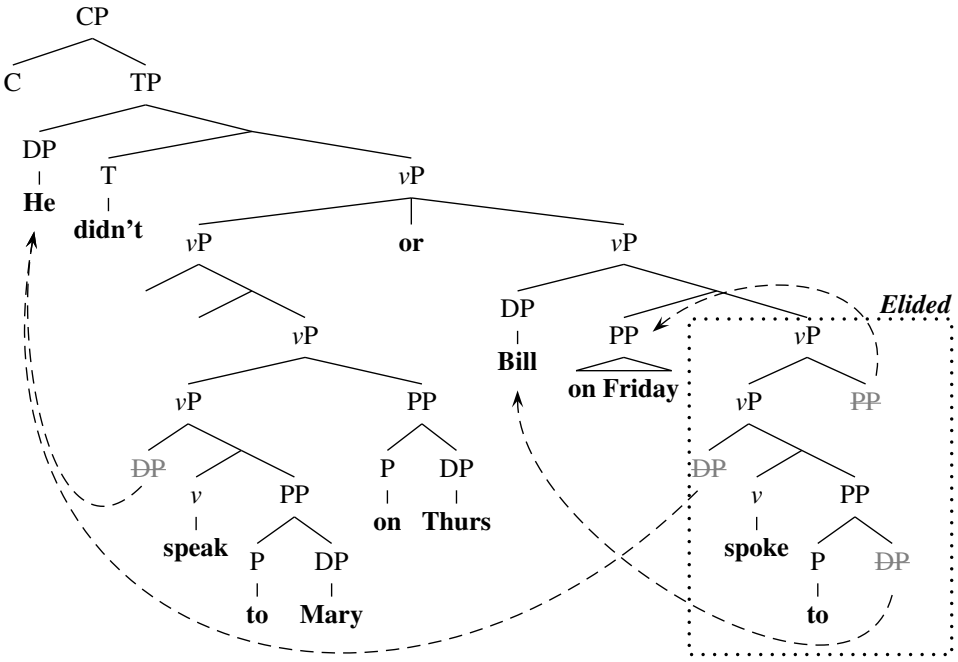

FIGURE 2

The derivation of vP-NCC, illustrated in Figure 2, is very similar to that of CP-NCC above in Figure 1 (modulo ATB movement of the subject in vP-NCC): the chunks undergo focus movement to the left edge of their conjunct, followed by ellipsis of (some projection of) the evacuated constituent.

Additional evidence of this structural ambiguity comes from the scopal interaction of quantified subjects and coordination in NCC. That is, quantified subjects can either scope above (31-a) or underneath (31-b) the coordination in NCC (see McCawley 1993; Johnson 2004 for gapping):

(31) Few people went to the play on Thursday and the concert on Friday.

a. ... as the play was really expensive, so no one could afford both. *few* (A $\wedge$ B)

b. ... as the weather was horrible, so most stayed at home. (*few* A) $\wedge$ (*few* B)

[11] See Potter (this volume) for such an approach.

[12] As first noted by Siegel (1987:fn. 1), intonation can make one of the readings more salient than the other: for example, a pause before the conjunction in (28) and (31) brings out the CP-coordination (distributed) reading.

We conclude that the ambiguities in NCCs track those seen in gapping, and that the different interpretations require different structures.

Under our analysis, the core derivation of *v*P-NCC is effectively identical to that of gapping (Johnson 2004; Toosarvandani 2012),[13] and the core derivation of CP-NCC is effectively identical to that of (multiple) stripping (Merchant 2003). In addition to sharing the move-and-delete analysis discussed throughout this paper, these phenomena are also all subject to the "no embedding" constraint (*ibid.*), shown below for NCC:

(32) *John confirmed that he called Bill a liar and denied (that) (he) ~~he called~~ Mary an idiot.

This constraint may, in turn, be a consequence of obligatory coordination in each phenomenon (and see Toosarvandani 2012 on "(low) coordinate parallelism"): after all, the only conspicuous point of variation distinguishing this collection of ellipsis phenomena is the height of coordination involved.

4.2. Extending the analysis: non-adjacent NCC chunks

If NCC is just move-and-delete, and more specifically two independent applications of Move on two independent XPs, then our analysis predicts that there shouldn't be anything requiring these XPs to be adjacent in the base structure (as they have been in the examples thus far). If we construct an NCC with non-adjacent chunks, then the effect should be one where the material in between the two chunks in the base structure will be left inside the ellipsis site, and hence "missing" in the NCC. This prediction is attested. Consider (33):[14]

(33) I gave books to Tom on Thursday and records on Friday.

Here, *to Tom* is not repeated in the second conjunct, even though it occurs in the first conjunct between the two DPs corresponding to the chunks of the NCC; hence we may say that *to Tom* is missing from the second conjunct. On the move-and-delete analysis, this is because *to Tom* is left in the ellipsis site after movement of the chunks.

(34) ... and $[_{XP}$ [RECORDS]$_i$ [on FRIDAY]$_j$ ~~[I gave t_i to Tom t_j]~~]

These are somewhat different from the NCCs we have seen so far, where the two chunks that make up the second conjunct are contiguous in the antecedent, but a unified account is both possible and indeed desirable. Such an account follows straightforwardly from our proposal.

Importantly, we find numerous other cases of NCCs of this kind, including cases where the remaining chunks are subconstituents within other kinds of VP-internal XPs.

