

On Coordination and Clitic Climbing in Spanish Auxiliary Verb Constructions

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ABSTRACT: In this work we analyse some aspects of the interaction between coordination and clitic climbing in Spanish sentences with auxiliary verbs. We aim at shedding light on three kinds of structures, or ‘scenarios’: (1) those in which we find coordinated auxiliaries taking a single lexical verb as complement (*Puede y debe hacerlo*); (2) those in which a single auxiliary takes coordinated lexical verbs as complement (*estás molestándonos y mirándonos*), and (3) those in which coordinated auxiliaries take coordinated lexical verbs as complement (*puede y debe terminarlo y entregarlo*). Our proposal will involve a combination of Gapping and Across-the-Board rule application for Scenarios (1) and (2) and Right Node Raising for Scenario (3). We will argue that well-known syntactic constraints on long distance dependencies, such as those proposed in Ross (1967), can account for the facts without the need for *ad hoc* machinery.

Keywords: clitic climbing; auxiliary verb constructions; coordinated structure constraint; across the board operations

1. Introduction

Clitic climbing (CC henceforth), descriptively, is an optional phenomenon whereby a pronominal clitic appears linearly detached from the lexical verb that selects it as an argument, and instead surfaces morphologically attached to a structurally higher verbal head

(see Andrade and Bok-Bennema, 2017; Rivas, 1977; Kayne, 1975; Aissen and Perlmutter, 1976; Solà, 2002; Raposo and Uriagereka, 2005; Benincá and Cinque, 2019 among many others). CC may feature in multi-clausal structures (as in (1)) or in monoclausal structures (as in (2)); with the only condition that the lexical V that subcategorises for the clitic is the argument of either another lexical verb (a *control* or ECM verb in a biclausal structure) or of an auxiliary verb (in a monoclausal structure):

- (1) a. Juan quiere_{V_{Control}} comprar_{lo}
 J. wants to-buy=_{CL_{ACC}}
 b. Juan *lo* quiere comprar
 J. CL_{ACC}=wants to-buy
 ‘Juan wants to buy it’
- (2) a. Juan está_{V_{Aux}} comprándolo
 J. is_{PROG} buying=_{CL_{ACC}}
 b. Juan *lo* está comprando
 J. CL_{ACC}=is_{PROG} buying
 ‘Juan is buying it’

It has been proposed that in fact (1) is a monoclausal structure, since there is a lexically governed operation of *restructuring* (Rizzi, 1982; Cinque, 2004, 2006; Wurmbrand, 2001) that transforms a bi-clausal structure into a monoclausal one, by:

- (a) Making arguments of the embedded V dependant on the matrix V, and
- (b) Forming a complex predicate, $V_{\text{matrix}} + V_{\text{embedded}}$

This hypothesis rests on the underlying assumption that CC is only possible in monoclausal structures, and receives some level of validation from the fact that CC is impossible when the embedded clause is finite, thus defining a CP (a barrier for movement):

- (1') a. Juan quiere que Pedro lo compre
 J. wants that P. CL_{ACC}=buys
 'J. wants P. to buy it'
- b. *Juan lo_i quiere que Pedro compre t_i
 J. CL_{ACC}=wants that P. buy

Negation in biclausal structures (e.g., with *querer* 'to want') also constitutes a barrier for CC (see Ordóñez, 2013; but see RAE-ASALE, 2009: §28.5j for some exceptions), when the embedded predicate is negated; this seems to also hold for modal auxiliaries (like *poder* 'can' and *tener que* 'have to'), which may take a negated VP complement:

- (1'') a. Juan quiere/puede/tiene que no comprarlo
 J. wants/may/has to NEG buy=CL_{ACC}
 'J. wants to not buy it'
- b. *Juan lo quiere/puede/tiene que no comprar
 J. CL_{ACC}=wants/may/has to NEG buy

Under certain theoretical assumptions, the data in (1'') could align with the movement approach to CC, since negation is known to induce weak islands effects (Rooryck, 1992) and therefore the ungrammaticality of (1'')b) would be due to an island violation. However, there have been interpretations where negation disrupts the configuration that licenses restructuring, with the same empirical consequences. Examples of the kind of (1'') thus cannot tip the scale in favour of either movement or restructuring approaches.

Cinque (2004, 2006) proposed (based mostly on data from Italian¹) that restructuring verbs are functional heads in a monoclausal structure, somewhat akin to auxiliaries. As noted in

¹ This is an important caveat: some of the arguments out forth in favour of restructuring in Italian do *not* carry over to Spanish. For example, Cinque (2004: 134) considers the interaction between restructuring and rules such as focalisation (example (i) and its gloss are taken from Cinque):

Nishida (2012), this position is problematic since it amounts to stripping those verbs from their thematic grid, making them essentially like raising verbs. Such an approach leads to problems in the analysis of object control verbs which allow for CC, as in (3a-b) (Luján, 1980) and causatives, like (3c) (see also Contreras, 1979: 115)

- (3) a. Les permito/dejo/ordeno traer el diccionario al examen
CL_{DAT} allow/let/order bring the dictionary to-the exam
 ‘I allow/let/order them (to) bring the dictionary to the exam’
- b. Se_{DAT} lo_{ACC} dejo/permito/ordeno traer t_{ACC} al examen
CL_{DAT}=CL_{ACC}=let/allow/order bring to-the exam
- c. Se lo hago traer al examen
CL_{DAT}=CL_{ACC}=make bring to-the exam

Unless one is committed to saying that object control structures are monoclausal (recall that Cinque, 2004, 2006 assumes that restructuring verbs are *always* functional heads in a monoclausal structure), then the assumption that CC is only possible in monoclausal structures (monoclausality which arises as a result of *restructuring*) should be revised. Here we will provide arguments that indirectly support the hypothesis that while CC is restricted to

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- i) A PARLARE DEI SUOI PROBLEMI, ti verrà
 To speak about his problems, he’ll to-you come

The corresponding Spanish example, however, is ungrammatical:

- ii) *A HABLAR DE SUS PROBLEMAS, te vendrá

Similarly, topicalisation allegedly works in Italian, but certainly not in Spanish (cf. (iii), taken from Cinque, 2004: 134, and (iv)):

- iii) Leggere a tutti, non lo potevo
 Read to everybody, NEG it could
 ‘Read it to everybody, I couldn’t’
- iv) *Leer a todos, no lo podría

The focus of the present paper is not a comparative study of Spanish and Italian CC, but in principle there is no reason or enough evidence to assume that the arguments in favour of indiscriminate monoclausality in Italian apply to Spanish.

non-finite contexts, for CC in Spanish (in the cases analysed here) monoclausality does not seem to be a necessary condition.

The present paper is concerned with the application of CC in Spanish in syntactic contexts that have been underexplored in the literature: coordinate structures where lexical verbs and auxiliary verbs are coordinated. Specifically, we will provide analyses for the three following situations: (1) a single auxiliary having scope over coordinated lexical verbs, (2) coordinated auxiliaries having scope over a single lexical verb, and (3) coordinated auxiliaries having scope over coordinated lexical verbs.

