

Gapping without gaps

Jan-Wouter Zwart
University of Groningen

1 Introduction

Gapping refers to the omission of a verb in clausal coordination, illustrated in (1).

- (1) Tasman discovered Tasmania, and Cook (discovered) the Cook Islands.

While the earliest analyses of gapping (Ross 1967) involve verb ellipsis, later sometimes modified as verb phrase ellipsis (Jayaseelan 1990, Coppock 2001), Johnson (2009) famously proposed an analysis without ellipsis, describing gapping as a case of across-the-board verb phrase movement instead.

This squib supports Johnson's contention that ellipsis is not involved in gapping. However, I note several problems with his specific proposal, suggesting across-the-board movement is not the way to go either. These problems have to do with the symmetric nature of coordination in gapping constructions, and with the nature of gapping in Dutch, where the proposed analysis can be shown not to work. I end by proposing an even more radical ellipsis-free analysis of gapping.

2 Elements of Johnson's movement analysis of gapping

I refer to Johnson 2009 for arguments, convincing in my view, that gapping is different from verb (phrase) ellipsis. Johnson's own analysis contains the following elements (see Figure 1).

- (2) Elements of Johnson's (2009) analysis
- a. coordination at the vP level ①
 - b. subjects are internal to both vPs, the subject of the first conjunct moves up ②
 - c. objects move out of the vP ③
 - d. across-the-board remnant VP-movement out of the vPs ④

Applied to (1), this means that *Tasman* is generated in the left conjunct vP, and moves out of that vP to SpecTP; *discovered* is the remnant VP of both conjunct vPs, moved into the middle field of the first clausal conjunct (PredP); *Tasmania* is the object of the left conjunct VP, moved to the right; and is the element coordinating

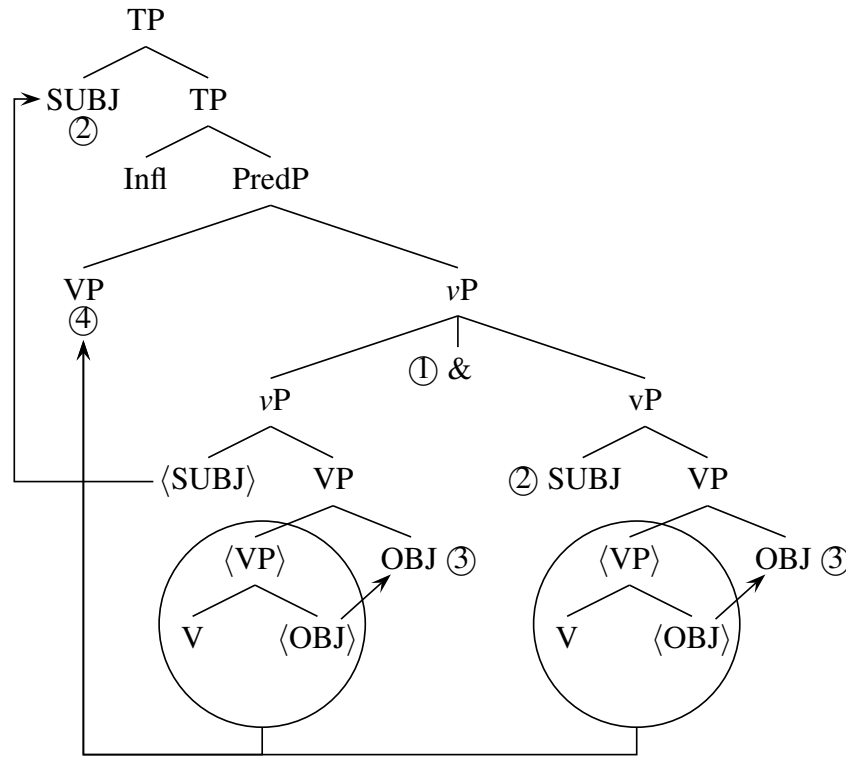


Figure 1

the two *vP* conjuncts; *Cook* is the subject of the right conjunct *vP*, staying in situ; *the Cook Islands* is the object of the right conjunct *VP*, moved to the right.

