

In search of a missing clause

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1 Collins Conjunctions: a brief introduction

1.1 The basic paradigm

A *Collins Conjunction* (CC) is the type of parenthetical first discussed in [Collins \(1988\)](#), which has the following format (CCs can also coordinate APs, PPs, and other types of subclausal constituents, but in the interest of conciseness I'm only going to consider DPs today).

- (1) *A linear template for Collins Conjunctions*
... [DP and IC DP] ...

IC stands for *Interrupting Category*. [Collins'](#) key insight is that, without heavy prosodic breaks, the *IC* position can be productively occupied by adverbs with a speaker-oriented (evaluative or evidential) meaning, but not by other adverbs.

- (2) Alice and $\left\{ \begin{array}{l} \checkmark \text{ possibly} \\ \checkmark \text{ probably} \\ \checkmark \text{ allegedly} \\ \checkmark \text{ apparently} \\ \checkmark \text{ (un)fortunately} \\ \checkmark \text{ perhaps} \\ \checkmark \text{ regrettably} \\ \checkmark \text{ certainly} \\ * \text{ quickly} \\ * \text{ intelligently} \\ * \text{ yesterday} \\ * \text{ weekly} \\ * \text{ tragically} \\ * \text{ by car} \end{array} \right\}$ Bob went to the store.

Additionally (although [Collins](#) didn't discuss this), verbal predicates with a comparable meaning can also function as ICs. Note the obligatory absence of a complementizer.

- (3) Alice and $\left\{ \begin{array}{l} \text{I think (*that)} \\ \text{I believe (*that)} \\ \text{I've heard (*that)} \\ \text{I suspect (*that)} \end{array} \right\}$ Bob have gone to the store.

In this talk, I am going to focus almost exclusively on CCs in Spanish, which, as English does, allows both speaker-oriented adverbs (4a)/(4b) and verbal predicates with an evaluative/evidential meaning (5). In the latter case, note that the presence of a complementizer is obligatory, contrary to what happens in English.

- (4) a. Andrés y **posiblemente** Beatriz fueron de compras.
Andrés and possibly Beatriz went.3PL shopping
- b. * Andrés y **rápidamente** Beatriz fueron de compras.
Andrés and quickly Beatriz went.3PL shopping
- (5) Andrés y **creo** *(**que**) Beatriz fueron de compras.
Andrés and think.1SG that Beatriz went.3PL shopping
- (6) A partial list of verbal predicates that can appear in this position:
- a. *parece (ser) que* “it seems that”
 - b. *me parece que* “it seems to me that”
 - c. *dicen que* “people say that”
 - d. *se rumorea que* “there is the rumor that”
 - e. *he oído que* “I’ve heard that”
 - f. *supongo que* “I suppose that”
 - g. *sospecho que* “I suspect that”
 - h. *me apostaría algo a que* “I would bet something that”
 - i. *lamento decir que* “I regret to say that”
 - j. *estoy bastante seguro (de) que* “I’m pretty sure that”
 - k. ... and many others.

Distribution CCs are not restricted to the clause-initial position; rather, they can appear anywhere a DP can. This is easier to demonstrate in Spanish due to its less rigid word order. For subject CCs, this includes the standard preverbal position, the right-peripheral position (which correlates with a narrow focus reading), and the subject position of a raising verb.

- (7) a. Andrés y **creo que** Beatriz han ido de compras.
Andrés and think.1SG that Beatriz have gone shopping
- b. Han ido de compras Andrés y **creo que** Beatriz.
have gone shopping Andrés and think.1SG that Beatriz
- c. Andrés y **creo que** Beatriz parecen haber ido de compras.
Andrés and think.1SG that Beatriz seem have gone shopping

In the case of objects, potential positions include the standard postverbal position, the scrambled position of VOS orders, and a topic position with clitic doubling.

- (8) a. Andrés va a recibir una beca y **creo que** un premio.
Andrés goes to receive a grant and think.1SG that an award
- b. Este año va a recibir la beca y **creo que** el premio Andrés.
this year goes to receive the grant and think.1SG that the award Andrés
- c. La beca y **creo que** el premio los va a recibir Andrés.
the grant and think.1SG that the award CL.3PL goes to receive Andrés

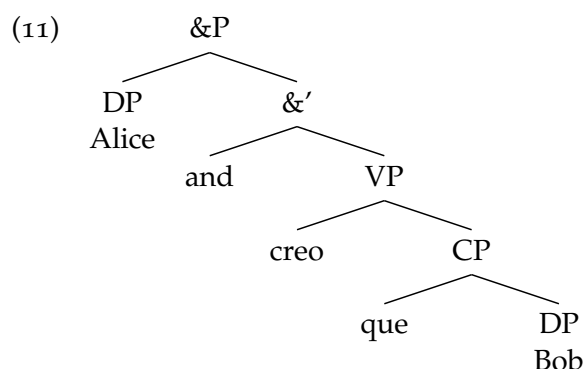
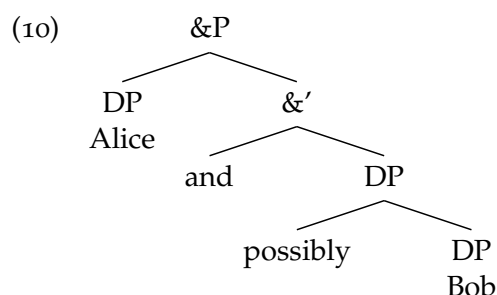
Additionally, nothing forbids multiple CCs within a single clause. They can be all contained within the same argument, distributed across different arguments, or a mixture of both. I provide English examples only, but the same paradigm holds for their Spanish equivalent with verbal CCs.