1.1 Some initial considerations on CC

The nature of CC varies depending on the theoretical stance one adopts: it may be a side-effect of other operations or a rule in its own right. A comprehensive overview of accounts of CC and its motivations exceeds the scope of this paper, but we may summarise the main approaches that can be found in the syntactic literature. For example, in Relational Grammar and its more recent incarnations –Arc Pair Grammar (Johnson and Postal, 1980), Metagraph Grammar (Postal, 2010)- there is no movement involved in CC; but rather a rule of *clause union* which makes dependants of an embedded clause into dependants of matrix verb; see Aissen and Perlmutter (1976) for a seminal work in this vein. This position has been taken up by those versions of generative grammar which propose a -possibly optional- *restructuring* operation, as we have seen above (Rizzi, 1982; Cinque, 2004, 2006; Wurmbrand, 2001). A different current within the transformational-generative tradition assumes either movement rules for syntactic or morphological reasons (Kayne, 1989; Torrego, 1998; Raposo and Uriagereka, 2005; Benincá and Cinque, 2019) or operations over feature matrices via Agree (Boeckx and Gallego, 2008). It is important to note that in current transformational grammar, if CC is modelled as a syntactic operation (and syntactic operations are motivated by the need

to check/value features to ensure interface convergence; see Chomsky, 2000 and much subsequent work), then it is not clear how to reconcile the idea that CC is a version of Internal Merge or Agree with the fact that Spanish CC in infinitival and gerundial contexts is a completely *optional* rule without there being any systematic semantic difference between sentences which display CC and sentences which do not (that is: there is no semantic or pragmatic difference between (1a) and (1b) or between (2a) and (2b)). We need to make a brief excursus. It has been proposed (Uriagereka, 2002: 273) that there are semantic effects associated to CC, although the cases considered in those works are very different from ours. For example, Uriagereka and Pietroski provide the following context:

Somewhere, at high noon, a terrorist launches a missile that strikes a hospital at 12:20. In that time interval, doctors remove a patient's heart (which was in its original place at 12:00) and store it in a laboratory at the other end of the hospital, while a new heart is placed (at 12:15) in the patient's chest. The missile strikes and the following Spanish sentences are uttered in the news to describe the horrifying event.

and consider the examples in (4), introduced as an illustration of ‘*the effect of clitic climbing on sub-events*’:

- (4) a. El terrorista destrozó el corazón del paciente.

the terrorist destroyed the heart of-the patient

- b. El terrorista destrozó su corazón del paciente.

the terrorist destroyed his/her heart of-the patient

- c. El terrorista le destrozó el corazón al paciente.

the terrorist CL_{DAT}=destroyed the heart to-the patient

‘The terrorist destroyed the patient’s heart’

Leaving aside the fact that (4b) does not sound acceptable to us, Uriagereka and Pietroski claim that ‘clitic climbing’ dissociates two possible readings: one with intrinsic possession and one without. However, (4c) does not feature CC at all, insofar as there is no other possible host for the clitic: it has not been generated at a lower position and then ‘climbed’ from possible host to possible host (sentence (4c) features clitic doubling, but not clitic climbing). These cases are not comparable with our (1-2).

Gallego (2016) also proposes a semantic effect in clitic climbing, although again there is no comparison between examples like our (1-2), or in truth any of the structural cases analysed here. Gallego considers (5a) and (5b) and proposes that while (5b) is contradictory, (5a) is not (annotations and glosses are Gallego’s):

(5) a. Pertenezco a la raza de fumadores que quieren dejarlo sin quererlo dejar

(meaningful)

Belong to the race of smokers that want quit=CL without want=CL quit

b. Pertenezco a la raza de fumadores que lo quieren dejar sin quererlo dejar

(contradictory)

Belong to the race of smokers that CL=want quit without want=CL quit

‘I belong to the kind of smokers who want to quit without wanting to quit’

We fail to find the difference noted by Gallego (citing a manuscript by Uriagereka); it must be taken into consideration -in any case- that the example features an auxiliary in both a positive and negative contexts (within and outside the scope of the preposition *sin* ‘without’): this may be a confounding factor, since (6) is not acceptable to us:

(6) ??Quiere romperle el corazón sin querer romperle el corazón

Wants break=CL_{DAT} the heart without want break=CL_{DAT} the heart

‘He/she wants to break his/her heart without breaking his/her heart’

The anomaly of (6) is completely independent of clitic placement, or indeed of the presence of a clitic at all.

Gallego proposes that ‘*climbing correlates with a more topic-like interpretation of the clitic while non-climbing does with a more focus-like one*’ (2016: 79). We are not sure how to interpret ‘*topic-like*’ or ‘*more focus-like*’ in semantic terms (Gallego, 2016: 79, fn. 16 somewhat acknowledges the vagueness of these terms, but provides no further clarification), what that ‘*correlation*’ is and how it would take place (and how it is related to the syntactic process of CC)². Similarly, we find no difference in ‘*felicitousness*’, let alone one that can be a result of the application of a movement rule (CC)³, between (7a) and (7b) (Gallego’s

² We need to note that CC must not be assimilated to *proclisis*, despite what is suggested in RAE-ASALE (2009: §28.3c). There are at least three crucial contexts to define this dissociation.

First, even when a clitic climbs to the highest auxiliary in a chain, stylistic inversion may make it an enclitic:

- i) Pero no era necesaria la presencia del médico para recomendar el asunto; **podíalo** hacer por carta Pou y Martí, José María, 1930. (CC + enclisis to a finite auxiliary)
But not was necessary the presence of the doctor to recommend the matter; could=CL_{Acc} do by letter

Second, in a sequence of auxiliaries, CC may target an intermediate auxiliary; the clitic will then be realised as an enclitic if the targeted auxiliary is an infinitive or a gerund:

- ii) No debió **poderlo** hacer (Tapia Bolívar, Daniel, 1992). (CC + enclisis to a non-finite intermediate auxiliary)
Not could be-able-to=CL_{Acc} do
- iii) Tendría que **haberle** dicho la verdad
Should_{ISgCond} have=CL_{Dat} told the truth

Finally, a clitic may climb to the highest auxiliary in a chain, but if this is an infinitive or gerund, the clitic will not be a proclitic (see also (9); García Fernández & Krivochen, 2019b for extensive discussion):

- iv) A tiempo para **poderlo** presentar el 7 de enero (El Diario Vasco, 19/12/2000) (CC + enclisis to an infinitival highest auxiliary)
In time to can=CL_{Acc} present the 7 of January
- v) La gente me dice, agradece el haber despertado y agradecería más el no **tenerlo** que haber hecho nunca (<https://www.wattpad.com/707205779-diario-de-alguien-insignificante-9>)
The people CL_{Dat} says, thanks the having awakened and thank_{Cond} more the not having=CL_{Acc} to have done ever

