

# On the syntax of adversative coordination

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## Abstract

A series of studies have distinguished two types of *but*, namely, corrective and contrastive. The difference between these two types has been considered largely semantic. This article shows that the semantic difference also translates into a different syntax for each type of *but*. More precisely, corrective *but* always requires clausal coordination. This entails that apparent cases of corrective *but* coordination at the DP level must be reanalyzed in terms of clausal ellipsis within the second conjunct. On the other hand, contrastive *but* is not restricted in this way, and offers the possibility of genuine DP-level coordination. From this difference, it is possible to derive a number of syntactic asymmetries between corrective and contrastive *but*.

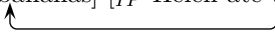
## 1 Introduction

This article examines the syntax of the adversative conjunction *but*, especially in its usage as a DP-level coordinator. Although the literature on the syntax of *but* is relatively small,<sup>1</sup> enough has been written to differentiate two competing proposals. On the one hand, Sag et al. (1985), Bianchi and Zamparelli (2004), and (implicitly) Merchant (2004b) argue that *but* can only coordinate clauses:<sup>2</sup> apparent cases of DP *but* coordination must be reanalyzed as clausal coordination plus ellipsis within the second conjunct (1b). I'll assume an analysis of ellipsis along the lines of Merchant (2001, 2004a) and related work –that is, in terms of movement of the remnant of ellipsis to the left periphery plus PF deletion of IP. I follow the convention of indicating ellipsis with strikethrough.

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<sup>1</sup>Most of the previous studies on *but* focus on its semantics. See, e.g., Lakoff (1971); Anscombe and Ducrot (1977); Barwise and Cooper (1981); Umbach (2005); and references.

<sup>2</sup>For the sake of consistency, I will assume that matrix clauses are CPs in all cases, possibly containing a silent Force operator (cf. Rizzi 1997). Nothing of what follows depends on this particular assumption, though.

- (1) a. Helen ate one apple but three bananas  
 b. [<sub>CP</sub> Helen ate one apple] but [<sub>CP</sub> [three bananas] [<sub>IP</sub> ~~Helen ate~~ *t*]]
- 

On the other hand, Barwise and Cooper (1981) claim that genuine DP-level *but* coordination is possible, subject to certain semantic restrictions (see section 2.2 and footnote 6). No ellipsis is necessary under this approach (2b).

- (2) a. Helen ate one apple but three bananas  
 b. Helen ate [<sub>DP</sub> one apple] but [<sub>DP</sub> three bananas]

This article shows that both analyses are correct: adversative coordination is compatible with a conjunction reduction analysis as well as with a DP-level coordination analysis. However, and very importantly, the choice between (1b) and (2b) is *not* random –rather, it is determined by the specific semantics of *but* in a given sentence. The semantic literature has shown that *but* has two different meanings, which have been called *corrective* and *contrastive*. Corrective *but* (translated as *sondern* in German and *sino* in Spanish) results in the denial of the proposition expressed in the first conjunct.

- (3) a. Helen didn't eat one apple but three bananas  
 b. Elena no comió una manzana sino tres plátanos  
 E not ate an apple but three bananas

On the other hand, contrastive *but* (*aber* in German; *pero* in Spanish) does not deny the proposition of the first conjunct. Rather, it simply compares two states of affairs, introducing the presupposition that the second conjunct is unexpected given the first conjunct.

- (4) a. The girl is tall but no good at basketball  
 b. La chica es alta pero desastrosa jugando al baloncesto  
 the girl is tall but disastrous playing at basketball

We will see that the semantic difference between corrective and contrastive *but* also has a reflection in syntax. Specifically, I defend the hypothesis that corrective *but* corresponds to the structure in (1b) –that is, clausal coordination plus ellipsis. On the other hand, contrastive *but* can coordinate smaller constituents, such as DPs (2b). We will see in the following sections that, from this asymmetry, we can derive a number of syntactic differences (some of them unnoticed so far) in the syntax of *but* coordination. On a larger scale, we will also see that this analysis supports a theory of grammar with a tight one-to-one mapping between syntax and semantics (*contra* proposals that advocate a looser correspondence, e.g., Culicover and Jackendoff 2005).

The article is organized as follows: in section 2, I elaborate a bit more on the semantic differences between contrastive and corrective *but*. In section 3, I provide six arguments that show that corrective *but* requires clausal coordination. After an interim conclusion in section 4, section 5 applies the same arguments

to contrastive *but* to show that it allows coordination of a wider range of categories. Finally, section 6 summarizes the empirical results, and section 7 offers a justification of why such a split should exist.

## 2 Two types of adversative coordination

### 2.1 Corrective *but* is a marker of metalinguistic negation

While English only has one word (*but*) to indicate adversative coordination, languages like Spanish or German have a choice between *pero* (Sp.) and *aber* (Ge.) on the one hand (contrastive *but*), and *sino* (Sp.) and *sondern* (Ge.) on the other (corrective *but*). The choice between using one or the other depends largely on the context they appear in. Starting with corrective *but*, Horn (1989) observes that it requires the presence of metalinguistic negation, which is defined as “a device for objecting to a previous utterance on any grounds whatever, including the conventional or conversational implicata it potentially induces, its morphology, its style or register, or its phonetic realization” (Horn 1989, 363). This amounts to saying that corrective *but* and *sino* are used whenever we want to deny the proposition expressed by the first conjunct.

Horn claims that metalinguistic negation “does not operate on the same rhetorical or grammatical level as the clause in which it occurs” and therefore “it will fail to display those traits which are characteristic of the more fully integrated object-level negator” (Horn 1989, 397). One of these traits is the possibility of being incorporated into the morphology of a word in the clause, which explains the ungrammaticality of (5a). Bosque (1980, 137) observes the same restriction for Spanish *sino* (5b).<sup>3</sup>

- (5) a. \* This is impossible but merely difficult.  
       b. \* Esto es imposible sino meramente difícil.  
           this is impossible but merely difficult

Similarly, both Horn (1989) and van der Wouden (1997, 69) note that NPIs are not licensed in clauses containing a metalinguistic negation. As expected, clauses containing English corrective *but* or Spanish *sino* do not license NPIs either.<sup>4</sup> Note that both examples in (6) are grammatical if the NPI *ever/nunca* is removed.

- (6) a. I haven’t (\*ever) been to Mexico but to Canada.  
       b. No he estado (\*nunca) en México sino en Canadá  
           not have been ever in M but in C

<sup>3</sup>Based on this restriction, Bosque (1980) suggests that *sino* is a negative polarity item. This conclusion, however, is falsified by the data in (6) below, which show that the sentential negation required to license *sino* cannot license NPIs.

<sup>4</sup>Thanks to Hilke Reckman (p.c.) for pointing this out to me.

Given that corrective *but* and *sino* require the presence of metalinguistic negation, Bosque (1980) and Horn (1989) conclude that these clauses, while syntactically coordinations, are semantically more akin to reason clauses. That is, the meaning of a sequence  $[p \text{ sino } q]$  is roughly “ $p$  is false ( $\neg p$ ) because closely related proposition  $q$  is true”. Note that this much is enough to block examples like (7), since the fact that we are not going to use an umbrella cannot be plausibly construed as the reason why it is not raining.<sup>5</sup> See Bosque (1980) for additional discussion.

- (7) \* No está lloviendo sino que vamos sin paraguas.  
       not is raining but that go.1PL without umbrella  
       “It is not raining but we are not using an umbrella”

## 2.2 Contrastive *but* is a regular coordinator

In opposition to corrective *but/sino*, contrastive *but/pero* behaves more like a minimally distinct version of *and*. To begin with, note that both *and* and contrastive *but* are identical in terms of propositional logic –i.e., the entire conjunction comes out as true only in case each of the conjuncts is also true on its own.