- (9) a. Alice, perhaps Bob, and probably Claire went to the store.
- b. Alice and possibly Bob went to the store and apparently to the movies.

- c. Alice, perhaps Bob, and probably Claire went to the store, apparently to the movies, and certainly to a bar.
 d. ...

1.2 The problem with CCs

Here are some naïve structures for CCs. However, it is highly unlikely that these trees are correct, either syntactically or semantically.



Syntactic problems These structures would require us to assume that verbal predicates like *think that*, *hear that*, *believe that*, *say that*, or *suspect that* can take either a clausal or a sub-clausal complement. However, a number of studies have shown that these predicates invariably take complements of category CP/TP, with apparent counterexamples involving either ellipsis or a pro-predicate of the appropriate category. There is no reason to suppose that syntactic subcategorization requirements are suspended when these predicates appear as ICs in a CC.

Semantic problems Schein (1992) shows that *possibly* and similar adverbs invariably require a propositional (type $\langle t \rangle$) argument (his reasoning is easily extensible to verbal ICs, although he doesn't explore this possibility). Consider (12):

- (12) Alice and possibly Bob went to the store.

Suppose that we redefined the semantics of *possibly* so that it could take type $\langle t \rangle$ and $\langle e \rangle$ arguments alike. If *possibly* could modify $\langle e \rangle$ -type objects directly, *possibly Bob* would be a modalized (epistemic possibility) version of *Bob*. This would refer any individual who, for all we know, could potentially be Bob, irrespective of whether he is actually Bob. Consequently, (12) would entail that two people went to the store, one of is possibly (but not certainly) Bob. This is clearly not the meaning of (12), so by reduction to the absurd, Schein concludes that *possibly* and similar adverbs cannot directly modify sub-propositional objects.

The rest of this talk Unless we are ready to make radical changes to things we are pretty sure about, everything indicates that CCs have a hidden clause somewhere. This hypothesis is supported by the fact that, if we try to paraphrase CCs, we end up with two separate propositions/assertions. Moreover, either one can be challenged in the follow-up discourse without affecting the status of the other (cf. Potts 2003 for *as*-parentheticals).

- (13) Alice and regrettably Bob have gone to the store.
- Main assertion: Alice and Bob have gone to the store.
 - Secondary assertion: the speaker regrets that Bob was one of the participants in this event.

- (14) A: Alice and regrettably Bob have gone to the store.
 B: No, they haven't, but I agree it would be regrettable if Bob had gone.
 [challenge of main assertion]
- (15) A: Alice and regrettably Bob have gone to the store.
 B: Yes, they have, but I don't agree it is regrettable that Bob has gone.
 [challenge of secondary assertion]

Additionally, we can't treat the secondary assertion as a presupposition or a conversational implicature, because unlike those two, it is not backgrounded.

- (16) a. I regret that Bob is helping us doing errands. Just this morning, Alice and (# regrettably) Bob have gone to the store.
 b. I regret that Bob is helping us doing errands. Just this morning Bob and also regrettably Alice have gone to the store.

The problem is that it is not obvious at all where this extra clause/assertion is hiding or what form it takes. The goal of this talk is to develop a partial solution to this problem.

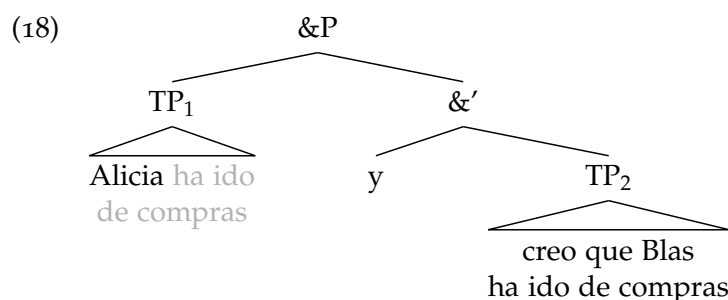
2 CCs are not cases of clausal coordination

2.1 A really bad analysis: clausal coordination plus ellipsis

2.1.1 The analysis

One possibility is that we are coordinating clauses rather than DPs, with one of the clauses being partially elided (from now on, deleted constituents appear in a light grey font).

- (17) Alicia y creo que Blas han ido de compras.
 Alicia and think.1SG that Blas have gone shopping



With a tree like this, we can account for the restriction to evidential/evaluative expressions only to the extent that these expressions can precede a whole TP. The advantages seem to end here, though.

2.1.2 Problems

Distribution If the CC appears in clause initial position, as above, we need backward ellipsis, but if it appears in clause final position, we need forward ellipsis. Clause-medial CCs need a combination of forward and backward ellipsis.

- (19) Alicia a ido al teatro y creo que a la biblioteca [Alicia ha ido]
 Alicia has gone to.the theater and think.1SG that to the library Alicia has gone

- (20) Este año va a recibir la beca Andrés y creo que el premio Andrés este
 this year goes to receive the grant Andrés and think.1SG that the award Andrés this
 año va a recibir.
 year goes to receive.

The problem is not that different types of ellipsis are required, but rather that they are not interchangeable. Consider:

- (21) a. ?? Alicia ha ido de compras y creo que Blas ha ido
 Alicia has gone shopping and think.1SG that Blas has gone shopping
 de compras
- b. * Alicia ha ido al teatro y creo que Alicia ha ido a la
 Alicia has gone to.the theater and think.1SG that Alicia has gone to the
 biblioteca.
 library
- c. ...