In this context, the *topic-like* and *focus-like* effects become even harder to identify, since intermediate positions in an auxiliary chain are hardly topic / focus bearing. Furthermore, there is a fourth case, which is enclisis with CC in positive imperatives (note that, while modals do not have imperatives, aspectual phasals do):

- vi) {**Empiézalo a/termínalo de**} hacer pronto (CC + enclisis to an imperative auxiliary)
Start=CL_{Acc} to / Finish=CL_{Acc} do soon

³ There may be some general preference for high vs. low clitics in different varieties, but that is an issue of variation, not of the properties of a grammatical rule. Even less clear is the relation between such vague preferences as reported by Gallego and the fact that he present CC as an instance of phase-theoretic driven Agree, a discrete rule of the grammar.

examples and judgement; a potentially confounding factor in (7b) for those speakers who disprefer it may be the contiguity between accusative clitics):

(7) a. ¿Qué es eso que tienes en la mano? Enséñamelo, quiero verlo

What is that that have in the hand show=CL=CL want see=CL

b. ¿Qué es eso que tienes en la mano? #Enséñamelo, lo quiero ver

What is that that have in the hand show=CL=CL CL=want see

‘What is it that you have in your hand? Show it to me, I want to see it.’

The fact that CC is optional with infinitives and gerunds (both its structural description and its structural change are well-formed, interpretable strings) is not easy to reconcile with the idea that CC takes place as a form of Agree, and thus as a way to save derivations from interface crashing⁴. Let us briefly discuss this point. As an example of a strictly motivated syntactic CC, Boeckx and Gallego (2008) propose that CC takes place via Long-Distance Agree:

Clitics may move. If they don't, a PF crash obtains (see also Raposo and Uriagereka, 2005)

They go as far as equating CC with subject raising in unaccusative constructions (the latter of which does have an impact on information structure that has been well-documented). In the same vein, Solà (2002: 240, ff.) analyses CC as an instance of Feature Attraction (i.e., Agree), and claims that

Clitic Climbing should satisfy a requirement which has been largely accepted within the Minimalist Program, namely that movement should be driven by (functional) features

⁴ Previous models, most prominently the extensions and revisions of the Standard Theory, did feature *optional* transformations (e.g., NEG-raising, passivisation) alongside *obligatory* transformations (e.g., *wh*-movement in languages that have it, affix hopping). The instances of Spanish CC analysed here support the case for the reintroduction of *optional rules* in the grammar.

that need to be checked against matching features in a lower constituent (Solà, 2002: 240)

Moreover, in the Minimalist approach clitics must be XPs, in order to prevent the moved clitic to project a phrase (as in Uriagereka, 1995: in his work, clitics are D heads akin to regular determiners; see also Raposo and Uriagereka, 2005). Some proposals, faced with the variable behaviour of clitics, assume that not all clitics are equal: Roca (1992) proposes that direct object clitics are DPs in A-positions, whereas indirect object clitics are akin to Agr, a functional category endowed with Person features.

If CC is a form of Agree, then not only should it be *obligatory* either in the overt or covert syntax in order to get a legitimate structure, it should also affect *all and only phase heads* (because only these can be Probes for Agree; see Chomsky, 2008). That is: CC must be *cyclic* and monotonically so. That is essentially the scenario proposed by Roberts (2010) for cliticisation, which can be extended to CC if CC is understood as cyclic cliticisation. Clitics, in that proposal, are assumed to be ϕ P, that is, bundles of phi-features:

(8) Agree (v^* , ϕ P)

step 1: $v^* [u\phi] \rightarrow \phi P [i\phi]$

step 2: $v^* [i\phi] \rightarrow \phi P [i\phi]$

The Goal copies its features onto the Probe, and this process ‘*exhausts the Goal’s content in cliticization*’ (Boeckx and Gallego, 2008). More probes mean more possibilities for cliticisation, but crucially only phase heads can host clitics. In sequences of auxiliary verbs the CC-as-Agree proposal, if implemented using the Minimalist machinery, entails that anything that host a clitic must be a phase head, even if there is no evidence for any kind of cyclicity effect triggered by such head (in other words: the set of phase heads and the set of clitic hosts are neither coextensive nor do they have the same intensional definition):

(9) a. Juan puede estarlo haciendo

J. may be=CL_{Acc} doing

b. Juan puede estar haciéndolo

J. may be doing=CL_{Acc}

‘Juan may be doing it’

c. Juan tiene que haberlo hecho

J. has to have=CL_{Acc} done

d. Juan lo tiene que haber hecho

J. CL_{Acc} has to have done

‘J. must have done it’

Note that the clitic climbs to the auxiliary *estar* in (9a) and to *haber* in (9c). There is, however, no evidence that either of these auxiliaries should be phase heads (see Bravo et al., 2015; García Fernández and Krivochen, 2019b for discussion about cyclicity effects in auxiliary chains); thus, if we adopt current minimalist practice, there is no evidence that they should bear phi-features and trigger Agree. Yet, they may host clitics which climb from a VP. In any case, the fact that all options in (1), (2), and (3) are possible (and, again, without there being a semantic/pragmatic difference between them) is an issue to be faced by Agree-based theories of CC, whereas manageable if the grammar is allowed to contain optional rules alongside obligatory rules.

We will show that our syntactic treatment, insofar as it builds on independently motivated constraints of the grammar which hold across theories, works in both transformational and non-transformational models (we will thus not commit to a specifically Minimalist machinery). We do assume, however, that in the cases we analyse here, CC is essentially a *syntactic* operation, and is thus governed by familiar conditions of the grammar (as opposed to a strictly morphological approach where clitic placement is *post-syntactic*; see

Bošković, 2000: 9; Anderson, 2005: 117). Specifically, for purposes of the present analysis, we follow what Bošković calls a ‘weak syntax’ approach:

***Weak Syntax:** Most movement of clitics is syntactic. However, Prosodic Inversion may intervene in the phonology to satisfy the requirement of a clitic for an appropriate host.*

We will argue that the restrictions that apply to CC in the configurations specified above can be explained under the assumption that, in coordinated structures, CC is a syntactic process that must comply with independently motivated constraints on operations relating conjuncts in coordinated structures. This is a non-trivial point: if Spanish CC was a post-syntactic operation, or a purely morphological operation, or basically *anything* other than a garden-variety movement (reordering) rule, then the usual constraints on movement should not apply to it (thus our adherence to the ‘weak syntax’ stance). The analysis presented in this paper explains why some elements can be distributed across coordinated lexical verbs in periphrastic constructions while others cannot. Our goal is to provide adequate structural descriptions for these sentences which capture their syntactic and semantic properties.

2. Scenario 1: Aux + V y V

Consider the following examples⁵:

(10) Juan es maravilloso: ...