- (8) a. Michele cooked dinner and Bruce set the table.  
       b. Michele cooked dinner but Bruce set the table.
- (9) a. Marta preparó la cena y Jorge puso la mesa.  
       M cooked the dinner and J set the table  
       b. Marta preparó la cena pero Jorge puso la mesa.  
       M cooked the dinner but J set the table

Note that the examples in (8) and (9) also show that neither *and* nor contrastive *but* require the first conjunct to be negative, as opposed to corrective *but* (cf. the previous subsection). Similarly, both *and* and contrastive *but* allow NPI licensing, again as opposed to corrective *but*. This reinforces the hypothesis that contrastive *but* should be grouped together with *and*, and away from corrective *but*.

- (10) a. ✓ I haven’t ever been to Mexico, but I have been to Canada.  
       b. ✓ No he estado nunca en México, pero he estado en Canadá.  
           not have been ever in M but have been in C

Note that I am not claiming that *and* and contrastive *but* are exactly identical –only that contrastive *but* is more similar to *and* than to corrective *but*. In spite

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<sup>5</sup>Note that this doesn’t mean that the two conjuncts of corrective *but*, if both taken to be true, should lead to a logical contradiction. For instance, “It is not rainy but sunny” is a well-formed case of corrective *but* coordination, even though it is possible to have rain and sunshine simultaneously.

of the similarities reviewed above, there are some differences between these two coordinators. For instance, it has been commonly noted that contrastive *but* introduces a counterexpectational meaning that is absent from *and*. Lakoff (1971) paraphrases this implicature as “*p* (and therefore  $\neg q$ ), but (actually) *q*”. This explains the deviance of examples like (11a): since taxi drivers are expected to have a driver’s license, the counterexpectational requirement of contrastive *but* is not met. The minimally different (11b), on the other hand, is grammatical because having a truck driver’s license is not expected of a taxi driver.

- (11) a. # Randy is a taxi driver but he has a driver’s license.  
 b. ✓ Randy is a taxi driver but he has a truck driver’s license.

This difference will affect the argumentation in section 5 slightly, in that the examples there will have to be constructed in such a way that they satisfy the counterexpectationality requirement. This might make some examples more contrived than would be desirable, but I don’t think it will affect the major conclusions of this article in anyway. For one, the contrast in (11) is purely semantic/pragmatic, and therefore arguably irrelevant for the syntactic distinctions I’m interested in.<sup>6</sup>

### 2.3 The proposal

The main claim of this article is that the difference between corrective and contrastive *but* is not limited to their semantics, as discussed in the previous two subsections. Rather, they also impose different constraints on the syntax of their conjuncts. More specifically:

- (12) *The syntax of adversative coordination*  
 a. Corrective *but* (*sino*) always requires its conjuncts to be full clauses.  
 b. Contrastive *but* (*pero*) allows its conjuncts to be smaller than clauses.

Note that the use of the words *requires* and *allows* is not accidental. The claim here is that corrective *but* cannot coordinate anything other than clause-level categories. In contrast, contrastive *but* is not restricted in this way, and can coordinate constituents of any category, as long as the usual constraints on unlike category coordination are respected. This means that contrastive *but* can

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<sup>6</sup>Another difference (cf. Barwise and Cooper 1981) is that contrastive *but* coordination of two DP requires said DPs to have different monotonicity. Thus, (ia) is ungrammatical because both conjuncts are monotone increasing, and (ib) because they are monotone decreasing.

- (i) a. \* John but a woman was/were invited to the party.  
 b. \* No boys but few girls were invited to the party  
 c. ✓ A woman but few boys were invited to the party

In reality, Barwise and Cooper (1981) do not make a distinction between corrective and contrastive *but*, either implicitly or explicitly. Nonetheless, all the examples they cite in favour of their generalization feature contrastive *but*.

coordinate DPs, but also adjectives, VP, adverbs, and so on. Crucially, nothing bans contrastive *but* from coordinating two clause that subsequently undergo conjunction reduction in the same way as corrective *but*. This, it fact, has been argued to be the case in examples such as the following, where the second conjunct appears to contain only a DP and a polarity marker (cf. Vicente 2006). We will return to this point in section 7.

- (13) a. Elena ha leído un libro, pero Mauricio no.  
           E     has read a   book but M           not  
           “Elena has read a book, but Mauricio hasn’t.”  
       b. Elena no ha leído un libro, pero Mauricio sí.  
           E     not has read a   book but M           yes  
           “Elena hasn’t read a book, but Mauricio has.”

### 3 Corrective *but* triggers conjunction reduction

#### 3.1 Scope of negation

The most obvious indication that corrective *but* requires a full clausal structure in its second conjunct comes from examples like the following.

- (14) a. Allard didn’t drink beer but champaign  
       b. Allard no bebió cerveza sino champán  
           A     not drank beer     but   champaign

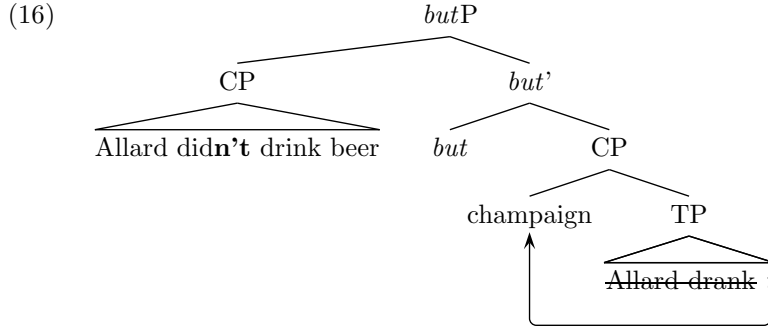
In both the English and Spanish versions of (14), negation takes scope only over the first conjunct –i.e., they mean  $[(\neg p) \wedge q]$ . Compare these examples with minimal pairs where the coordinator is *and* (15), where a  $[\neg(p \wedge q)]$  reading is possible.<sup>7</sup>

- (15) a. Allard didn’t drink beer and champaign  
       b. Allard no bebió cerveza y champán  
           A     not drank beer     and champaign

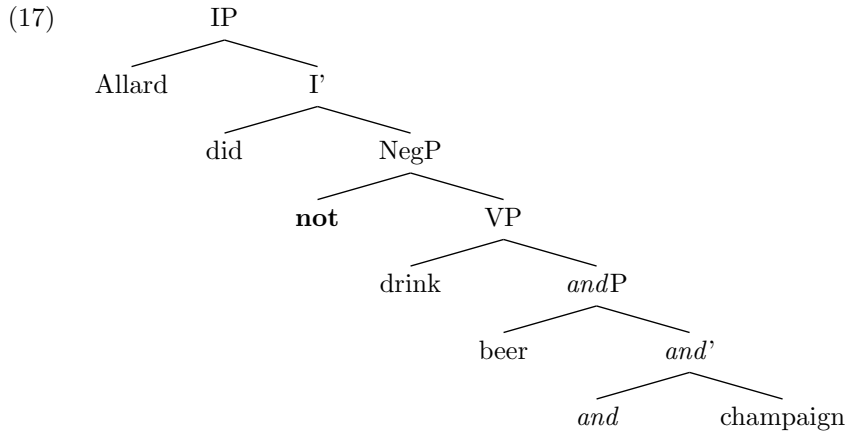
The source of this asymmetry can be traced to the requirements their conjuncts imposed by *and* and corrective *but*. By hypothesis, corrective *but* can only coordinate clauses, hence (14) must be assigned the structure in (16) prior to the ellipsis step (which I take to involve PF deletion without affecting the syntactic structure, see Merchant 2004b). In this structure, negation is embedded inside

<sup>7</sup>Things are slightly more complicated. Example (15) is ambiguous between the  $[\neg p \wedge \neg q]$  and the  $[\neg(p \wedge q)]$  readings (cf. Repp 2005 for discussion). The relevant point here is that the latter reading (“it is not the case that both beer and champaign were drunk, though either one of them might have been”), which requires negation scoping over coordination, is excluded from corrective *but* coordinations.

the first conjunct.<sup>8</sup> Hence, the fact that it cannot scope over the second conjunct follows from a simple lack of c-command.