Multiple CCs Multiple CCs would require multiple elliptical clauses, which would increase the number of unattested readings.

Agreement pattern A CC with two singular subjects triggers plural agreement for a substantial fraction of speakers, myself included (more about this later). A clausal coordination analysis predicts singular agreement in these cases.

- (22) % Alicia y creo que Blas ha ido de compras.
 Alicia and think.3SG that Blas has gone shopping [predicted grammatical]
- (23) Alicia y creo que Blas han ido de compras.
 Alicia and think.3PL that Blas has gone shopping [predicted ungrammatical]

Cross- and extra-conjunct binding A quantifier in the first conjunct can bind a pronoun in the second (although the reverse is not possible). Moreover, a quantifier in the second conjunct cannot bind a pronoun in the main part of the clause. However, the c-command relations in (18) predict the opposite pattern.

- (24) Todo_i catedrático y creo que su_i mejor doctorando van a recibir una
 every professor and think.1SG that his best grad student go.3PL to receive a
 beca del CSIC.
 grant from CSIC [predicted ungrammatical]
- (25) * La secretaria del departamento y dicen que todo_i catedrático han cenado
 the secretary of.the department and say.3PL that every professor have dined
 en su_i casa alguna vez.
 at his home some time [predicted grammatical]

Scope wrt modals and negation The following example is consistent with reality only if the coordinate structure takes narrow scope wrt the modal and the negation. Given that it models CCs as a type of clausal coordination, (18) predicts the opposite scope reading.

- (26) Los judíos ortodoxos no pueden llevar ropa hecha de lana y creo que
 the jews orthodox not can wear clothing made of wool and think.1SG that
 lino.
 linen [reading [cannot > and] available but predicted unavailable]

Locality effects An IC that contains a standard island boundary gives rise to locality effects ((28) is a control with a bridge verb). An ellipsis analysis doesn't predict these effects, as there is nothing moving across the IC.

- (27) a. * Alicia y he escuchado al hombre que cree que Blas han ido
 Alicia and have.1SG heard the man that thinks that Blas have gone
 de compras.
 shopping [predicted grammatical]
- b. * Alicia y me he alegrado después de que alguien dijera que Blas
 Alicia and CL have.1SG felt.happy after of that someone said that Blas
 han ido de compras
 have gone shopping. [predicted grammatical]
- (28) Alicia y creo que alguien ha dicho que Blas han ido de compras.
 Alicia and think.1SG that someone has said that Blas have gone shopping

Morphological mismatches An ellipsis analysis predicts that CCs ought to support morphological mismatches. In reality, they don't.

- (29) Alicia y creo que tú vais a defender tu tesis en junio.
 Alicia and think.3SG that you go.2PL to defend your thesis in June
 [sloppy reading unavailable but predicted available]

Distributive readings CCs allow distributive readings: in the example below, Antonio and Blas have only scored one goal each. In contrast, (18) predicts an infelicitous reading where both goals have been collectively scored by both players.

- (30) *Context: I know that the team we support has won 2-0, but I don't know who the goalscorers are, so I ask about it. You reply:*
 Han metido los goles Antonio y creo que Blas.
 have scored the goals Antonio and think.1SG that Blas
 [predicted ungrammatical/infelicitous]

Non-elliptical variant Unlike canonical types of ellipsis (including stripping/fragments), CCs don't have a non-elliptical variant with the correct meaning. This is especially problematic for examples with multiple CCs, where it is essentially impossible to reproduce aggregate contributions of all the ICs.

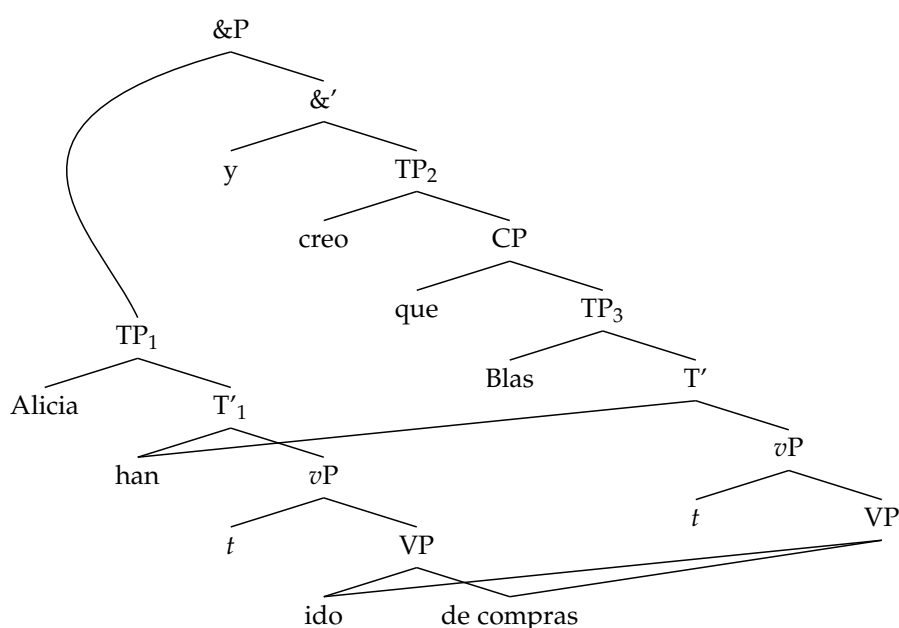
- (31) Alicia y aparentemente Blas han ido a la tienda y creo que a la
 Alicia and apparently Blas have gone to the store and think.1SG that to the
 biblioteca.
 library
 "Alicia has gone to the store and I think she has gone to the library, and in doing so she was apparently accompanied by Blas"