J. is wonderful: ...

a. ...Podrías darle un regalo y decirlo a todo el mundo

Could.2SGCOND give-CLDAT.3SG a present and say-CL.ACC3SG to all the world

⁵ Examples of the type of (10a-b) were called to one of the authors’ attention by Li Pengxiao (p.c.).

b. ...Le_i podrías dar *t_i* un regalo y decirlo a todo el mundo

CLDAT.3SG-Could.2SGCOND give a present and say-CL.ACC3SG to all the world

‘John is wonderful: you could give him a present and tell it [that he is wonderful] to everybody’

c. *Lo_i podrías darle un regalo y decir *t_i* a todo el mundo (the clitic climbs to the auxiliary from the second term of the coordination; the result is ungrammatical)

CL.ACC3SG-could.2SGCOND give-CLDAT.3SG a present and say to all the world

(11) a. Nos estás molestando y mirando

CL.ACC1PL-Are.2SGPRES bothering and looking

‘You are bothering us and looking at us’

b. *Estás molestándonos y mirando (intended reading: same as (11a))

Are.2SGPRES bothering-CL.ACC1PL and looking

c. *Estás molestando y mirándonos (intended reading: same as (11a))

Are.2SGPRES bothering and looking-CL.ACC1PL

d. Estás molestándonos y mirándonos (same as (11a))

Are.2SGPRES bothering-CL.ACC1PL and looking-CL.ACC1PL

In (10a) we have the auxiliary *poder* followed by two coordinated infinitives, *dar* and *decir*, each of which hosts a clitic which corresponds to its internal argument⁶. (10b) features the

⁶ We are interested in the reading where *lo* refers to *Juan es maravilloso*. We leave aside the reading where *lo* refers to the other conjunct, *darle un regalo*. In that reading, a raised clitic could be argued to generate an effect analogous to *strong crossover* (in the sense of Postal, 1971), which would account for the ungrammaticality of (i) below in that reading:

dative clitic from the first term of the coordination having climbed above *poder*, whereas the second term of the coordination has both accusative and dative clitics *in situ*.

The contrast between (11a) and (11b) above is particularly relevant to our purposes, since it shows that there is no problem in distributing an *auxiliary* between coordinated lexical verbs (such that (11a) means *estás molestandonos y estás mirándonos*), but it is *not* possible to distribute a *clitic* between coordinated terms unless the clitic is hosted by the distributed auxiliary (i.e., clitics *in situ* do not get distributed over coordinated terms). It is, of course, possible to have a clitic in each verb, as in (11d); we are not really concerned with this structure in the present paper. In (11a) we have the progressive auxiliary <*estar* + gerund> followed by two coordinated infinitives, but unlike the examples in (10) there is only one clitic proclitic to the auxiliary which is nevertheless interpreted distributively with respect to the coordinated infinitives (as can be seen in the English translation), yielding the same interpretation as (11d).

If we take a look at the coordinated lexical verbs in (10), clearly, each lexical verb can have its own arguments, as we see in (10a): *dar* has an internal dative argument *le* and an accusative argument *un regalo*, and *decir* has an internal argument *lo*. Both appear within the VP, enclitics to the infinitives. Spanish allows for clitics to attach to most auxiliaries (12a-c) and to certain lexical verbs (12e-f) which take a non-finite clause as their complement, as we can see in the examples in (12):

(12) a. *Parece* hacerlo (raising V⁷)

i) *Lo_i podrías [darle un regalo]_i y decir *t_i* a todo el mundo

In this work we are interested in restrictions which emerge from the structure of coordination, and therefore the study of crossover effects in clitic climbing with auxiliary verb constructions will be left for future research.

⁷ *Parecer* in Spanish may appear in three distinct contexts (RAE-ASALE §37.10):

- i) Juan parece enfermo (*parecer* + PredP)
 J. seems sick
- ii) Juan parece estar enfermo (*parecer* + infinitive)

Making the clitic climb from the second term of the coordination yields an ungrammatical sentence, but having clitic movement from the first term yields a grammatical output: this is important in determining the target of the movement operation. Neither the movement in (13a) nor in (13b) take place *across-the-board*, yet (13b) is grammatical: we will see that it is necessary to distinguish cases where clitic climbing takes place within a conjunct from cases where it takes place across conjuncts, despite the superficial form being in some cases identical. An important constraint to bear in mind is that it is impossible to make two clitics climb from different terms in a coordination. (14) illustrates the result of making a clitic from each term climb, yielding an ungrammatical sentence⁸ (cf. 1a, above):

- (14) *Se_i lo_j podrías dar *t_i* un regalo y decir *t_j* a todo el mundo
CL.DAT3SG=CL.ACC3SG=could.2SGPRES give a present and say to all the world

These restrictions have nothing to do with lexically governed processes pertaining to either the auxiliaries or the lexical verbs, since both (15a) and (15b) below are well-formed as individual sentences:

- (15) a. Le_i podrías dar *t_i* un regalo
CL.DAT3SG=could.2SGCOND give a present
 ‘You could give him/her a present’
 b. Lo_i podrías decir *t_i* a todo el mundo

⁸ It is relevant to note that there is no *a priori* constraint on making clitics climb from different predicates, as seen in (i) (repeated from (3b) above):

- i) Se lo deja/permite/ordena traer al examen (from ‘Les deja traer el diccionario al examen’)
CL.Dat3 CL.Acc3Sg=let/allow/orders bring to the test
 ‘He/she lets them bring it to the test’

The relevant constraint applying to (14) must thus pertain to the structure of coordination, not to the fact that there is CC from two different predicates.

CL.Acc3SG=could.2SGCOND say to all the world

‘You could tell that to everybody’

Since ungrammaticality arises when (15a) and (15b) are conjoined, the relevant condition, thus, must pertain to the structure of *coordination* and the operations that can apply to coordinated structures (or, equivalently, the output filters that dependencies within coordinated structures must satisfy). We propose here that the ungrammatical cases are violations of Ross’ (1967) Coordinate Structure Constraint (CSC):

In a coordinate structure, no conjunct may be chopped, nor may any element contained in a conjunct be chopped out of that conjunct. (Ross, 1967: 428)

2.1 A brief digression on the CSC

It is necessary to state this condition more precisely, because the CSC has been understood in at least two different senses, not always yielding equivalent results. As correctly pointed out by Postal (1998: 83),

It seems correct to divide Ross's original formulation of the CSC into separate principles. The one I called the Conjunct Constraint [...] forbids the extraction of coordinate conjuncts themselves. The other, the CSC, bans (non-ATB) extraction from true conjuncts.

With Postal (1998: ix)⁹, in this paper we use *extraction* in a way that does not necessarily entail a transformational (thus, multi-stratal) approach to displacement; rather, to the relation between an operator and a variable however it is formulated (using traces, copies, links...).

⁹ ‘The term *extraction*, due I believe to Jorge Hankamer, covers **in a theoretically neutral way** phenomena like the left front position of English *wh* forms, topicalized phrases, and the like’. (Postal, 1998: ix. Highlighting ours).