In contrast, *and* allows for coordination of smaller constituents without invoking ellipsis. Example (15) would correspond to the structure in (17), where negation is outside the coordinate structure. Therefore it can take wide scope over both conjuncts, yielding the  $\neg(p \wedge q)$  reading.



### 3.2 Preverbal subject coordination

Corrective *but* cannot coordinate two preverbal subjects.<sup>9</sup> The examples in (18) cannot mean “two mathematicians didn’t get their papers published, but seven

<sup>8</sup>I am assuming here an asymmetric syntax for negation, along the lines of Munn (1993) and others. As far as I can tell, though, this assumption does not affect any of the arguments I present.

<sup>9</sup>Sandra Chung (p.c.) has pointed out to me examples like (i), which seem to falsify the claim I make in this subsection and the following one.

- (i) a. Not Steve but I should drive the car.  
b. Not three but four girls are sunbathing on the lawn.

I’ll ignore such examples for the time being and return to them in section 3.7

astrophysicists did”, which is the reading we would expect if it were possible to coordinate preverbal subjects with corrective *but*.

- (18) a. \* Two mathematicians but seven astrophysicists didn’t get their papers published.  
 b. \* Dos matemáticos sino siete astrofísicos no pudieron two mathematicians but seven astrophysicists not were.able publicar sus artículos. publish their papers

In contrast, *and* can coordinate preverbal subjects without trouble.

- (19) a. ✓ Two mathematicians and seven astrophysicists didn’t get their papers published.  
 b. ✓ Dos matemáticos y siete astrofísicos no pudieron two mathematicians y seven astrophysicists not were.able publicar sus artículos. publish their papers

This asymmetry can be explained if corrective *but* requires its conjuncts to be clauses, while *and* allows DP coordination. It is not possible to analyze the sequence “two mathematicians but seven astrophysicists” in terms of clausal coordination plus ellipsis. Note that this reasoning assumes that backward ellipsis cannot apply under corrective *but* coordination (20).<sup>10</sup>

- (20) a. \* Two mathematicians [*IP* ~~got their papers published~~] but seven astrophysicists didn’t get their papers published  
 b. \* Dos matemáticos [*IP* ~~pudieron publicar sus artículos~~] sino two mathematicians were.able publish their articles but siete astrofísicos no pudieron publicar sus artículos seven astrophysicist not were.able publish their articles

While I cannot derive it from deeper principles, it seems correct to assume ban against backward ellipsis in corrective *but* coordination. This ban can be shown to be effective through the following ungrammatical examples, which attempt object coordination under corrective *but* coordination.

- (21) a. \* A book [*IP* ~~Larry read t~~] but Larry didn’t read a magazine.  
 b. \* Un libro [*IP* ~~Mauricio leyó t~~] sino Mauricio no leyó una a book M read but M not read a revista magazine

<sup>10</sup>Incidentally, note that the reading of this example would be the opposite of the intended reading in (18), i.e., “two mathematicians got their papers published, but seven astrophysicists didn’t”.



Note, however, that corrective *but* can coordinate right-peripheral subjects (22a). Obviously, this is only possible in Spanish, since English doesn't allow postverbal subjects at all. The grammaticality of this example is predicted by a conjunction reduction analysis, since it allows a parse in which the second conjunct is part of an elided clause (22b).

- (22) a. ✓ No publicaron sus artículos dos matemáticos sino siete  
not published their papers two mathematicians but seven  
astrofísicos.  
astrophysicists  
"Two mathematicians didn't publish their papers but seven astrophysicists did."  
b. [<sub>CP</sub> No publicaron sus artículos dos matemáticos] sino [<sub>CP</sub> [siete  
astrofísicos]~~[publicaron sus artículos t]~~]

### 3.3 Attributive adjective coordination

In the same way as preverbal subjects, attributive adjectives cannot be coordinated with corrective *but*: (23a) cannot mean "I didn't read a short but I read an interesting one".<sup>11</sup> The explanation is the same as in the previous section: there is no way to derive this surface string out of the clausal coordination structure required by corrective *but*. The only way in which the intended reading can be derived is by placing the second conjunct at the right edge of the clause (23b), in a way that is compatible with a conjunction reduction analysis (23c).<sup>12</sup>

- (23) a. \* I didn't read a short but interesting book  
b. I didn't read a short book, but an interesting one  
c. I didn't read a short book, but an interesting one [<sub>IP</sub> ~~I read~~ t]

The Spanish examples are slightly more delicate. An example analogous to (23a) is grammatical. This, however, is due to the fact that Spanish adjectives tend to be postnominal. If a postnominal adjective happens to appear in clause final position, as happens in (24a), a parse is possible in which the second conjunct is an elided clause (24b).

- (24) a. ✓ No he comprado una camisa amarilla sino rosa  
not have bought a shirt yellow but pink  
"I haven't bought a yellow shirt, but I have bought a pink one"  
b. No he comprado una camisa amarilla sino rosa [<sub>IP</sub> ~~he comprado una camisa~~ t]

<sup>11</sup>The grammatical reading of this example ("I didn't read a book that is short but interesting") will be tackled in section 5.3

<sup>12</sup>Incidentally, note that the deviance of *?\*I didn't read a short book but interesting* is plausibly related to the deviance of *?\*Interesting, I read a book*, which reinforces the idea that (23b) is derived by movement of DP to SpecCP plus deletion of IP.

Nonetheless, it can be easily confirmed that Spanish indeed behaves in the same way as English in this respect. If we construct an example in which a parse similar to (24b) is blocked, then corrective *but* coordination of attributive adjectives becomes ungrammatical. This can be achieved, for instance, by embedding the attributive adjective inside a preverbal subject (25a). Once this point is controlled for, the only way the intended reading can be constructed is the same as in English –i.e., by placing the second conjunct at the right edge of the clause (25b).

- (25) a. \* Un pianista joven sino brillante no interpretó una sonata de  
           a pianist young but brilliant not played a sonata by  
           Bach  
           Bach
- b. ✓ Un pianista joven no interpretó una sonata de Bach, sino uno  
       a pianist young not played a sonata by Bach but one  
       brillante  
       brilliant  
       “A young pianist didn’t play a Bach sonata, but a brilliant one did”

### 3.4 Agreement

As pointed out in section 3.2, corrective *but* can coordinate clause final subjects in Spanish (26a). This is because such examples offer the possibility of a parse in which the second conjunct is actually part of an elided clause (26b).

- (26) a. No ha leído el libro Esteban sino Mauricio.  
           not has read the book E but M  
           “Esteban didn’t read the book, but Mauricio did.”
- b. [No ha leído el libro Esteban] sino [~~ha leído el libro~~ Mauricio].

The representation in (26b) makes an interesting prediction: given that the second conjunct belongs to a separate clause, it will not be able to trigger agreement on the first conjunct verb. That is, in cases where corrective *but* conjoins two clause final subjects, a first conjunct. This is shown in the following examples, featuring both an intransitive and a transitive verb.<sup>13</sup> Note that if the coordinator is *and* (instead of *sino*) we get regular full conjunct agreement.

- (27) a. No se { ✓presentó / \*presentaron } un pianista sino  
           not SE showed.up.3PL showed.up.3PL a pianist but  
           tres trombonistas.  
           three trombone players  
           “A pianist didn’t show up but three trombone players did.”

<sup>13</sup>As far as I know, this effect was first noted by Gallego (2004). It should be noted, though, that he doesn’t attribute it to an elliptical second conjunct. Rather, he assumes that there is no ellipsis and then defines an *ad hoc* rule that allows coordinated subjects in corrective *but* coordination to behave as a “more compact unit” for the purposes of agreement.