2.2 A slightly better analysis: clausal coordination plus multidominance

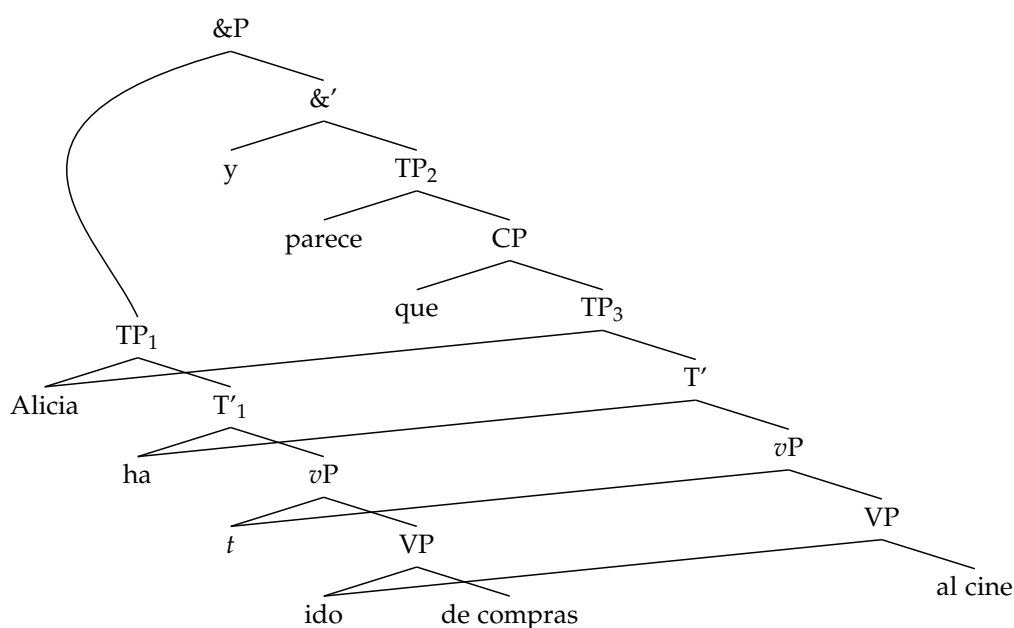
2.2.1 The analysis

As an alternative to ellipsis, we can imagine that part of the structure is multidominated. The "missing clause" effect arises from the fact that part of the structure is being used twice. Here I am using Gracanin-Yuksek's (2007) implementation of multidominance as non-bulk sharing. The restriction to evaluative/evidential expressions follows, as above, from the extent to which these expressions can precede TPs.

(32) *Linearization: "Alicia y creo que Blas ha ido de compras"*



(33) *Linearization: "Alicia ha ido de compras y parece que al cine"*



2.2.2 Advantages over an elliptical analysis

Agreement The only T head enters into a legitimate Agree relation with two heads simultaneously, neither of which creates an intervention effect for the other. In configurations like this, Grosz (2009) has argued that a cumulative agreement effect might obtain.

Distributive readings This analysis is equivalent to saying that CCs are a subtype of Right Node Raising. Given that RNR itself supports distributive readings, we expect CCs to be available here too.

(34) Alice thinks that Bob, and Claire is sure that Daniel, have drunk a bottle of beer.
[distributive reading available, despite the general oddness of this example]

Lack of an elliptical variant This follows trivially, because there is no elliptical clause that could potentially be spelled out.

Lack of morphological mismatches This also follows trivially, as there is no elliptical clause that can contain the mismatched pronoun.

2.2.3 Remaining problems

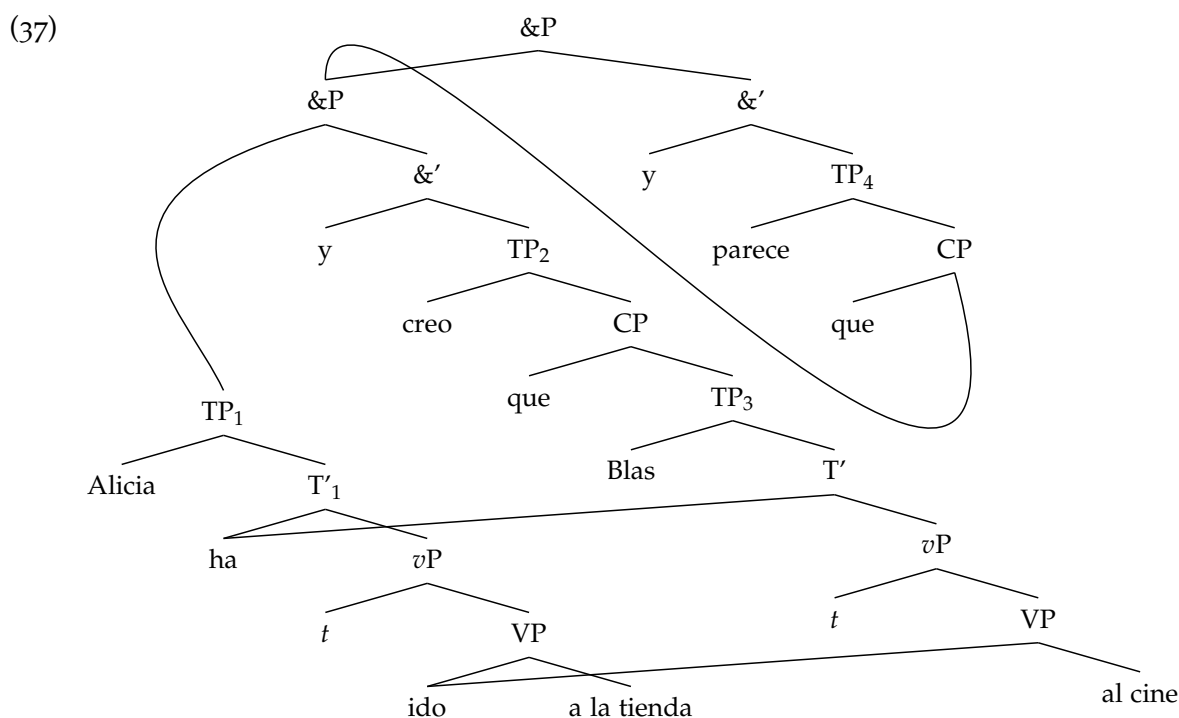
Distribution Nearly all linearization algorithms make it clear that multidominated constituents are invariably linearized at either the right or the left edge of the sentence. Therefore, they fail to accommodate clause-medial CCs.