It is important to note that this quotation appears in the prologue of a work that mostly adopts a version of Arc Pair Grammar, a framework which is neither generative (proof-theoretical) nor transformational.

Here, we use the term ‘CSC’ to refer strictly to the *second* of Postal’s parts: non Across-the-Board (ATB) extraction from *true* conjuncts is forbidden¹⁰ (or, alternatively, a structural description where filler-gap dependencies -in the sense of Sag, 2010- involving coordinated structures only affect one of the terms of the coordination are ill-formed). Crucially, the CSC has been held in transformational and non-transformational models alike; as a constraint on rules or on dependencies (Ross, 1967; Goodall, 1984; Na and Huck, 1992), as a theorem which follows from enriched Phrase Structure rules in non-transformational syntax (e.g., Gazdar, 1981: 155-156), or a condition on the well-formedness of annotated multi-stratified graphs (Johnson and Postal, 1980). The apparent counterexamples to the CSC in the literature (e.g., Goldsmith, 1985; Lakoff, 1986; Na and Huck, 1992) often involve the conjunction of two clauses, with extraction applying *internally* to one of them. For instance, Goldsmith’s famous example

(16) How many lakes can we destroy and not arouse public antipathy?

features *wh*-movement *within the first conjunct*, such that the segmentation we would assign to (16) is actually (16’):

(16’) [[_{CP} [How many lakes]_{*i*} [_C can [_{TP} we destroy *t_i*]] and [_{CP} not arouse public antipathy]]?

There is no evidence that the structural description of (16) actually involves the *wh*-phrase being extracted *out* of the first conjunct, rather, it seems to be reordered within it¹¹. Similarly, Na and Huck’s (1992) case is based on sentences like (17)

¹⁰ Ross (1967: 176) first defined ATB phenomena as a class of rules that affect (e.g., displace, delete) identical constituents of all the conjuncts of a coordinate structure at once.

¹¹ Schmerling (1983: 17-18; 2018: 87-89) gives empirical arguments for the idea that *and not* is actually a logical connective (and a terminal node in the syntax). Schmerling (2018: 87) provides the following truth table for it:

P	and-not	Q
T	F	T
T	T	F
F	F	T

(17) Which shoes_{*i*} did Terry run in and hurt his knee? (from Na and Huck, 1992: 136)

Where it is not at all clear that the CSC has indeed been violated since there is no dependency (syntactic or semantic) between the *wh*-phrase and the second conjunct; *wh*-movement may have applied only within the first conjunct and not target a position outside that conjunct. The case where an element is extracted from the second conjunct (in (18) below), despite being judged grammatical by Na and Huck, is rejected by our informants:

(18) *Which knee_{*i*} did Terry run in these shoes and hurt *t_i*?

A detailed discussion of the validity of the counterexamples to the CSC is outside the scope of this paper, but the reader is referred to Schmerling (1972) and Postal (1998: Chapter 3) for details. For our purposes, the relevant generalisation captured by the CSC is that in a coordinate structure where *and* has the value of logical conjunction (see Schmerling, 1972: 93), extraction of a syntactic object *from* a position inside one of the conjuncts to a position *outside* the individual conjuncts (e.g., *wh*-movement targeting the matrix COMP) is only possible if it applies across the board. Nothing is said about reordering rules applying *inside* one of the conjuncts.

In addition to its remarkable empirical robustness¹², it is worth noting that the CSC makes no claim about the format of the phrase marker assigned to coordinated structures: be it a flat *n*-ary branching tree (Ross, 1967; see also the *iterating coordination schema* in Sag et al., 1985; Levine, 1985; Culicover and Jackendoff, 2005; Johnson, 2014; Toosavardani, 2012) or an endocentric binary-branching X-bar-like tree (e.g., Progovac, 1999; Zoerner, 1995;

F	F	F
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¹² It must be noted at this point that within the literature on apparent counterexamples to the CSC, there is no data on Spanish; assuming that clitic movement in Spanish may be CSC noncompliant -as has been suggested to us by a reviewer- is simply an unwarranted assumption.

Kayne, 1994; and related works), the CSC applies all the same as a meta-constraint on rules (as a second-order condition over movement rules) or as an output condition on representations featuring dependencies across conjuncts.

2.3 Scenario 1 (re)visited

Our syntactic assumptions, all fairly standard, can be summarised as follows:

- Clitics are units manipulated by the syntax (as per the *weak syntax* approach)
- Clitic climbing is subjected to syntactic constraints (in particular, the CSC)
- The grammar is an ordered set of rules, and this order needs to be specified when discussing the interaction between rules
- The structural analysis assigned to a string must adequately represent semantic dependencies between objects in that string

We can now look at our paradigm in (10-13) in the light of the CSC as a condition over the output of CC. We must note that if the auxiliary *podrías* was outside of the coordination term that includes the lexical VP *darle un regalo*, then (13b) (*Le podrías dar un regalo y decirlo a todo el mundo*) should be ungrammatical due to a violation of the CSC since CC cannot be claimed to have applied ATB. If the CSC applies to the coordinated structures in (6) (and we have no evidence to suggest otherwise), then in order to account for their well-formedness we are forced to conclude that the correct segmentation of (13b) must be what is stated in *preliminary form* in (19) below; we will see, however, that it does not provide an adequate representation of semantic relations:

(19) [[*Le_i podrías dar t_i un regalo*] y [*decirlo a todo el mundo*]]

On this analysis, the clitic *le* is not extracted out of its conjunct, but rather climbs *within* the first conjunct, from *dar* to *podrías* (note that if verbal periphrases are monoclausal structures, there is not even a bounding node crossed in this process). The CSC is thus respected since

there is no chopping out of a conjunct, as in Goldsmith's (1985) example. Moreover, because ATB-climbing is allowed, we can offer an account of the grammaticality of the examples in (20), which feature matrix clauses with finite verbs:

- (20) a. Lo_i compré t_i y vendí t_i en tiempo récord
CL.ACC3SG=buy.1SGPASTPERF and sell.1SGPASTPERF in time record
 'I bought it and sold it in record time'
- b. Le_i dije t_i y repetí t_i que la quiero
CL.DAT3SG=say.1SGPASTPERF and repeat.1SGPASTPERF that CL.ACC3SG love.1SGPRES
 'I told her and repeated to her that I love her'

The same is true of the cases we are interested in here, in which we have an auxiliary verb and two coordinated lexical verbs:

- (21) a. Lo_i tengo *que*_{Aux} empezar_v t_i ahora y terminar_v t_i
 antes del viernes
CL.ACC3SG=have to.1SGPRES start now and finish before of-the Friday
 'I have to start it now and finish it before Friday'
- b. Le_i tengo *que*_{Aux} pedir_v t_i y prestar_v t_i libros
CL.DAT3SG=have to.1SGPRES borrow and lend books
 'I have to borrow books from him/her and lend him/her books'

Unless the clitic and the two gaps are coindexed, the sentences are ungrammatical: in (21a), what I need to start and finish *must* be the same thing; in (21b) the person from whom I borrow books *must* be the same as the one I lend books to. How to capture this may vary: one

possibility is to have coindexed clitics, another is to resort to multidominance and have a single clitic which is dominated by both VPs (which would prevent the multiplication of units and indices). In either case, it is necessary to interpret the clitic as the direct object of both verbs. Therefore, ATB-*clitic climbing* seems to be a suitable way of analysing these cases.