- b. No se { \*presentó / ✓presentaron } un pianista y  
 not SE showed.up.3PL showed.up.3PL a pianist and  
 tres trombonistas.  
 three trombone players  
 “A pianist and three trombone players didn’t show up.”
- (28) a. No { ✓cometió / \*cometieron } un error un pianista sino  
 not made.3SG made.3PL a mistake a pianist but  
 tres trombonistas  
 three trombone players  
 “A pianist didn’t make a mistake but three trombone players did”
- b. No { \*cometió / ✓cometieron } un error un pianista y  
 not made.3SG made.3PL a mistake a pianist and  
 tres trombonistas  
 three trombone players  
 “A pianist and three trombone players didn’t make a mistake”

To complete the argument, it is necessary to show that first conjunct agreement is really due to ellipsis, rather than a genuine first conjunct agreement effect (see Johannessen 1998 for a cross-linguistic illustration of the latter type of effect). The contrast between *and* and *but* illustrated in both (27) and (28) already points towards this conclusion: if this were a genuine first conjunct agreement effect, we wouldn’t expect it to be affected by the choice of coordinator. Moreover, note that the analysis I am proposing predicts that first conjunct agreement with *and* will be possible whenever it is reasonable to suppose that the second conjunct is elliptical. One such environment is polarity ellipsis: as shown below, the prediction is confirmed.<sup>14</sup>

- (29) { ✓Ha / \*Han } leído un libro Pedro, y Clara también  
 has have read a book P and C too

Finally, first conjunct agreement becomes impossible with reciprocal predicates like *encontrarse* ‘to come across each other’, which require a collective subject.

- (30) Se { \*encontró / ✓encontraron } Juan y Pedro  
 SE came.across.3SG came.across.3PL J and P  
 (también)  
 too

The data in (27) through (30) suggest very strongly that first conjunct agreement effects in Spanish are only an illusion caused by the second conjunct being an elliptical clause. This conclusion lends additional support to the hypothesis that DP coordination with corrective *but* is actually a case of conjunction reduction.

<sup>14</sup>For evidence that this construction does indeed involve clausal coordination plus ellipsis, see Depiante (2000), Vicente (2006), and references therein.

### 3.5 Locality effects

The theory of ellipsis I am assuming in this article is the one developed by Merchant (2001, 2004a), where the remnants of ellipsis move to a position outside the ellipsis site. Given that movement is an integral part of this approach to ellipsis, one would expect to find locality effects in cases of corrective *but* coordination. This argument is complicated, though, by the variable status of island effects under ellipsis. We can start by noting that, while island effects disappear under sluicing (31), they tend to persist in fragment answers (32).

- (31) a. ✓ They want to hire somebody who speaks a Celtic language, but I don't know which Celtic language  
 b. \* Which Celtic language do they want to hire somebody who speaks?
- (32) A: They want to hire somebody who speaks Breton.  
 B: \* No, Manx.  
 B': \* No, Manx, they want to hire somebody who speaks.

The kind of ellipsis that I am hypothesizing for corrective *but* coordination is closer to fragment answers than to sluicing.<sup>15</sup> Therefore, we should expect corrective *but* coordination to be sensitive to island boundaries. We will see in this section that this is indeed correct.<sup>16</sup> Let us begin by noticing that some speakers judge sentences like (33a) as degraded, in which corrective *but* is coordinating two objects. Analogous examples in which corrective *but* coordinates two subjects are judged as fully ungrammatical (33b).

- (33) a. ?? I didn't leave the party [{after/because} Amy started telling bad jokes] but [childhood anecdotes].  
 b. \* I didn't leave the party [{after/because} Amy started telling bad jokes] but [Cassandra].

These judgements parallel the classical subject/object asymmetries on extraction (34), hence I take the contrast in (33) to indicate that corrective *but* involves movement as an integral part of ellipsis.<sup>17</sup>

<sup>15</sup>Note that here it is important to place negation outside the island, so as to ensure that the elided clause also contains an island boundary

<sup>16</sup>A few of the speakers I sampled (both for Spanish and English) do not find any island violations in the relevant examples. I do not have anything interesting to say about this, other than speculating that, for these speakers, ellipsis can circumvent island violations in a wider range of constructions than just sluicing (in fact, Jason Merchant, p.c., informs me that a similar split in judgements can be observed with respect to examples like 32). In spite of this, the fact remains that a significant subset of speakers agree with the judgements indicated in the text, which shows that the island effects are real.

<sup>17</sup>In the *Barriers* framework, the contrast between (34a) and (34b) was explained by saying that the former only violated Subjacency, whereas the latter violated both Subjacency and the ECP. With the elimination of proper government in the 1990s, there is no obvious way to account for this contrast. I assume, though, that whatever explanation can be applied to (34) can also be extended to (33).

- (34) a. ?? [Bad jokes], I left the party [{after/because} Amy started telling *t*].  
 b. \* [Cassandra], I left the party [{after/because} *t* started telling bad jokes].

Note also that the examples in (33) turn grammatical if corrective *but* doesn't coordinate only the objects, but rather the entire adjunct. This is because movement of the adjunct doesn't violate any constraints on movement.

- (35) a. ✓ I didn't leave the party [{after/because} Amy started telling bad jokes] but [{after/because} she started telling childhood anecdotes].  
 b. ✓ I didn't leave the party [{after/because} Amy started telling bad jokes] but [{after/because} Cassandra started telling them].  
 (36) ✓ [{After/Because} Amy started telling bad jokes], I left the party.

As a final indication that movement is involved, note that the same speakers who reject (33) find analogous examples without island boundaries much more acceptable (37).

- (37) a. ✓ I didn't say [that Cary Grant starred in *The Rope*] but in [*North by Northwest*].  
 b. ? I didn't say [that Cary Grant starred in *The Rope*] but [James Stewart].

The following batch of examples show that the same paradigm can be replicated in Spanish. In (38), we see there is an asymmetry as to whether *sino* coordinates two objects or two subjects embedded in an adjunct island;<sup>18</sup> In (39), we see that coordination of the entire adjunct island circumvents ungrammaticality; and finally, in (40) we see that examples without island boundaries are also grammatical.

---

<sup>18</sup>One potential problem with (38b) is that *sino* requires focus on the coordinated constituents, and for a number of speakers there is a tendency to place focused subjects in a postverbal position. Thus, it is possible that part of the deviance of (38b) is due to the placement of the subject in the first conjunct, rather than to island constraints (thanks to Ricardo Etxepare, p.c., for pointing this out). Note that if we place the subject in a postverbal position, we would expect a deviance similar to that of objects: postverbal subjects sit in SpecvP (cf. Ordóñez 1997), which is a properly governed position. This seems to be correct.

- (i) ?? Juan no se ha cabreado porque haya traído cinco suspensos su sobrino sino  
 J not SE has got.angry because has got five Fs his nephew but  
 su hija.  
 his daughter.

- (38) a. ?? Ernesto no se fue [{después de que / porque} Andrés  
E not SE left after of that because A  
empezara a contar chistes malos] sino [batallitas de su  
started to tell jokes bad but anecdotes from his  
infancia]  
childhood  
“Ernesto didn’t leave after/because Andrés started to tell bad  
jokes but childhood anecdotes.”
- b. \* Ernesto no se fue [{después de que / porque} Andrés  
E not SE left after of that because A  
empezara a contar chistes malos] sino [Mauricio]  
started to tell jokes bad but M  
“Ernesto didn’t leave after/because Andrés started to tell bad  
jokes but after Mauricio started to.”
- (39) a. ✓ Ernesto no se fue [{después de que / porque} Andrés  
E not SE left after of that because A  
empezara a contar chistes malos] sino [{después de que /  
started to tell jokes bad but after of that  
porque} *pro* empezara a contar batallitas de su infancia].  
because started to tell anecdotes from his childhood  
“Ernesto didn’t leave after/because Andrés started to tell bad  
jokes but after/because he started telling childhood anecdotes.”
- b. ✓ Ernesto no se fue [{después de que / porque} Andrés  
E not SE left after of that because A  
empezara a contar chistes malos] sino [{después de que /  
started to tell jokes bad but after of that  
porque} Mauricio empezara a contarlos].  
because M started to tell.CL  
“Ernesto didn’t leave after/because Andrés started to tell bad  
jokes but after/because Mauricio started telling them.”
- (40) a. ✓ No he dicho [que Cary Grant actuara en *La soga* ], sino  
not have said that C G played in The Rope but  
[en *Con la muerte en los talones*].  
in North by Northwest  
“I didn’t say that Cary Grant played in *The Rope* but in *North  
by Northwest*.”
- b. ? No he dicho [que Cary Grant actuara en *La soga* ], sino  
not have said that C G played in The Rope but  
[James Stewart].  
J S  
“I didn’t say that Cary Grant played in *The Rope* but James  
Stewart.”