- (35) Este año va a recibir la beca y creo que el premio Andrés.
 this year goes to receive the grand and think.1SG that the award Andrés.
 [predicted ungrammatical]

An exception to this is the algorithm in [Guimarães \(2004\)](#). However, this algorithm is designed to account for clause-medial linearization of parentheticals in multiply-rooted trees, which CCs are not. It is difficult to determine whether his algorithm can be extended to CCs.

Multiple CCs Again because we are dealing with clause-level coordination, multiple CCs (especially CCs across different arguments) are difficult to analyze. The prediction is that one of the ICs will take scope over the other, but in reality, multiple ICs are scopeless wrt each other.

- (36) Alicia y posiblemente Blas han ido a la tienda y creo que a la biblioteca.
 Alicia and possibly Blas have gone to the store and think.1SG that to the library



Scope wrt modals and negation As happens with the ellipsis analysis, coordination takes the highest scope; therefore, this analysis can't account for CCs where coordination takes narrow scope with respect to modals and negation.

- (38) Los judíos ortodoxos no pueden llevar ropa hecha de lana y creo que
 the jews orthodox not can wear clothing made of wool and think.1SG that
 lino.
 linen [reading $\neg \diamond > \wedge$ predicted ungrammatical]

Locality effects Locality effects as in (27) are incorrectly not predicted to arise, as there is no movement across the IC-internal island boundaries.

Binding Because we are dealing with clause-level coordination, the incorrect c-command relations, and therefore binding patterns, are predicted.

- (39) a. Todo_i catedrático y creo que su_i mejor doctorando van a recibir
 every professor and think.1SG that his best grad student go.3PL to receive
 una beca del CSIC.
 a grant from CSIC [predicted ungrammatical]
- b. * La secretaria del departamento y dicen que todo_i catedrático han
 the secretary of.the department and say.3PL that every professor have
 cenado en su_i casa alguna vez.
 dined at his home some time [predicted grammatical]

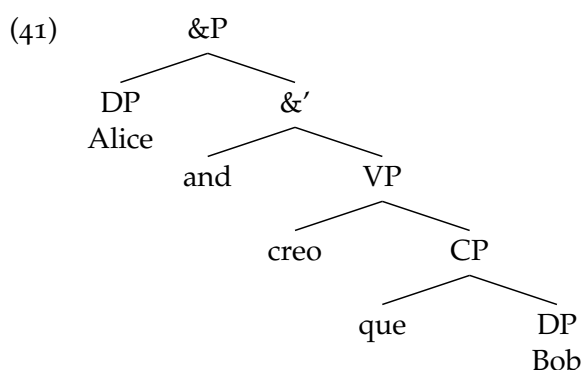
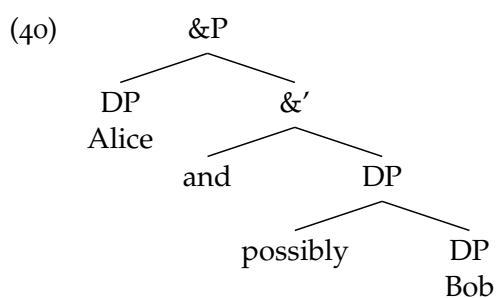
2.3 Interim conclusion

Clausal coordination, whether supplemented by ellipsis or multidominance, makes incorrect predictions wrt several properties of CCs. Many of the problems reduce to the fact that we are coordinating TPs, which puts individual constituents in the wrong geometric relations.

3 Getting closer: Scheinian DP coordination

3.1 The analysis

Schein (1992) attempts to push a structure like (40), and by extension (41), by enriching the semantics of DPs so that they contain information about event and thematic structure. The net result is that DPs count as propositional objects and, by extension, as legitimate arguments for speaker-oriented adverbs.



- (42) $\llbracket \text{Bob} \rrbracket = \exists e[\text{Agent}(e, \text{Bob}) \wedge e(\dots)]$
 and similarly for theme, goal,...

[in fact, things are more complicated, because [Schein](#) includes all thematic information inside the semantics of the DP, but let's just use this simplified version]

- (43) $\llbracket \text{possibly Bob} \rrbracket = \exists e[\text{possibly}(\text{Agent}(e, \text{Bob})) \wedge e(\dots)]$
 "There is a certain event e and it is possible that Bob is the agent of e "
- (44) $\llbracket \text{Alice and possibly Bob} \rrbracket = \exists e[\text{Agent}(e, \text{Alice}) \wedge \text{possibly}(\text{Agent}(e, \text{Bob})) \wedge e(\dots)]$
 "There is a certain event e such that Alice is an agent of e and it is possible that Bob is also an agent of e "

The "missing clause" effect is a purely semantic one, and the restriction to evaluative/evidential expressions follows from the extent to which lower adverbials cannot take propositions as their arguments.