(35) a. I told John I was learning Icelandic, and Mary Faroese.
= ... and $[_{XP}$ [MARY]$_i$ [FAROESE]$_j$ ~~[I told t_i I was learning t_j]~~]

b. I told John to learn Icelandic and Mary Faroese.
= ... and $[_{XP}$ [MARY]$_i$ [FAROESE]$_j$ ~~[I told t_i to learn t_j]~~]

c. I saw John at two o'clock and Mary three.[15]
= ... and $[_{XP}$ [MARY]$_i$ [THREE]$_j$ ~~[I saw t_i at t_j]~~]

d. ?I told John to take pictures of my dogs, and Mary my cats.
= ... and $[_{XP}$ [MARY]$_i$ [my CATS]$_j$ ~~[I told t_i to take pictures of t_j]~~]

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[13] For *v*P-NCC, it is possible that adjunct chunks are not moved, but adjoined above the ellipsis site. Note that we do not assume that the ellipsis operation here is "VP-ellipsis" of the traditional sort, since NCC is licensed in many configurations where VP-ellipsis is disallowed. Instead we propose that ellipsis here is licensed by A′-movement of the surviving chunks, adopting the theory of ellipsis licensing in Thoms (2010).

[14] Examples like (33) seem to benefit from placing focal stress (indicated with small caps) on the separate chunks.

[15] Frazier et al. (2012:7-8) report that P-stranding is not possible with the second chunk of NCC (at least in different terms), but they do not discuss any other cases of NCC that involves "missing pieces." We acknowledge that many examples of incomplete NCC with only a preposition missing are somewhat marginal for some speakers, but as noted above, adding some degree of focal stress to the second conjunct improves them significantly.

Such examples provide very strong evidence for the role of ellipsis in deriving NCC, as it is not clear how to derive these strings with literal coordination or other such mechanisms. Our move-and-delete account does this easily, and without appealing to multiple instances of non-constituent ellipsis like "distributed deletion" (e.g. *...and ~~I told~~ Mary ~~I was learning~~ Faroese*).[16]

4.3. Summary

In this section we have proposed a move-and-delete analysis of NCC, where there is movement of the chunks to the left periphery of a coordinated XP, with ellipsis applying in the second conjunct to leave just the chunks. Evidence from scope ambiguities indicates that the coordination can be of *v*P or CP, and evidence from NCC examples with "missing pieces" indicate that NCC involves ellipsis within the second conjunct.

5. Move-and-delete phenomena: the analytical outlook

In section 4.1, we saw evidence of two different types of NCC, distinguished only by the height of coordination involved (CP vs. *v*P). This, we suggested, mirrors the behavior of gapping, a phenomenon which shares other important similarities with NCC, including the no-embedding constraint. Note that it would be equally plausible to describe all of these cases as involving "multiple stripping," since stripping is also analysed as involving focus movement plus ellipsis (see e.g. Sag 1976). Stepping back, the preponderance of empirical and analytical similarities uniting all of these ellipsis phenomena calls into question the wisdom of distinguishing them terminologically. It would seem that a unified analysis is conceivable (and certainly desirable), as we discuss briefly in this section.

As we suggested above, a seemingly-trivial variable, the height of coordination, leads the move-and-delete derivation to produce the empirical profiles we have come to know as gapping or stripping. At this point, we might begin to explore some logical consequences of this approach: under the traditional assumption that coordination can combine any two like categories, we might wonder how many of these possibile coordinations lead to unique elliptical profiles when construed with the move-and-delete derivation. Put differently, what constrains the distribution of move-and-delete phenomena?

The scope of this question is substantial, and we cannot address it in any real depth here. As an initial attempt, though, we submit the following prediction: if the move-and-delete derivation requires A′-movement, then it stands to reason that it should only be found within categories that have the relevant A′-positions to host such movement. In other words, we expect the move-and-delete derivation to require access to a left periphery, i.e. the left edge of CP, or the left edge of *v*P (the "low" left periphery: Jayaseelan 2002 a.o.). If this is correct, then the numerous different logically-possible heights of coordination are only relevant to the extent that their conjuncts contain a left periphery. This predicts that NPs, for example, should be unable to host move-and-delete: there is no evidence that NPs can host A′-movement. This prediction is confirmed for stripping (36-a) (cf. Lobeck 1995) and NCC (36-b):

(36) a. *I spread the rumour that you stole the pies, and he spread the rumour (that) the beer.
b. *I heard the rumour about Mary that she liked and (about) Tom that he hated.
(on relevant different rumours interpretation)

A unified analysis of move-and-delete ellipsis phenomena may be achievable, then, but much work remains to be done. If tenable, though, such an analysis would have the inherent virtue of reducing the size of the grammar, in keeping with current Minimalist goals.

6. Conclusion

"Non-constituent coordination" involves neither coordination of non-constituents, nor ellipsis of non-constituents (e.g. "left edge ellipsis"). Rather, such sentences are derived by a "move-and-delete"

[16] This is in fact permitted in some theories, e.g. Hartmann (2000), in another context Fanselow & Ćavar (2002), but it should be evident from the preceding discussion that this is far too powerful a mechanism to allow into the grammar. If simple LEE overgenerates, distributed deletion is likely to go wild (and see Ott 2011 for criticisms of much of the empirical basis of distributed deletion).

derivation, where the second conjunct is a full conjoined *v*P or CP reduced by ellipsis following movement of the pronounced material out of the ellipsis site. Both the movement and ellipsis components of the analysis operate on constituents, and are motivated empirically, yielding deep similarities to the analyses of several other ellipsis phenomena, indicating that a unified analysis is possible. Sentences like (1), then, do not challenge the grammatical tenet that syntax only manipulates constituents. Non-constituent coordination and non-constituent ellipsis do not exist.

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