In Spanish it is possible to use P-stranding as an additional movement test.<sup>19</sup> Examples (41a) and (41b) show that, if corrective *but* coordinates two PPs, the presence of the preposition in the second conjunct is mandatory. Example (41c) is given as a control to show that Spanish does not allow P-stranding.<sup>20</sup>

- (41) a. ?\* No he visto a una chica con un vestido azul sino \_\_\_\_  
           not have seen to a girl with a dress blue but \_\_\_\_  
           zapatos negros  
           shoes black
- b. ✓ No he visto a una chica con un vestido azul sino **con**  
           not have seen to a girl with a dress blue but with  
           zapatos negros  
           shoes black
- c. \* ¿Qué tipo de zapatos has visto a una chica con?  
           what type of shoes have seen to a girl with

In short, we have seen that locality data point towards a conjunction reduction analysis of corrective *but* in which movement is an integral part of ellipsis.

### 3.6 Connectivity effects

Merchant (2004a) uses examples like the following to show that fragment answers stem from a full clause that undergoes ellipsis.

- (42) A: Who does every<sub>i</sub> man love the most?  
       B: His<sub>i</sub> wife.

The pronoun in (42) gives rise to a bound variable reading, even though the clause it appears in doesn't contain any visible quantifier. Merchant explains this effect by assuming that, in reality, (42) contains an elided version of the quantifier. This results in a regular quantifier-variable relation (43). If fragment answers were not elided clauses, (42) could only be explained by stipulating that variable binding can exceptionally apply across utterances only in these cases.

- (43) A: Who does every<sub>i</sub> man love the most?  
       B: [His<sub>i</sub> wife] [~~every<sub>i</sub> man loves the most~~ *t*].
- 

The same argument can be made in the domain of corrective *but* coordination. Consider the following example.

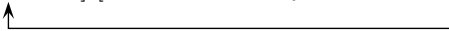
<sup>19</sup>This argument is adapted from Depiante (2000, 106ff), who uses it to show that regular stripping involves A-bar movement. One of her original examples is the following:

- (i) Pedro sabe sobre historia más que nadie, y \*(sobre) geografía también  
       P knows about history more than anybody and about geography too

<sup>20</sup>See Rodrigues et al. (to appear) and Vicente (2008) for arguments that, as opposed to what happens with strong islands, ellipsis does not rescue P-stranding violations.

- (44) a. I didn't say that every<sub>i</sub> man loves his<sub>i</sub> wife but his<sub>i</sub> mistress.  
 b. No he <sub>i</sub> dicho que todo<sub>i</sub> hombre quiera a su mujer<sub>i</sub>, sino a su<sub>i</sub>  
 not have said that every man loves to his wife but to his  
 amante.  
 mistress

In both the English and the Spanish versions of (44), *his mistress* is interpreted outside the scope of negation. By transitivity, it should also be interpreted outside the scope of the quantifier, which would incorrectly block the bound variable reading. This problem can be avoided by assuming that the second conjunct is a full clause that contains a silent representation of the quantifier.

- (45) ...but [his<sub>i</sub> mistress] [~~I said that every<sub>i</sub> man loves~~ *t*]  


### 3.7 An aside on edge coordinations

In sections 3.2 and 3.3, I argued that corrective *but* cannot coordinate preverbal subjects or attributive adjectives. I attributed this restriction to the impossibility of creating the corresponding elliptical structures. However, at the same time, I acknowledged in footnote 9 the existence of cases like (46) and (47), which appear to contradict the claims defended in these two sections. Bianchi and Zamparelli (2004) refer to such examples as “adjacent initial edge coordinations”, though for convenience I’ll shorten it to just “edge coordination”.

- (46) a. Not a mathematician but a physicist discovered the neutron.  
 b. Not three but four girls are sunbathing on the lawn.  
 (47) a. No un matemático sino un físico descubrió el neutrón.  
 not a mathematician but a physicist discovered the neutron  
 b. No tres sino cuatro chicas están tomando el sol en el jardín  
 not three but four girls are taking the sun in the garden

It might be tempting to conclude that edge coordinations feature corrective *but* coordination at the DP/AP level, without ellipsis, which I claimed in section 3 to be impossible. If such an analysis turned out to be correct, it would require a very substantial revision of the analysis presented in this article. However, I believe that the evidence presented in that section 3 is strong enough to force us to consider alternative analyses before jumping to the conclusion that corrective *but* can coordinate constituents smaller than clauses. Bear in mind that my goal in this subsection is *not* to offer a full analysis of edge coordinations –it is simply to show that they do not constitute counterexamples to the analysis of corrective *but* coordination developed here.<sup>21</sup>

<sup>21</sup>Bianchi and Zamparelli (2004, 326-327) also propose that examples like (46)/(47), as well as their Italian counterparts, require conjunction reduction. Note, however, that they do not commit to any specific way of implementing this idea.



There aren't many tests that one can run on this class of examples to determine whether they are cases of conjunction reduction or small coordination. We can dismiss tests based on subject coordination and attributive adjective coordination, since these are the ones that give rise to the problematic data. Tests based on connectivity effects are also useless here, as we will see in section 5.6 that they cannot distinguish between conjunction reduction and small coordination. Of the three remaining tests, locality effects and scope of negation are also unreliable to determine the correct structure. Let me start by commenting on locality effects on the basis of the following example.

- (48) ?? [Not the neutron but the Higgs boson] was I surprised because [a mathematician had discovered *t*].

Although it is obvious that (48) is an adjunct island violation, it is actually impossible to tell what exactly causes the violation. We can say that edge coordinations are cases of small coordination, and that the island violation is caused by movement of [<sub>DP</sub> *not the neutron but the Higgs boson*]. However, we could equally plausibly say that edge coordinations are instances of clausal coordination plus ellipsis within the first conjunct, in which case the ungrammaticality would be caused by the independent movements of *not the neutron* and *the Higgs boson*. The conclusion is that, in this particular environment, locality effects are also ineffective to differentiate between conjunction reduction and small coordination.

A test based on the scope of negation is equally ineffective. Clearly, negation only scopes over the first conjunct in (46)/(47). Note, however, that we are dealing here with constituent negation: as soon as we try to combine edge coordination with sentential negation, we effectively replicate the ungrammatical sentences of sections 3.2 and 3.3.

- (49) a. \* A mathematician but a physicist didn't discover the proton.  
b. \* Three but four girls aren't sunbathing on the lawn.
- (50) a. \* Un matemático sino un físico no descubrió el neutrón.  
a mathematician but a physicist not discovered the neutron  
b. \* Tres sino cuatro chicas no están tomando el sol en el  
three but four girls not are taking the sun in the  
jardín  
garden

It is quite plausible to assume that constituent negation attaches directly to the negated constituent (see Lasnik 1972; Depiante 2000; Vicente 2006). The problem is that this is again not enough to differentiate conjunction reduction from small coordination. An example such as (46a) is potentially compatible with these two structures:

- (51) *Edge coordination as small coordination*  
[<sub>TP</sub> [[<sub>DP</sub> not a mathematician] but [<sub>DP</sub> a physicist]]  
discovered the neutron]

- (52) *Edge coordination as conjunction reduction*  
 $[_{TP} [_{DP} \text{not a mathematician}] \text{discovered the neutron}]$   
 but  $[_{TP} [_{DP} \text{a physicist}] \text{discovered the neutron}]$

We are left, therefore, with only one test –namely, agreement, which fortunately offers some clues about the correct structure of edge coordinations. We can see in the examples below that number agreement on the verb is controlled by the second conjunct.