Additionally, [Schein](#) also predicts the correct multipropositional reading of CCs, even in cases with multiple CCs, where ICs don't scopally interact with each other.

- (45) Alice and possibly Bob went to the store.
 \simeq there is an event e of going, such that the store is the destination of e , Alice is an agent of e and it is possible that Bob is also an agent of e .
- (46) Alice and possibly Bob went to the store and apparently to the library.
 \simeq there is an event e of going, such that the store is a destination of e , it appears that the library is also a destination of e , Alice is an agent of e , and it is possible that Bob is also an Agent of e .

3.1.1 Additional advantages

By placing coordination at the DP level, [Schein](#) predicts that CCs will share several properties with regular DP coordinations. This is the main area where CP-coordination analyses fail, and it suggests that a DP-coordination analysis of some sort is superior to CP-coordination analyses.

Agreement CCs with two singular DPs are predicted to trigger cumulative agreement for the same reason that regular coordination of two singular DPs does.

Distribution Since CCs are formally DPs coordinations, they are predicted to appear wherever a DP coordination can.

Distributive readings CCs are also predicted to support distributive readings wherever a regular DP coordination can.

Scope wrt negation/modals CCs are predicted to take narrow scope wrt negation and modals in the same contexts where regular DP coordinations do.

Binding patterns Since the constituent structure of CCs is equivalent to that of regular DP coordinations, the same binding patterns will be observed —i.e., the first conjunct can bind into the second, but the second conjunct cannot bind into the first or outside the coordinate structure.

Lack of an elliptical variant This follows trivially, because there is no silent structure that could potentially be spelled out.

Lack of morphological mismatch effects This also follows trivially, because there is no silent structure that could contain the mismatched pronoun.

3.2 Problems

3.2.1 Locality

Nothing is moving here, so we can't account for the observed locality effects in cases when the IC contains an island boundary.

3.2.2 Theory of syntax/semantics

[Schein's](#) analysis is unlikely to work in its original form, as it requires a semantics that can't be compositionally derived from syntax. However, we can get around this problem by a functional head F that merges with DP and gives us the correct semantics.

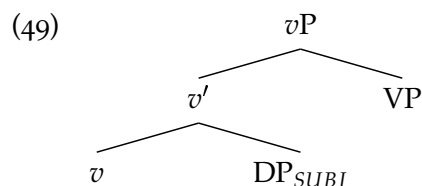
What exactly is F ? It is a functional head that assigns a theta role to a DP. But then, a theta role is the name we give to the relation between an individual and an event, so in reality, F has to come with two lambda terms, one ranging over individuals and the other over events.

$$(47) \quad \llbracket F \rrbracket = \lambda x \lambda e [\text{Agent}(e, x)]$$

Notably, we already have functional heads that look like this. Here is a more or less standard semantics for v ([Kratzer 1996:121](#), [Pylkkanen 2002:13](#)).

$$(48) \quad \llbracket v \rrbracket = \lambda x \lambda e [\text{Agent}(e, x)]$$

In other words, if we want to build a responsible syntax for [Schein's](#) semantics, we need to say that v and other theta-role-assigning heads ought to be placed inside DPs, rather than inside the main spine of the clause.



Is this legit? Admittedly, this modification of [Schein's](#) analysis results in an odd-looking syntactic structure, because now theta-assigning heads take individuals as their complements and events as their specifiers. However, there is nothing wrong so long as we can show that the system is (i) internally consistent; and (ii) consistent with other things we know about argument structure. I still haven't figured out whether (i) and (ii) are satisfied, but let's run with this for the time being.

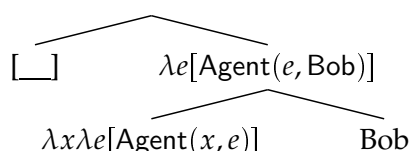
Does it actually work? In practice, a Scheinian solution requires major changes to the standard Function Application rule. Here is the standard definition from [Heim and Kratzer \(1998:44\)](#)

(50) *Function Application*

If α is a branching node $\{\beta, \gamma\}$ is the set of α 's daughters, and $\llbracket \beta \rrbracket$ is a function whose domain contains $\llbracket \gamma \rrbracket$, then $\llbracket \alpha \rrbracket = \llbracket \beta \rrbracket(\llbracket \gamma \rrbracket)$.

Merging v and a DP gives us the following (ignoring issues of word order).

(51)



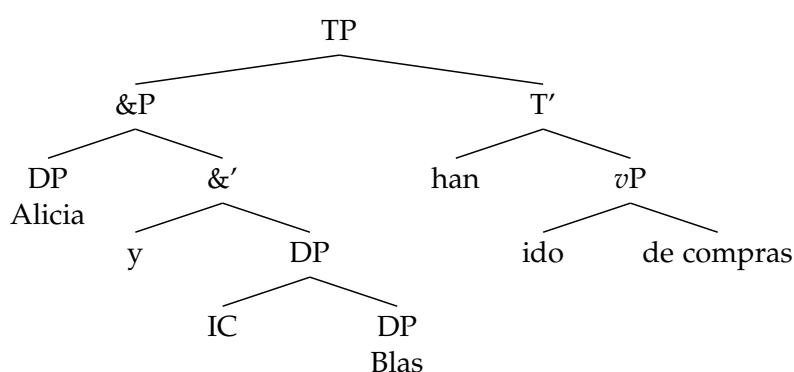
In order for the semantics to come out right, we need to merge an event (i.e., a VP) as the specifier. Potentially, we could write a lexical entry for an adverb that would pass up the λe term and allow the event to be merged as an outer specifier, but that would be the limit. In other words, this syntax/semantics can accommodate adverbial parentheticals, but not verbal parentheticals with the structure in (). In order to do that, you can redefine Function Application so that λ terms don't have to be satisfied right away, but it is not clear that this can be done in a constrained enough way.