But there are further issues. While this analysis solves the syntax, because there is no non-ATB chopping outside a conjunct in true coordination, the semantic interpretation remains unaccounted for: the auxiliary *podrías* is interpreted distributively with respect to both infinitives *dar* and *decir*. In other words, an adequate paraphrase of (13b) is (22), which makes the shortcomings of (19) evident:

(22) Podrías darle un regalo y podrías decirlo a todo el mundo

The same is true when instead of a modal we have the progressive auxiliary <estar + gerund>, as in (14a), an adequate paraphrase of which is given in (23)

(23) Estás molestándonos y estás mirándonos

Therefore, we need to be able to capture the fact that an auxiliary that appears linearly before conjoined lexical verbs is distributed with respect to those lexical verbs. This has as a result that the analysis we have just seen is inadequate: is not possible both to claim that the auxiliary is part of the first term of the coordination *only* and to get the ‘distributed’ semantics. Furthermore, the morphosyntactic requirements of the auxiliary must be met in both terms of the coordination: *poder* selects an infinitival form as its complement, and in the cases we are interested in, this means that lexical verbs must be either both infinitives or both gerunds, depending on what the distributed auxiliary selects for:

- (24) a. *Podrías darle_{INF} un regalo y diciéndolo_{GER} a todo el mundo (auxiliary <*poder* + inf>)
 b. *Estás molestándolo_{GER} y mirarnos_{INF} (auxiliary <*estar* + ger>)

These observations lead us to propose that the auxiliary is present in both terms of the coordination, but surfaces only in one. There is a well-known process that deletes a verbal head common to a number of conjuncts, under identity: we refer to the rule of Gapping (Ross, 1970). Having this property, Gapping deserves our attention in the present context. A classic example of *Gapping* is presented in Ross (1970: 842):

(25) I want to try to begin to write a novel, and Mary

$$\left\{ \begin{array}{l} \text{wants to try to begin to write a play} \\ \text{wants to try to begin to write a play} \\ \text{wants to try to begin to write a play} \\ \text{wants to try to begin to write a play} \end{array} \right\}$$

However, it is not necessary to accept the existence of a literal operation of deletion in the grammar in order to capture the *empirical* effects of Gapping: Steedman (1990) proposes an explicit combinatory algebra where Gapping effects derive from Type-raising and function composition in CCG, with no transformations required. In this proposal, the ‘gapped’ element is interpreted by constituent coordination with a syntactic object of the same category type in the ‘ungapped’ term of the coordination (Steedman, 1990: 210). Kubota and Levine (2014) propose an analysis from Hybrid Type-Logical Categorical Grammar whereby the surface asymmetry between S-conjuncts (that is, the first conjunct with an overt V and the second with a deleted V –no auxiliary constructions are considered in that work) is specified in the phonological component, as a lambda-operator keeps track of a TV (Transitive Verb phrase) gap in the second conjunct. On the other side of the grammatical spectrum, Johnson (2009, 2018) proposes a Minimalist transformational derivation of Gapping based on (leftwards) *ATB movement* in structures featuring VP coordination rather than *V deletion*, thus multiplying terminal and non-terminal nodes in the structural description (and requiring a rule of reconstruction for semantic interpretation). Restricting the domain of application of Gapping to VP coordinated structures (as opposed to Sentence-coordination, see e.g. Sag et

al., 1985) seems to be adequate for the analysis of our cases given the obligatory distribution of auxiliaries over VPs, but in and of itself this observation does not allow one to favour an analysis over its competitors: see e.g., Toosavardani (2013) for an analysis involving VP-coordination (with Johnson) but *deletion* instead of *movement* (contra Johnson). The Tree Adjoining Grammar view (Sarkar and Joshi 1997) formulates gapping as structure sharing (Karttunen and Kay 1985) or graph contraction (roughly, the identification of common nodes in distinct elementary trees after tree composition, analogously to edge contraction in graph theory), delivering multidominated nodes in derived trees. For our present intents and purposes (since we are currently focused on the properties of Clitic Climbing in coordinated structures rather than on the nature of Gapping), Ross' original insight of 'Gapping-as-V-deletion under identity' will suffice descriptively, much discussion pending. The proposal we make here is that in sentences where an auxiliary is interpreted as distributed over coordinated VPs (as in *Podrías darle un regalo y decirlo a todo el mundo* and *estás molestando y mirándonos*), *gapping* has applied such that an instance of the distributed auxiliary in the second conjunct gets deleted under identity (e.g., *Podrías darle un regalo y ~~podrías~~ decirlo a todo el mundo*). We may note that in terms of *weak generative power*, in what pertains to the data under consideration here, the proposals mentioned above are equivalent (that is, they define the same set of strings). A full comparison of the aforementioned proposals in terms of strong generative power exceeds the scope of the present paper, and will be left for future research.

2.4 Issues of rule ordering

We have identified *two* syntactic rules involved in the derivation of examples like (20) and (21) (however they are formulated); at this point issues of *ordering* become relevant: we need to determine whether the rules may apply in the same derivation (which we have argued they can) and if so in which order (bearing in mind that it is possible to have both logical

orderings *gapping* > *CC* and *CC* > *gapping* generate grammatical strings). To begin with, let us assume that Gapping applies in the derivation of (20) and (21) *before* *CC* and, further, that the distributed auxiliary is in fact an element that occurs *in both* conjuncts in the representation that is the input to Gapping, just like *wants (to try (to begin...))* in (25). Concretely, let us consider (13b) (*Le podrías dar un regalo y decirlo a todo el mundo*): we have the modal auxiliary *poder*, whose meaning and morphological requirements are distributed across the coordination terms; this means that the underlying structure for *Podrías darle un regalo y decirlo a todo el mundo* is *Podrías darle un regalo y podrías decirlo a todo el mundo*; and the underlying structure for *Nos estás molestando y mirando* is *Nos estás molestando y nos estás mirando*. In both cases, the auxiliary in the second term of the coordination has been *gapped*. Let us focus on (22) (*Podrías darle un regalo y podrías decirlo a todo el mundo*), which features non-gapped auxiliaries and all clitics *in situ* to illustrate the argument. If Gapping applies *before* *CC*, the derivation from (22) to (12b) (*Le podrías dar un regalo y decirlo a todo el mundo*) should proceed as follows:

- (26) a. *Podrías darle un regalo y podrías decirlo a todo el mundo*
 b. *Podrías darle un regalo y ~~podrías~~ decirlo a todo el mundo* (via Gapping)

If Gapping applies *before* *CC*, and if *CC* is subjected to the CSC, then the only possible continuation for (26b) is (26c) (where we have replaced indexes with category identifications for clarity purposes):

- (26) c. *Le podrías dar _{t_{CL.DAT}} un regalo y ~~podrías~~ decirlo a todo el mundo* (via *CC*)

The CSC bans *CC* from the second conjunct into the first (because that is not an ATB operation, since it only applies to one term of the coordination). Thus, (26d-e) are correctly excluded:

- (26) d. **Lo podrías dar un regalo y ~~podrías~~ decir _{t_{CL.ACC}} a todo el mundo*

e. *Se lo podrías dar $t_{CL.DAT}$ un regalo y podrías decir $t_{CL.ACC}$ a todo el mundo

The derivation of *Le podrías dar un regalo y decirlo a todo el mundo*, then, involves the application of Gapping *before* CC.