- (53) a. Not three but only one girl { \*are/✓is } sunbathing on the lawn.  
 b. Not one but three girls { ✓are/\*is } sunbathing on the lawn.
- (54) a. No tres sino sólo una chica { \*están / ✓está } tomando el sol  
 not three but only one girl are is taking the sun  
 b. No una sino tres chicas { ✓están / \*está } tomando el sol  
 not one but three girls are is taking the sun

Especially revealing are the data in (53a) and (54a). If these were cases of small DP coordination, we would not expect to find singular agreement on the verb, given that such a conjoined DP would be semantically plural. By analogy with the data presented in section 3.4, we may conclude that edge coordinations represent cases of conjunction reduction. Therefore, they do not pose any problem for the analysis of corrective *but* coordination I have presented here. An additional argument in favour of this conclusion comes from the observation (Bianchi and Zamparelli, 2004, 314) that it is sometimes possible to separate the two conjuncts of an edge coordination, giving rise to alternations like the following. Any attempt to derive (55b) via movement out of a small coordination structure would result in a violation of the Coordinate Structure Constraint.

- (55) a. [Not only Mary but also Lucy] did he invite  
 b. [Not only Mary] did he invite, [but also Lucy]

The reader might have noticed that, if edge coordinations are cases of conjunction reduction, then they must be derived through backward ellipsis, which I had already dismissed in section 3.2 as impossible in the context of corrective *but* coordination. I have nothing interesting to say about this conundrum, and I must leave it as an open question.<sup>22</sup> I won't say anything else either about edge coordinations in the rest of this article. I appreciate that this conclusion is somewhat unsatisfactory, in that a proper theory of adversative coordination should also incorporate an analysis of edge coordinations. However, bear in

<sup>22</sup>Sandra Chung (p.c.) speculates that this difference might have something to do with the fact that regular corrective *but* coordination depends on the presence of sentential/metalinguistic negation, whereas edge coordinations require constituent negation. In particular, it might be the case that the very strong focus requirement imposed on the conjuncts licenses a Right Node Raising structure. On the assumption that RNR is qualitatively different from TP deletion, this problem would be solved. Although I am quite sympathetic to this intuition, at present I cannot offer a full implementation.

mind that the purpose of this article, as stated in (12) above, is to show that corrective *but* coordination requires conjunction reduction. I believe we have accomplished that much, and it is therefore justifiable to defer an more in-depth analysis of edge coordinations to future work.

## 4 Interim conclusion and prospects

Table 1 summarizes the properties of corrective *but*. As we have seen in each of the six cases, this particular array of characteristics follows from the hypothesis that corrective *but* requires its conjuncts to be clauses.

Blocks scope of negation	yes
Allows preverbal subject coordination	no
Allows attributive adjective coordination	no
Triggers first conjunct agreement	yes
Shows locality effects	yes
Shows connectivity effects	yes

Table 1: Properties of corrective *but*

The argument will be completed in the next section, where we will see that contrastive *but* behaves differently from corrective *but* in quite interesting ways. First of all, we will see that contrastive *but* behaves in the opposite way than corrective *but*, in a manner that suggests that it can coordinate sub-clausal categories without resorting to ellipsis. Nonetheless, this is only its default behaviour. Recall that I proposed in (12) above that contrastive *but* can also coordinate clauses, if need be. Now, if contrastive *but* can coordinate clauses, there isn't anything preventing one of the conjuncts from being elliptical. Thus, the prediction that arises is the following:

- (56) *Behaviour of contrastive 'but'*
- a. By default, contrastive *but* will not show signs of ellipsis.
  - b. However if the second conjunct can be forced to be clausal, elliptical effects will reappear.

We will see that this prediction is indeed correct. However, before we move on to the data, it is first necessary to determine what environments force the second conjunct to be an elliptical clause. For Spanish, I take the polarity ellipsis construction, illustrated in (57) below, to be such an environment. Depiante 2000 and Vicente 2006 argue at length that such examples are derived by moving the negated remnant to a topic position to the left of negation, followed by deletion of IP (58). I take the negative marker *no* to head the polarity projection  $\Sigma P$  proposed in Laka (1990).<sup>23</sup>

<sup>23</sup>This assumption receives support from French, where the negative word used in polarity

- (57) Esteban ha viajado a Venezuela, pero Mauricio no.  
 E has travelled to V but M not
- (58) ...pero Mauricio [<sub>SP</sub> no [<sub>IP</sub> ~~ha viajado a Venezuela~~ *t*]]
- 

It is worth noting that the construction exemplified above has a variant in which the polarity marker precedes the remnant of ellipsis. The difference between the two variants, however, is deeper than just a change in word order. Concentrating especially on negative fragments, both Depiante (2000) and Vicente (2006) present evidence that the *no XP* order can be derived by directly left-adjoining negation to the negated constituent –rather than through clausal ellipsis, as in the *XP no* order.

- (59) a. Esteban a viajado a Venezuela, pero no a Cuba  
 E has travelled to Venezuela but not to Cuba
- b. ...pero [<sub>PP</sub> no [<sub>PP</sub> a Cuba]]

Due to this asymmetry, I will consider only the *XP no* order in the next section, as this is the only one that forces an underlying clausal structure for the second conjunct. Turning to English, we can note that while there is a polarity ellipsis construction, it is limited to the *not XP* order (60).

- (60) a. Steve wants to go to California, but not to Vermont
- b. \* Steve wants to go to California, but to Vermont not

However, Lasnik (1972) argues convincingly that English polarity ellipsis can be structurally ambiguous: it may stem from either a conjunction reduction structure, as Spanish (58), or from non-elliptical structure like Spanish (59). Given that there it is not possible to guarantee that an English *not XP* structure does stem from an underlying clause, I will not consider English data in order to show that the second clause of (56) holds. I believe, nonetheless, that the Spanish data alone will be sufficient to establish the correctness of this prediction.

## 5 Contrastive *but* allows small coordination

### 5.1 Scope of negation

As opposed to corrective *but*, contrastive *but* (Spanish *pero*) allows a negation to take scope over both conjuncts, yielding the reading  $[\neg(p \wedge q)]$ . Thus, the

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ellipsis is *non*, distinct from the regular sentential negation *ne...pas*. Thanks to Amanda Morris (p.c.) for pointing out this datum to me.

- (i) Marie a lu un livre, mais Claude non  
 M has read a book but C not

meaning of (61) is that it is not the case that Susie is both poor and honest, though she might have one of these two properties (given that, by de Morgan's law,  $[\neg(p \wedge q)] = [\neg p \vee \neg q]$ ). As discussed above in section 3.1, this particular reading is generated when negation scopes over the whole coordinate structure. Therefore, its availability supports an analysis in which *pero* conjoins two bare APs, without any ellipsis.

- (61) a. Susie is not [<sub>AP</sub> poor but honest]  
       b. Susana no es [<sub>AP</sub> pobre pero honesta]  
           S       not is       poor but honest

This is the default behaviour of contrastive *but*. Now, as predicted by (56) above, contrastive *but* ought to show the same behaviour as corrective *but* in the polarity ellipsis construction, where the second conjunct is an elliptical clause. This much is correct: in contrast to (61), example (62) receives the reading  $[(\neg p) \wedge q]$ .<sup>24</sup>

- (62) Susana no ha viajado a Venezuela, pero a México sí.  
       S       not has travelled to V       but to Mexico yes

## 5.2 Preverbal subject coordination

As opposed to corrective *but*, contrastive *but* can coordinate preverbal subjects without trouble. In the same way as in the previous subsection, the grammaticality of (63) follows if contrastive *but* and *pero* allow DP-level coordination without ellipsis.

- (63) a. ✓ [<sub>DP</sub> One single neurosurgeon but at least three cardiologists] will  
           take part in this operation.  
       b. ✓ [<sub>DP</sub> Un único neurocirujano pero al menos tres cardiólogos]  
           one single neurosurgeon but at least three cardiologists  
           participarán en esta operación  
           take.part.FUT in this operation

Also, as in the previous section, the polarity ellipsis construction cannot be used to coordinate preverbal subjects. This suggests that, in the same way as with corrective *but*, we are dealing with an elliptical clause here. Note that sentence is grammatical if the second conjunct appears at the right edge, in a position consistent with conjunction reduction (64b). This shows that the ungrammaticality of (64a) is purely syntactic and cannot be reduced to semantic incongruity.