4 A better DP coordination analysis

4.1 Preliminaries

Solutions based on ellipsis or multidominance fail primarily because they require clause-level coordination, which makes incorrect predictions about the geometric relations of different constituents. If we instead assume DP-level coordination, we can avoid most of those problems. In order to avoid the problems related to a Scheinian approach, I propose that the IC is actually a right-hand adjunct to the second conjunct. For the time being, I am going to leave the internal structure of IC blank.

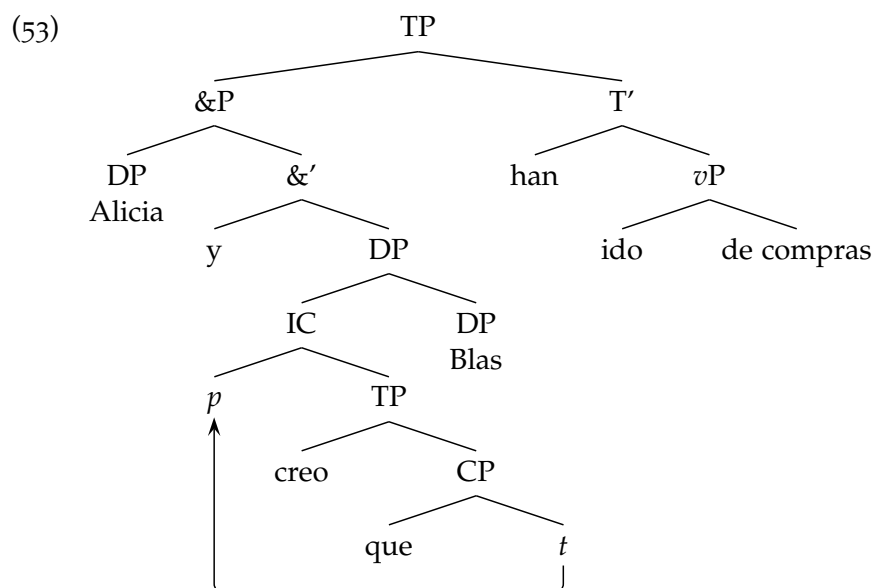
(52)



This allows us to maintain all the advantages discussed in subsection 3.1.1 above. However, since here we are back to treating DPs as subpropositional entities, something else needs to be said to derive the correct reading.

4.2 Internal syntax/semantics of the IC

A more articulate version of (52) is the following. We need something like p (which stands for *proposition*) in order to satisfy the semantic and syntactic requirements of the IC. Note that p cannot be an elided TP (i.e., a syntactically complete TP that fails to be pronounced). If it were, we would expect to find a range of ellipsis effects that are just not there (e.g., binding, morphological mismatches...). I also assume that p moves to the highest SpecCP within IC, leaving behind a variable over propositions that I believe. This is largely parallel to the derivation of *as* and *which* parentheticals (cf. Potts 2002 *et seq*).



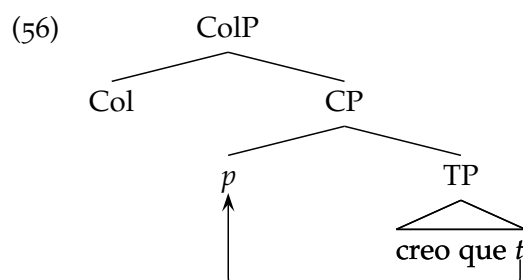
But we are not done yet! The meaning of IC now is an abstraction over propositions that I believe, which cannot be composed with the second conjunct for type mismatch reasons (we want a proposition, not an individual). Additionally, we don't want IC and the main assertion to stand in a predicate-argument relationship either. This is essentially the same situation that [Potts](#) encounters with *as*-parentheticals. His solution consists on defining a lexical entry for *as* that turns the whole parenthetical into an identity function, so that the meaning of the main assertion can be passed on to the parenthetical. Formally.

$$(54) \quad \llbracket as \rrbracket = \lambda P_{\langle st,t \rangle} . \lambda p_{\langle st \rangle} [P(p) \text{ is true } [p]]$$

We can replicate this solution by positing a null functional head *Col* with a similar semantics. Its complement is an abstraction over propositions that I believe, and the particular proposition that I believe is obtained by composing first with an individual, then with a property, and passing these meanings down to the *p* variable. Note that in order to get the right interpretation, the meaning of IC must be composed in a different dimension (following the terminology of [Potts](#)), so that it ends up forming an independent assertion.

$$(55) \quad \llbracket Col \rrbracket = \lambda P_{\langle \langle s,et \rangle t \rangle} \lambda p_{\langle s,et \rangle} \lambda x_{\langle e \rangle} [P(p)(x) \text{ is true } [p(x)]]$$

So, the final internal structure of IC is as follows.