We can now examine the inverse order in the application of rules: assume that CC applies *before* Gapping. As before, we begin with the string in (22a). Given this string, we can apply *clitic climbing* inside each coordination term optionally, which yields either (27a), (27b), or (27c) depending on the target of CC:

- (27) a. Le podrías dar $t_{CL.DAT}$ un regalo y podrías decirlo a todo el mundo (clitic climbing within the first term only)
b. Podrías darle un regalo y lo podrías decir $t_{CL.ACC}$ a todo el mundo (clitic climbing within the second term only)
c. Le podrías dar $t_{CL.DAT}$ un regalo y lo podrías decir $t_{CL.ACC}$ a todo el mundo (clitic climbing is internal to both terms)

All three sentences in (27) are equally grammatical. Once clitic climbing has applied, however, we have a problem: we cannot delete the auxiliary under identity, because at the point of applying Gapping the terminal node that corresponds to the modal also contains a clitic, and the clitics in the first and second term of the coordination are *not identical* either morphologically or referentially. Therefore, the structural description for Gapping is not met.

Note that if we apply clitic climbing in the second conjunct, yielding (27b-c) then deleting the auxiliary would leave the clitic without a host since the modal, which hosted the clitic, has been deleted under sloppy identity, leaving the clitic behind. This results in an ungrammatical sentence (presumably, in Minimalist terms, the ungrammaticality is due to a PF crash):

- But what would happen if we indeed had referentially and morphologically identical clitics?
- Consider (29) at this effect:

- Let us test both orderings, $Gapping > CC$ and $CC > Gapping$ in (30) and (31) respectively:

- If the clitics are referentially and morphologically identical, we see no way of distinguishing between the orderings in (30) and (31) in terms of the output string. But since the ordering

Gapping > *CC* seems to be required for independent reasons, we may generalise that proposal, and assume that the grammatical output is the result of that rule ordering.

All ungrammatical cases considered so far seem to be correctly excluded by the CSC applied as a representational filter to the output of *Gapping*; crucially, *extraction* operations (including *CC* as a filler-gap dependency) must, for purposes of the CSC, apply *across the board* when dependencies cross the boundaries of a single coordination term.

3. Scenario 2: Aux y Aux + V

Now we can consider the mirror image of **Scenario 1**: coordinated auxiliaries and a single lexical verb, as in (32):

- (32) a. Puede y debe hacerlo
 Can.3SGPRES and *must.3SGPRES* *do=CL.Acc*
 ‘He/she can and must do it’
 b. Lo puede y debe hacer¹³
 c. *Puede y lo debe hacer
 d. Lo puede y lo debe hacer

We must note that the distributive semantics still hold: (32a) means *puede hacerlo y debe hacerlo*; in this case, it is the lexical verb *hacer* that gets distributed with respect to the auxiliaries *poder* and *deber*. We see that the clitic can appear within the lexical VP –as in (32a)–, as a proclitic on the first auxiliary only –as in (32b)–, or as a proclitic on both –as in (32d)–. Crucially, however, it *cannot* appear as a proclitic on the second auxiliary only, as shown in (32c). In this context, two questions arise:

¹³ Nishida (2012) claims, in our opinion incorrectly, that a clitic cannot take wide scope in a coordinate structure. Similarly, she claims that a sentence like ‘*Juan lo quería y lo esperaba leer*’ (‘Juan wanted to and hoped to read it’) is ungrammatical, again a judgment we –and the other native speakers we have consulted– do not agree with. These facts are crucial for the treatment of *CC* in coordinated structures that we suggest in this work.

- a) What is the position of *hacerlo* in (32a)?
- b) What is the position of the clitic in (32b)?

To answer the first question, we need to consider a possible structural description for (32a) which can accommodate the semantics. Note that the distributed lexical verb in (32a) necessarily materialises in the second conjunct; (32a') is ungrammatical:

(32) a'. *Puede hacerlo y debe

Here we have a combination of requirements in place: on the one hand, because we are still dealing with coordinated structures, processes must either affect a single conjunct internally or apply *across the board*. Furthermore, we need to invoke an operation that not only applies ATB, but also yields an output in which the lexical VP is linearly at the right edge of the clause but can be semantically interpreted in both conjuncts. This suggests that (32a) has been obtained via *Right Node Raising* (RNR), a transformation that cyclically right-adjoins a common term in coordinate structures¹⁴. If this is correct, then the structural description that has to be assigned to (32a) is parallel to that assigned to (33) below, where an NP has undergone RNR, being adjoined to the nearest cyclic node¹⁵:

(33) Juan ama y María odia la última película de Stallone
J. loves and M. hates the last movie of Stallone
 'John loves and Mary hates Stallone's last movie'

In (33), the NP [la última película de Stallone] has been moved ATB from its conjuncts and right-adjoined at the closest cyclic node that dominates both terms of the coordination; call it

¹⁴ We remain mostly agnostic here as to whether there is multidominance or displacement involved in RNR, but see Levine (1985) and Postal (1998), respectively, for insightful discussion of these positions.

¹⁵ This approach is consistent with Ross' (1967: 341) *Right Roof Constraint*:

In all rules whose structural index is of the form ... A Y, and whose structural change specifies that A is to be adjoined to the right of Y, A must command Y (where the definition of 'command' differs from that of 'c-command' in making explicit reference to the structurally closest S node; more generally, the closest cyclic node).