<sup>24</sup>For this argument to hold, I am forced to assume that *sí* in (62) is simply an affirmative counterpart of the regular negative instantiation of  $\Sigma^0$ . The discussion in Laka (1990) suggests that this assumption is correct. Given that this structure would otherwise be identical to regular negative polarity ellipsis, the argument is not affected.

- (64) a. \* [Un neurocirujano pero (al menos) tres cardiólogos no]  
 one neurosurgeon but at least three cardiologists not  
 participarán en esta operación  
 take.part.FUT in this operation
- b. Un neurocirujano participará en esta operación, pero tres  
 a neurosurgeon take.part.fut in this operation but three  
 cardiólogos no.  
 cardiologists not

### 5.3 Attributive adjective coordination

As an extension of the previous argumente, consider the fact that contrastive *but* also allows coordination of attributive adjectives (as opposed to corrective *but*, see section 3.3). Once again, the reason is that contrastive *but* allows its conjuncts to be smaller than clauses (in this case, bare adjectives).

- (65) a. ✓ A [<sub>AP</sub> young but brilliant] pianist played a Bach sonata.
- b. ✓ Un pianista [<sub>AP</sub> joven pero brillante] interpretó una sonata de  
 a pianist young but brilliant played a sonata by  
 Bach  
 Bach

Also as in the previous section, trying to apply the polarity ellipsis construction to contrastive *but* coordination of attributive adjectives results in ungrammaticality, unless it is done in such a way that it becomes compatible with a conjunction reduction analysis.

- (66) a. \* Un pianista [<sub>AP</sub> joven] pero [<sub>CP</sub> brillante no] interpretó una  
 a pianist young but brilliant not played a  
 sonata de Bach  
 sonata by Bach
- b. Un pianista [<sub>AP</sub> joven] interpretó una sonata de Bach, pero uno  
 a pianist young played a sonata by Bach but one  
 brillante no  
 brilliant not

### 5.4 Agreement

In section 3.4, we saw that, in Spanish, corrective *but* is exceptional in triggering first conjunct agreement with clause final subjects. That effect was attributed to the fact that the second conjunct belongs to a separate clause and, as such, it is unable to trigger agreement on the first conjunct verb. The hypothesis we are defending in this section is that contrastive *but* allows DP-level coordination without ellipsis. Since the environment for a first conjunct agreement effect would not be created, we should expect regular full conjunct agreement. The minimal pair below shows that this prediction is correct.

- (67) {  $\checkmark$ Van / ?Va } a participar en la operación un único  
 go.3PL go.3SG to take.part in the operation a single  
 neurocirujano pero tres cardiólogos  
 neurosurgeon but three cardiologists

Note, interestingly, that singular (first conjunct) agreement is only mildly degraded, not fully ungrammatical. This is because the linear order (67) is structurally ambiguous –i.e., it is compatible with a small coordination analysis as well as with a conjunction reduction analysis. However, if we resort to polarity ellipsis on the second conjunct, the ambiguity disappears and only first conjunct agreement is possible (68).

- (68) { \*Van /  $\checkmark$ Va } a participar en la operación un único  
 go.3PL go.3SG to take.part in the operation a single  
 neurocirujano pero tres cardiólogos no  
 neurosurgeon but three cardiologists not

Conversely, if we place the coordinated subject in a position where a conjunction reduction parse would not be possible (e.g., a preverbal position), then only full conjunct agreement is possible (69). These data show that contrastive *but* coordinates small categories by default. However, when the second conjunct can be constructed as being underlyingly a full clause, signs of ellipsis begin to appear.

- (69) Un único neurocirujano pero al menos tres cardiólogos {  $\checkmark$ van  
 one single neurosurgeon but at least three cardiologists go.3PL  
 / \*va } a participar en la operación  
 go.3SG to take.part in the operation

## 5.5 Locality effects

In section 3.5 we saw that, for some speakers, corrective *but* is sensitive to island effects. Those same speakers, however, find it perfectly grammatical to embed a contrastive *but* coordination inside the same type of island (70). These examples show that contrastive *but* does not involve conjunction reduction, at least inasmuch as we consider movement an integral part of conjunction reduction.

- (70) a.  $\checkmark$  I complained to the director of the hospital [because one single  
 surgeon but at least three unqualified students took part in the  
 operation].  
 b.  $\checkmark$  Me quejé al director del hospital [porque un  
 CL complained to.the director of.the hospital because one  
 único neurocirujano pero al menos tres estudiantes sin  
 single neurosurgeon but at least three students without  
 experiencia participaron en la operación].  
 experience took.part in the operation

However, island effects reappear if the second conjunct features polarity ellipsis.

- (71) \* Me quejé al director del hospital [porque un único  
CL complained to.the director of.the hospital because one single  
neurocirujano había participado en la operación] pero tres  
neurosurgeon had taken.part in the operation but three  
estudiantes no  
students not

The same asymmetry holds for P-stranding effects: under regular contrastive *but* coordination, they are absent, which suggests DP coordination below the preposition (72a). However, if polarity ellipsis forces the second conjunct to be clausal, P-stranding effects reappear.

- (72) a. ✓ He visto a una chica [<sub>PP</sub> con [<sub>DP</sub> un vestido azul pero [<sub>\_\_\_</sub>]]  
have seen to a girl with a dress blue but  
zapatos negros.  
shoes black
- b. \* He visto a una chica [<sub>PP</sub> con un vestido azul] pero [<sub>CP</sub> <sub>\_\_\_</sub>  
have seen to a girl with a dress blue but with  
zapatos negros no]  
shoes black not

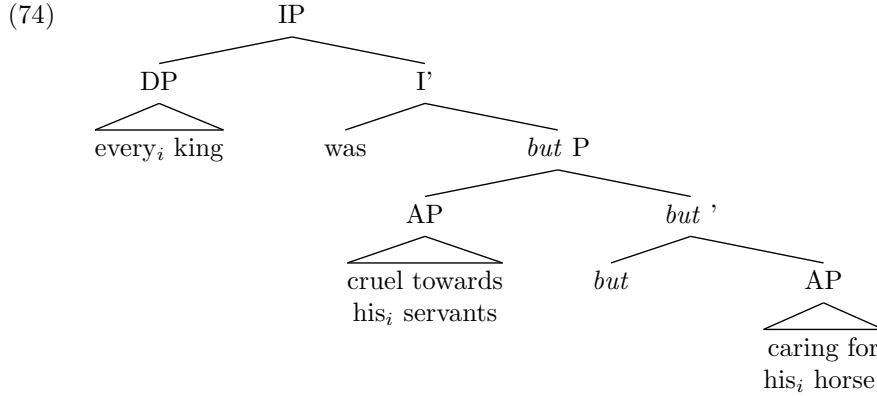
## 5.6 Connectivity effects

Connectivity effects are exceptional in that contrastive *but* shows the same behaviour as corrective *but*, even when there is no polarity ellipsis that forces the second conjunct to be an elliptical full clause.

- (73) a. Every<sub>i</sub> medieval king was cruel towards his<sub>i</sub> servants but very caring  
for his<sub>i</sub> horse.
- b. Todo<sub>i</sub> rey medieval era cruel con sus<sub>i</sub> vasallos pero cariñoso  
every king medieval was cruel with his servants but caring  
con su<sub>i</sub> caballo.  
with his horse

Nonetheless, this paralellism is expected if contrastive *but* allows for small coordination. If only the objects are coordinated in (73), then the quantificational subject takes scope over the entire conjunction, and can bind the pronouns in either object.





As expected, though, the use of polarity ellipsis in the second conjunct also results in a connectivity effect. This can be easily analyzed in terms of conjunction reduction, along the lines of (44) in section 3.6.