This gives us the correct meaning for the secondary assertion expressed by the IC. Additionally, it generalizes to an arbitrary number of CCs, such that neither of multiple ICs scopally interferes with the other.

Research question Assume something along this lines is actually correct. This raises the question of how many different heads there are to connect a parenthetical to the main clause. [Potts](#), in various works, has suggested that *as*, *which*, and *COMMA* can fulfill this role. Now we also have *Col*. What's the typology of these heads?

4.3 Extensions

This kind of interrupting categories are actually not restricted to coordinations. Note that in neither of the following sentences is the IC in the scope of negation, which follows if it is a secondary assertion formally independent from the main assertion.

- (57) Alicia no ha comido *creo* que los plátanos.
Alicia not has eaten think.1SG that the bananas
- (58) No ha comido los plátanos *creo* que Alicia.
not has eaten the bananas think.1SG that Alicia

Analyses based on a sequence of remnant movements and/or ellipsis face serious problems, but nothing extra need to be postulated if we fold (57) and (58) under the same analysis we have developed for CCs.

5 Known issues

5.1 Agreement

While a large number of speakers require cumulative agreement on CCs, some allow/require non-cumulative agreement. This possibility doesn't follow from the analysis here, as regular DP coordinations invariably trigger cumulative agreement.

- (59) a. % Alicia y *creo* que Blas ha ido de compras.
Alicia and think.1SG that Blas has gone shopping
- b. * Alicia y Blas ha ido de compras.
Alicia and Blas has gone shopping

As far as I can see, the only way to account for this pattern is to assimilate CCs to DP disjunctions, which also exhibit variable agreement. However, at present I don't know how to do this.

- (60) Un catedrático o un postdoc { *deben* / *debe* } hablar con el decano.
a professor or a postdoc must.3PL must.3SG talk with the dean

5.2 Mood selection

Certain verbs, like *esperar* 'to hope', select for a subjunctive clause.

- (61) Alicia espera que Blas { *vaya* / * *va* } de compras.
Alicia hopes that Blas goes.3SG.SUBJ goes.3SG.IND shopping

However, when these verbs appear inside an IC, both the indicative and the subjunctive are degraded, although there is a clear intuition that the subjunctive is worse than the indicative.

- (62) Alicia y *espero* que Blas { * *hayan* / ?? *han* } ido de compras.
Alicia and hope.1SG that Blas have.3PL.SUBJ have.3SG.IND gone shopping

Under the current analysis, there is no reason why the indicative should be degraded, given that *esperar* doesn't directly interact with the main clause verb.

5.3 Typology of fragments

The following surprising generalization appears to hold true.

- (63) Languages that require a complementizer with embedded stripping also require a complementizer with verbal predicate CCs.
- (64) *Spanish requires complementizers*
- a. Andrés y creo *(que) Beatriz van a recibir una beca del CSIC.
Andrés and think.1SG that Beatriz go.3PL to receive a grant from CSIC
- b. Q: ¿Quién va a recibir una beca del CSIC?
who goes to receive a grant from CSIC?
- A: Creo *(que) Beatriz.
think.1SG that Beatriz
- (65) *Polish requires complementizers (Agata Renans and Marta Wierzba, p.c.)*
- a. Alicja i myślę *(że) Beate jadłem czekoladę.
Alicja and think.1SG that Beate ate chocolate.
- b. Q: Którzy jedli czekoladę?
who ate chocolate
- A: Myślę *(że) Beate.
think.1SG that Beate
- (66) *Hungarian requires complementizers (Julia Bacskai-Aktari, p.c.)*
- a. Anikó és gondolom *(hogy) Béla evett csokoládét.
Anikó and think.1SG that Béla ate chocolate.
- b. Q: Akik evett csokoládét?
who ate chocolate?
- A: Gondolom *(hogy) Béla.
think.1SG that Béla
- (67) *English doesn't allow complementizers*
- a. Alice and I think (*that) Bob are going to receive an NSF grant.
- b. Q: Who is going to receive an NSF grant?
A: I think (*that) Bob.
- (68) *German doesn't allow complementizers (Anja Kleemann-Krämer, p.c.)*
- a. Alex und ich glaube *(dass) Bettina bekommen ein Stipendium aus der DFG.
Alex and I think that Bettina receive.3PL a grant from the DFG
- b. Q: Wer bekommt ein Stipendium aus der DFG?
who receives a grant from the DFG
- A: Ich glaube *(dass) Bettina.
I think that Bettina
- (69) *Dutch doesn't allow complementizers (Ruben van de Vijver, p.c.; Temmerman 2013)*
- a. Annelies en ik denk *(dat) Bas gaan een subsidie van NWO ontvangen.
Annelies and I think that Bas go.3PL a grant from NWO receive.
- b. Q: Wie gaat een subsidie van NWO ontvangen?
who goes a grant from NWO receive
- A: Ik denk *(dat) Bas.
I think that Bas

In the case of the complementizer languages, this correlation is a problem because a similar pattern is ungrammatical when the IC appears in post-DP position or a stand-alone fragment answer. In those cases, one has to resort to a C-less version.

(70) * Alicia y Blas, creo (* que) han ido de compras.
Alicia and Blas think.1SG that have gone shopping

(71) A: Parece que Alicia ha ido de compras.
seems that Alicia has gone shopping

B: Sí, parece (* que).
yes seems that

This pattern seems to push us into the conclusion that, in Spanish, Hungarian, and Polish, the presence of a complementizer is contingent on it immediately preceding a constituent with a focus or contrastive topic interpretation, regardless of the actual syntactic structure mediating between the two. I don't know how to implement this restriction.

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