3 Coordination: Symmetric or asymmetric?

As Johnson (2009: 294) notes, his analysis violates the Coordinate Structure Constraint of Ross (1967), not so much in the across-the-board *VP*-movement, but in the movement of the subject (*Tasman* in (1)) out of the first conjunct *vP*. He refers to the observation made in the literature (see in particular Kehler 1996) that the Coordinate Structure Constraint is not observed in so-called asymmetric coordinations, and suggests that it “does seem possible” that coordination in gapping constructions is of the required asymmetric type.

This, however, is incorrect. As discussed in Kehler 2002: 83, Levin & Prince (1986) show that the asymmetric cause-effect reading of clausal coordination is lost under gapping. Consider a situation where *Tasman* and *Cook* are highly competitive characters, leading one to order more expensive drinks than the other. In that situation, (3) has the asymmetric reading that *Cook* orders champagne *because*

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Tasman ordered wine (the symmetric reading, where Tasman and Cook just happen to order different drinks, is also available, of course):

(3) Tasman orders wine and Cook orders champagne.

But under gapping, the asymmetric (cause-effect) reading is lost:

(4) Tasman orders wine, and Cook champagne.

In this connection, Lakoff (1986) discusses the kinds of scenarios inducing the asymmetry that favors violations of the Coordinate Structure Constraint. These scenarios involve a natural course of events (5), reverse outcomes (6), or cause-effect (7).

(5) This is the champagne that Cook went to the store and bought.

(6) How much champagne can you drink and still stay sober?

(7) This is the champagne that Cook drank and lived to be one hundred

These typical scenarios all involve subject continuity. Gapping, on the other hand, requires contrastively focused subjects (and objects).

In Kehler's (2002) analysis, violations of the Coordinate Structure Constraint are only possible when the conjoined clauses involve a common topic (2002: 123, compare Lakoff 1971). In symmetric coherence relations, this leads to extraction of the common topic from both conjuncts, i.e. across-the-board extraction. In asymmetric coherence relations (contiguity, causality), there must be a single topic for both conjoined clauses, which can then be extracted (as in examples (5)–(7)). Typically, the cohesion between the two events expressed in the conjoined clauses requires that the subject of the two clauses remains constant. This makes it impossible to construe gapping counterparts to the examples in (5)–(7). As far as I can tell, only cause-effect scenarios allow for situations where the subjects are contrasted, but they require context, as in (3)–(4). And in those cases, gapping is not allowed.

It seems, then, that the violation of the Coordinate Structure Constraint in Johnson's (2009) analysis of gapping is problematic. Recall that this violation occurs when the subject of the first conjunct moves up, while the subject of the second conjunct stays inside its *vP* (see Figure 1). This subject movement is necessitated by Johnson's assumption that the subject is generated inside *vP* (his (19a)). But this assumption is a necessary ingredient of the analysis, which involves the coordination of two *vPs* under a single TP. Under these assumptions, no alternative position presents itself for the subject of the second conjunct. The Coordinate Structure Constraint violation, therefore, is inevitable.

4 Gapping in Dutch

Gapping in Dutch is illustrated in (8) (compare to (1)) (as usual, Dutch examples are presented as embedded clauses to abstract away from the verb-second phenomenon, putting the verb in second position in main clauses):

- (8) ... dat Tasman Tasmanië ontdek-te en Cook de Cook Eilanden
 ... that Tasman Tasmania discover-PST and Cook the Cook Islands
 ‘... that Tasman discovered Tasmania and Cook the Cook Islands.’

In Dutch embedded clauses, the word order is OV due to leftward shift of the object (Zwart 1994). The object appears to the left of adverbs and particles, including negation, that mark the vP boundary:

- (9) ... dat Tasman Tasmanië niet ontdek-te
 ... that Tasman Tasmania NEG discover-PST
 ‘... that Tasman did not discover Tasmania.’

The object shift applies to objects in both conjuncts (AFF = affirmative):

- (10) Hij beweert-t dat Tasman Tasmanië wél ontdekt-te en Cook
 he.NOM claim-3SG that Tasman Tasmania AFF discover-PST and Cook
 de Cook Eilanden níet.
 the Cook Islands NEG.
 ‘He claims that Tasman did discover Tasmania, and Cook did not discover
 the Cook Islands.’