- (75)    *Todo*<sub>i</sub> rey            medieval se comportaba de manera cruel con    *sus*<sub>i</sub>  
           every medieval king        SE behaved        of manner cruel with his  
           vasallos, pero con    *su*<sub>i</sub> caballo not  
           servants but    with his horse    not

I appreciate that the data in (73) are compatible both with a small coordination analysis as well as with a conjunction reduction analysis in which the second conjunct contains a silent instance of the quantifier. As such, they do not constitute direct evidence in favour of a small coordination analysis of contrastive *but*. However, when this paradigm is considered together with the preceding five arguments, a small coordination approach is more plausible than conjunction reduction. All in all, it is quite reasonable to conclude that connectivity effects also support the generalizations about adversative coordination that I've proposed in this paper.

## 6 Final empirical summary

The empirical results of this article are summarized in Table 2 below. As we have discussed all through the article, these properties can be derived if we accept the following three premises:

- Corrective *but* requires clausal ellipsis in all cases.
- Contrastive *but* allows coordination of categories smaller than a clause.
- Notwithstanding the last point, the polarity ellipsis construction forces contrastive *but* to take full clauses as its conjuncts..

While these are interesting results, we would also like to know why things should happen in this particular way. The following section is an attempt to answer

	Corrective <i>but</i>	Contrastive <i>but</i> (polarity ellipsis)	Contrastive <i>but</i> (default)
Blocks scope of negation	yes	yes	no
Allows preverbal subject coordination	no	no	yes
Allows attributive adjective coordination	no	no	yes
Triggers first conjunct agreement	yes	yes	no
Shows locality effects	yes	yes	no
Shows connectivity effects	yes	yes	yes

Table 2: Comparison of corrective vs. contrastive *but*

this question. The proposal I will develop there relies on the idea that there is a very tight correspondence between syntax and semantics, as commonly assumed in much current work in minimalist syntax.

## 7 Analysis

In order to understand why the data in Table 2 should hold, let me set corrective *but* aside for a moment and concentrate on the behaviour of contrastive *but*. As we have seen, contrastive *but* coordinates small categories by default. However, if the second conjunct exhibits polarity ellipsis, conjunction reduction effects reappear. Let me begin by making the assumption that contrastive *but* can in general coordinate conjuncts of any category, subject only to the restriction that its conjuncts won't be larger than necessary –i.e., there won't be any gratuitous conjunction reduction.<sup>25</sup> If we assume this much, then it follows that conjunction reduction in the context of polarity ellipsis must *not* be gratuitous. Something must be forcing it, and the question is what.

What I want to propose is that it is negation itself that is forcing clausal coordination and the consequent ellipsis. In section 4, I assumed that the negative marker we see in polarity ellipsis is an instantiation of Laka's (1990) polarity head  $\Sigma^o$  (see Vicente 2006 for additional discussion). Now, it is customary to assume that polarity-related projections appear in a fairly high position in the structure, somewhere in the expanded CP area (see Cinque 1999 and references). This idea, I submit, explains the properties of contrastive *but*, as detailed through section 5. If we need to include a polarity phrase in one of the conjuncts, we also need to include all the projections below it. Given that

<sup>25</sup>I am also implicitly assuming a restriction on coordination of unlike categories, along the lines discussed in Sag et al. (1985). Since this restriction will not be relevant to the argumentation, I will leave it implicit.

polarity phrases appear in such a high position, this amounts to saying that they force the inclusion of a full clausal structure, effectively deriving a conjunction reduction paradigm. In contrast, if there is no polarity ellipsis, it is not necessary to include a polarity projection either, and contrastive *but* can coordinate smaller categories.

Note that this analysis only works under the assumption that one cannot take “shortcuts” when building up clause structure –i.e., one must proceed from the bottom up to the desired level, without skipping intervening projections. Therefore, to the extent that this proposal is correct, it supports a view of grammar in which there is a strict one-to-one mapping between syntax and semantics (as assumed in several current works in the minimalist framework, and *contra* proposals like, e.g., Culicover and Jackendoff 2005): propositional meaning can only be derived by building up a full clausal structure, with a complete set of lexical and functional categories and grammatical relations (argument structure, event structure...).

The same reasoning can be extended to cover the fact that corrective *but* is restricted to clausal coordination. Recall from section 2.1 that one of the defining properties of corrective *but* is that it requires the use of metalinguistic negation, which Horn (1989) defined as “a device to object to a previous utterance on any grounds whatever, including the conventional or conversational implicata it potentially induces, its morphology, its style or register, or its phonetic realization”. That is, the function of corrective *but*, as it own name indicates, is to mark a certain proposition as false ( $\neg p$ ) and replace it with the corresponding affirmative proposition ( $p$ ). The attentive reader might have noticed that I have replaced Horn’s “utterance” with “proposition”, thus implying that corrective *but* is a function from one proposition to another, even when the corrected part is not obviously propositional. There is some evidence, though, that this is correct. Consider, for instance, a correction in the phonetic realization of the word *tomato*. The reason why (76a) is ungrammatical is plausibly because English doesn’t allow extraction of attributive adjective out of their containing nominal (76b). The grammatical counterpart is (77), which is consistent with the elliptical analysis of corrective *but* defended in section 3.

- (76) a. \* British people don’t ask for /tə’mɛɪtə/ soup, but /tə’mɑ:tə/.  
 b. \* Tomato, British people don’t ask for [t soup].

- (77) British people don’t ask for /tə’mɛɪtə/ soup, but /tə’mɑ:tə/ soup.

Thus, if we take the view that corrective *but* is invariably a function from one proposition to another, then we must conclude that both conjuncts must also be invariably clausal. This follows from the same reasoning we employed to explain the conjunction reduction effects that arise whenever contrastive *but* appears in a polarity ellipsis environment: a propositional semantics requires a full clausal structure behind it. Under this analysis, the syntactic difference between corrective and contrastive *but* reduces to a stipulation that the former always takes a proposition as its second conjunct. Therefore, corrective *but* will

never take anything smaller than a clause as its second conjunct, which explains the data discussed in section 3.

## 8 Conclusions

The primary goal of this article has been to argue that the semantic difference between corrective and contrastive *but* translates into a different syntax for each of them. The specific generalizations, stated in (12) and (56) above, are repeated here.

- (78) *The syntax of adversative coordination*
- a. Corrective *but* (*sino*) always requires its conjuncts to be full clauses.
  - b. Contrastive *but* (*pero*) allows its conjuncts to be smaller than clauses.
- (79) *Behaviour of contrastive ‘but’*
- a. By default, contrastive *but* will not show signs of ellipsis.
  - b. However if the second conjunct can be forced to be clausal, elliptical effects will reappear.

I believe that the data discussed throughout sections 3 and 5 suggest that these generalizations are essentially correct. The more interesting result, however, is the hypothesis developed in section 7 that the behaviour of both types of *but* can be reduced to a single principle –namely, that there is a one-to-one mapping between syntax and semantics, so that a propositional semantics necessarily requires the building of a full clausal structure. If this analysis is correct, then this article can be taken as an argument in favour of theories that assume such a strict mapping (e.g., several recent proposals within minimalist syntax), and against theories that advocate a looser correspondence (e.g., Culicover and Jackendoff 2005 and related work).

Admittedly, in order to derive this result, I have ignored various aspects of the adversative coordination. Apart from not considering edge coordinations (cf. section 3.7 above), there is also the fact that certain languages allow its use as an exceptive marker.<sup>26</sup> It is my hope, though, that this article inspires further research on this area of grammar.

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<sup>26</sup>Interestingly, it might well be the case that the syntax of exceptive *but* can be subsumed under the analysis developed here. For one, Reinhart (1991) observes that exceptive *but* is also sensitive to the presence of island boundaries, which suggests that ellipsis is also involved in these cases. Reinhart’s examples are as follows.

- (i) a. We invited everyone to our party but/except Felix
- b. \* The people who love every composer arrived but/except Mozart
- c. \* [Which composer] did the people who love *t* arrive?

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