Since *de Cook Eilanden* ‘the Cook Islands’ in (8) is outside vP , it follows that *Cook*, the subject of the second conjunct in (8), cannot be inside vP either. While this removes the violation of the Coordinate Structure Constraint, since now both subjects have moved out of vP , it entails that gapping can no longer involve coordination at the vP level.

This means we are back at a clausal coordination analysis of gapping (presumably at the TP level). But then across-the-board extraction of the (remnant) VP would have to target a position outside TP, presumably in the left periphery, predicting VS word order in gapping (incorrectly). This could be fixed by proposing an additional subject movement out of the first conjunct, but that would be an ad hoc operation, bringing the Coordinate Structure Constraint violation back in again. (The subject is considered to be in the specifier position of TP in embedded clauses, in view of its position to the right of the complementizer, cf. (8).)

Another problem with gapping in Dutch, noted first for German in Evers 1975: 14, is that it may target discontinuous verbal elements:

- (11) ... dat Tasman probeer-t [Tasmanië te ontdek-ken] en Cook
 ... that Tasman try-3SG Tasmania INF discover-INF and Cook
 (probeer-t) [de Cook Eilanden (te ontdek-ken)]
 the Cook Islands
 ‘... that Tasman tries to discover Tasmania, and Cook the Cook Islands.’

This would seem to be incompatible with any VP-movement analysis, including the remnant VP-movement analysis proposed by Johnson (2009). This argument assumes a condition of parallelism between the two conjuncts in gapping; as pointed out by Vanden Wyngaerd (2009: 48), if that condition could be relaxed, discontinuous gapping could be avoided by moving *de Cook Eilanden* ‘the Cook Islands’ in (11) into the matrix clause to the left of *probeert* ‘tries’, a movement that is generally possible in Dutch.

All in all, though, it seems that Johnson’s (2009) analysis of gapping as across-the-board remnant VP-movement does not carry over to Dutch.

5 A WYSIWYG analysis

So far we have seen that Johnson’s (2009) analysis of gapping, replacing more traditional ellipsis analyses, faces problems with the Coordinate Structure Constraint and with gapping in Dutch. Nevertheless, I find Johnson’s arguments against an ellipsis approach to gapping compelling, and would therefore suggest another alternative analysis, not involving ellipsis or movement.

My alternative proposal starts from the assumption that every derivation is a triple consisting of a numeration (a set of elements), narrow syntax (the iterated operation merge), and an externalization procedure (setting the stage for sound/meaning processing). Importantly, a member of the numeration may itself be the output of another derivation (recursion). This has been referred to as ‘layered derivations’ (Zwart 2009, 2011). On this approach, conjuncts must be outputs of separate derivations (Zwart 2005), so that a coordinated structure *A and B* starts from the numeration (12), where *A/B* may stand for any possible conjunct, no matter its internal complexity.

- (12) { A, and, B }

In gapping constructions, A must be a clause, but B need not be. In fact, we may consider the possibility that B is just a string of noun phrases, more particularly those noun phrases that are focus alternatives to the focused noun phrases in clause A.

In the first conjunct of example (1), the focused noun phrases are *Tasman* and *Tasmania*. This means that for (1), B = [Cook the Cook Islands], i.e. what you see is what you get.

The nonfocused material in a gapping construction represents the ‘focus related topic’ of [Tancredi \(1992\)](#), i.e. that which is taken to be ‘given’ in the interpretation of an incomplete structure. I assume that full interpretation of a gapping construction involves the association of the focus material (B in (12)) with the focus related topic as part of the externalization procedure. Assuming this much, there is no need for a covert presence of the focus related topic material in B, i.e. no need for ellipsis in narrow syntax.

(It may be that the derivation generating B does involve ellipsis; i.e. the derivation yielding B starts out as a full clause, and is reduced to the set of focus elements during the externalization procedure of that derivation layer. This may account for the ellipsis effects in gapping found in [Coppock 2001](#), though I leave this for further study.)

In support of this WYSIWYG analysis of gapping, I note the following.

First, as [Carrera Hernández \(2006: 258\)](#) observes, languages using a different conjunction for clausal coordination and noun phrase coordination lack gapping. This is illustrated in (13) for Wolof ([Carrera Hernández 2006: 263](#), referring to Dr. Stéphane Robert by personal communication; Wolof uses *ag/ak* for noun phrase coordination).

- (13) *Jënd naa woto te yow mobilette.
to.buy PERF:1SG car and you motorbike
(intended) ‘I bought a car and you a motorbike.’

If gapping involves clausal coordination, this generalization is mysterious, but not if in gapping the element A is a clause and the element B is a noun phrase string (assuming such a string to be characterized by the nominal category feature).

Second, on an ellipsis analysis of gapping one expects gap-remnant interactions, but these are hard to find ([Ross 1970: 250](#)). For example, in (14a) *the bucket* cannot interact with the supposedly elided verb *kicked* to yield the idiomatic reading ‘die’, in (14b) the elided material (*heard no one*) does not license the negative polarity item *anything*, and in (14c) the elided material (*wants Bob*) does not provide a binder for the reflexive pronoun *himself*.

- (14) a. #John kicked the ball and Bill the bucket.
b. *John heard no one object and Bill say anything.
c. I want Bob to shave himself and Mary to wash himself.

Third, the WYSIWYG analysis proposed here accounts for the differences between gapping and VP-deletion/pseudogapping listed in Johnson 2009: 293, as well as for the observation that gapping occurs productively in languages without VP-deletion, such as Dutch. As is well known, VP-deletion/pseudogapping is not restricted to coordination, occurring with subordinating conjunctions like *before* and *because* and in embedded clauses, unlike gapping:

- (15) a. Tasman discovered Tasmania before Cook did (the Cook Islands).
b. *Tasman discovered Tasmania before Cook the Cook Islands.
- (16) a. Tasman discovered Tasmania and I think Cook did (the Cook Islands/ too).
b. *Tasman discovered Tasmania and I think Cook the Cook Islands.

If gapping does not involve ellipsis, parallel behavior to VP-deletion (including pseudogapping) is not predicted. Other differences between VP-deletion and gapping, such as the presence of additional material in the elliptical clause (like *hardly*, possible with VP-deletion but not with gapping), and voice mismatches between the overt and elliptical verb (possible with VP-deletion but not with gapping), also hinge on the presence of covert clausal material in ellipsis, which we no longer assume to apply to gapping on the analysis proposed here.

Finally, the analysis contemplated here derives all the locality effects of gapping identified in Neijt 1979. These effects are illustrated in (17)–(20), with the focused elements underlined.

- (17) Coordinate Structure Constraint
*Alphonse cooked the rice and the beans and Harry the potatoes.
- (18) Sentential Subject Condition
*That Alphonse ate the rice is fantastic and Harry the beans.
- (19) Left Branch Condition
*People from New York love the beach and LA the theater.
- (20) Adjunct Island Condition
*John saw Mary after he fixed the car and Bill the bike.

What unites these examples is that the focus elements in the first conjunct clause are contained within an island: *the beans* is contained within a coordinate structure in (17), both *Alphonse* and *the rice* are contained within a subject clause in (18), *New York* is contained within a left branch element in (19), and *the car* is contained within an adjunct in (20).

In a layered derivation model of grammar, islands are outputs of separate derivations (see Zwart 2009). Such an output of a separate derivation is listed as a single

element in the numeration for the next derivation, and as a corollary, its subparts are not elements in that numeration. Hence they can also not be singled out as focus elements in the derivation built on that numeration.

Concretely, in (17) *the rice and the beans* can be a focus element in the first conjunct clause, because *the rice and the beans* is an element in the numeration deriving that clause, but *the beans* is not an element in the numeration deriving the first conjunct clause, and therefore *the beans* cannot be a focus element in that clause. As a result, *the potatoes* can only be interpreted as a focus alternative to *the rice and the beans*, not as a focus alternative to *the beans*. The same goes, *mutatis mutandis*, for the island-contained intended focus elements in (18)–(20).

In conclusion, it seems that the major explananda of gapping constructions are within reach in the WYSIWYG analysis proposed here, in which the remnants are not the by-product of ellipsis or remnant movement, but simply the focus alternatives to the focused noun phrases in the antecedent clause.

6 Conclusion

In this squib I have (i) endorsed the arguments advanced in Johnson 2009 against an ellipsis analysis of gapping, (ii) argued that the alternative analysis advanced by Johnson, involving remnant-VP across-the-board movement, runs into problems with the Coordinate Structure Constraint and with gapping in Dutch, and (iii) proposed a new ‘what you see is what you get’ analysis of gapping, in which the remnant noun phrases are the output of a separate derivation yielding a string of focus alternatives to the focused noun phrases in the antecedent clause. This analysis, couched within the framework of layered derivations of Zwart (2009), explains major properties of gapping, setting it apart from VP-deletion/pseudogapping, and accounting for its locality properties.

Kyle Johnson was one of the first visiting faculty I encountered in the context of the Dutch national linguistics graduate training program, and I have benefited greatly from his work, his encouragement, and his friendship. I’ve also adopted Kyle’s habit of letting papers float around in semi-published form for many years, and the material in this squib, first presented in Utrecht in 2007 and then in Budapest in 2009, is no exception. I can think of no better place for this paper to finally land than in his well-deserved tribute.

References

- Carrera Hernández, Ana. 2006. Gapping as a syntactic dependency. *UCL Working Papers in Linguistics* 18. 241–267.

- Coppock, Elizabeth. 2001. Gapping: in defense of deletion. *Proceedings of the Chicago Linguistic Society* 37(1). 133–148.
- Evers, Arnold. 1975. *The transformational cycle in Dutch and German*: Utrecht University dissertation.
- Jayaseelan, K. A. 1990. Incomplete VP Deletion and Gapping. *Linguistic Analysis* 20(1-2). 64–81.
- Johnson, Kyle. 2009. Gapping is not (VP) Ellipsis. *Linguistic Inquiry* 40(2). 289–328.
- Kehler, Andrew. 1996. Coherence and the Coordinate Structure Constraint. *Proceedings of the Berkeley Linguistic Society* 22. 220–231.
- Kehler, Andrew. 2002. *Coherence, Reference, and the Theory of Grammar*. CSLI Publications.
- Lakoff, George. 1986. Frame semantic control of the Coordinate Structure Constraint. *Proceedings of the Chicago Linguistic Society* 22(2). 152–167.
- Lakoff, Robin. 1971. If's, and's and but's about conjunction. In Charles J. Fillmore & D. Terence Langendoen (eds.), *Studies in Linguistic Semantics*, 114–149. New York: Holt, Rinehart, and Winston.
- Levin, Nancy & Ellen Prince. 1986. Gapping and causal implicature. *Papers in Linguistics* 19. 351–364.
- Neijt, Anneke. 1979. *Gapping*. Dordrecht: Foris.
- Ross, John Robert. 1967. *Constraints on Variables in Syntax*: Massachusetts Institute of Technology dissertation.
- Ross, John Robert. 1970. Gapping and the Order of Constituents. In Manfred Bierwisch & Karle E. Heidolph (eds.), *Progress in Linguistics*, 249–259. The Hague: Mouton.
- Tancredi, C. 1992. *Deletion, Deaccenting and Presupposition*: Massachusetts Institute of Technology dissertation.
- Vanden Wyngaerd, Guido. 2009. Gapping constituents. HUB Research Paper 2009/2. <https://lirias.kuleuven.be/bitstream/123456789/408979/1/09HRPL%26L02.pdf>.
- Zwart, Jan-Wouter. 1994. Dutch is head initial. *The Linguistic Review* 11. 377–406.
- Zwart, Jan-Wouter. 2005. The Coordinate Structure Constraint: A minimalist perspective. Paper presented at the Workshop on verb clusters and coordination, Leiden University, November 4. <http://www.let.rug.nl/~zwart/docs/ho05devos.pdf>.
- Zwart, Jan-Wouter. 2009. Prospects for top-down derivation. *Catalan Journal of Linguistics* 8. 161–187.
- Zwart, Jan-Wouter. 2011. Structure and order: Asymmetric merge. In Cedric Boeckx (ed.), *The Oxford Handbook of Linguistic Minimalism*, 96–118. Oxford: Oxford University Press.