S for convenience. We propose here that in (32a) the lexical verb with its clitic (*hacer + lo*) has undergone the same process, being RN-raised. Thus, the answer to question (a) ‘what is the position of the lexical V?’ is ‘adjoined to the nearest cyclic node’ (which we refer to as S, following a well-established tradition in formal language theory) as shown in (34):

(34) [s [Puede [_{VP} *t_V*]] y [debe [_{VP} *t_V*]] [_V *hacerlo*]]

In this context, the relative *ordering* of RNR becomes relevant, in relation to other instances of adjunction: it is this timing that determines the structural and linear precedence relations between the RNR-ed VP and other adjuncts. It is important to note, within a derivational framework, that RNR-ed infinitives appear *before* rightmost adjuncts with wide scope, which suggests that the infinitive *cannot* be root-adjoined *post-cyclically* (as seen in the contrast in (35) below); RNR must apply *before* late adjunction, targeting a lower cyclic node (see Stepanov, 2001 for discussion of *late adjunction*). Note that the adjoined PP [antes de las vacaciones] in (35a) has wide scope (over both *quiere V* and *debe V*); we can test that by forcing the PP adjunct into a position where it would only have narrow scope (in (35b)):

(35) a. Juan quiere y debe terminar el trabajo antes de las vacaciones (RNR of the infinitive applies *cyclically* before PP adjunction to the root, the result is grammatical)

J. wants and must finish the work before of the holidays

‘J. wants to and must finish the work before the holidays’

b. *Juan quiere y debe antes de las vacaciones terminar el trabajo

J. wants and must before of the holidays finish the work

(RNR of the infinitive applies *post-cyclically*, targeting an outer position after PP adjunction; the result is ungrammatical¹⁶)

This is not all, however. If *hacerlo* is right-adjoined to the nearest cyclic node (*as per* the Right Roof Constraint), we still need to explain how come the clitic can appear either as proclitic only to *puede* but not to *debe*; or proclitic to both. Crucially, we need to consider that in (32b) the clitic *necessarily* has wide scope, and that the narrow scope version (32c), in which the clitic only has scope over a single term of the coordination, is ungrammatical. This suggests that the target position must have scope over the coordinated auxiliaries. A provisional proposal, much research pending, is that the climbing clitic is syntactically left-adjoined to the minimal phrasal node that contains both auxiliaries (the clitic's phonological hosts) *post-cyclically*. The derivational step that follows (28) is thus (30):

(36) [s [Lo] [puede [_{VP} *t_V*]] y [debe [_{VP} *t_V*]] [_V *hacer t_{CL}*]] (via post-cyclic clitic climbing)

Being sister-adjoined to the minimal phrasal node that contains [*puede y debe*], the clitic is pronounced as a phonological word with closest element which can host it phonologically (provided that there is no potential structurally intervening node), in this case the first term of the coordination, while syntactically having scope over both terms, as desired. Crucially, we are assuming –much discussion aside– that sister-adjunction structures (but not Chomsky-adjunction), like the configuration that arises in [[*lo*] [*puede ...*]] are local enough that they can serve as the input for *cliticization*, the process whereby a clitic is attached to a fully inflected verbal form (see Desouvrey, 2005: §3; also Sadler, 1997 for further arguments and discussion). The clitic can thus be hosted by the first phonological word in the sister node to which it is adjoined, in this case, *poder*¹⁷.

¹⁶ We are not considering the case in which the PP is a parenthetical; only the situation in which the PP has been generated as a VP adjunct.

¹⁷ A reviewer has suggested that proclitics and enclitics have different syntactic relations with their hosts (see e.g. Benincá & Cinque, 1993 for arguments from Italian). In this paper we assume that in their base position as

Another possibility, which gives a different output (and crucially is thus *not* part of the same reference set as the derivation of (32b)), is having CC apply in both conjuncts *before* the lexical verb gets Right Node Raised: this option (made explicit in (37)) yields the grammatical sentence (32d):

- (37) a. [S [Puede [_{VP} hacerlo]] y [debe [_{VP} hacerlo]]]
 b. [S [Lo puede [_{VP} hacer *t_{CL}*]] y [lo debe [_{VP} hacer *t_{CL}*]]] (via clitic climbing in both conjuncts)
 c. [S [Lo puede [_{VP} *t_V* *t_{CL}*]] y [lo debe [_{VP} *t_V* *t_{CL}*]] [_V hacer]] (via ATB-Right Node Raising of V)

Note that the case in which CC does not apply in all conjuncts (thus, not *across the board*) before RNR, but only in the second conjunct (what we see in example (26c)) is ungrammatical. All of this is consistent with (and indeed follows from) the CSC as interpreted here (again, following Postal, 1998): *non ATB displacement from coordinate structures yields ungrammatical structures*.

4. Completing the paradigm: Aux y Aux + V y V

A brief note is due about a combination of the structures we have discussed so far: coordinated auxiliaries and coordinated lexical verbs, all in one sentence:

- (38) a. Podría y debería terminarlo_i y publicarlo_i
 Could.3SGCOND and should.3SGCOND finish=CL.ACC and publish=CL.ACC
 ‘I/He/she should finish it and publish it’

verbal arguments, clitics occupy complement positions. Once they climb, if they end as proclitics to the highest auxiliary, they are sister-adjoined to the node that immediately dominates their phonological host. That segment is not extended (as opposed to what would happen in Chomsky-adjunction), and as observed in the references cited above, cliticization may take place. The idea that proclisis involves adjunction is also found in Kayne (1994: 19, ff.) for French and Italian; however, Kayne (1994: 44) proposes (considering data from French, Italian, and German) that pronominal clitics adjoin to abstract null functional heads. The machinery employed here for Spanish CC does not require assuming abstract null heads.

b. Lo_i podría y debería terminar t_i y publicar t_i
CL.ACC-could.3SGCOND and should.3SGCOND finish=CL.ACC and publish

Note that here as well the auxiliaries *podría* and *debería* are distributed, this time with respect to *two* lexical verbs: *terminar* and *publicar*. We have included indexes in (38a) with exclusively illustrative purposes, to call the reader's attention to the fact that the clitics *must* be correferential, as pointed out above. So far, in the analysis of **Scenarios 1** and **2** we have made use of two operations: forward *Gapping* and RNR. Optimally, nothing further should be invoked to provide an adequate structural description for (38) that capture the semantic dependencies between lexical verbs and their clitics as well as auxiliaries and their modified verbs. We propose, then, that the derivation of (38) goes along the lines of (39), where sub-indices added to 'y' serve clarity purposes only:

- (39) a. [_S [Podría [_{VP} terminarlo]] y₁ [podría [_{VP} publicarlo]] y₂ [debería [_{VP} terminarlo]] y₃ [debería [_{VP} publicarlo]]]
 b. [_S [Podría [_{VP} terminarlo]] y₁ [~~podría~~ [_{VP} publicarlo]] y₂ [debería [_{VP} terminarlo]] y₃ [~~debería~~ [_{VP} publicarlo]]] (via forward *gapping* of *podría* and *debería* in their respective conjuncts; the lower instance of each is deleted under identity)
 c. [_S [[Podría [_{t_{VP}}]] [~~podría~~ [_{t_{VP}}]] y₂ [debería [_{t_{VP}}]] [~~debería~~ [_{t_{VP}}]]] [_{VP} terminarlo] y [_{VP} publicarlo]] (via RNR of the Vs, applied *across-the-board* in coordination 2; coordinating conjunctions conjoining empty nodes are deleted)
 d. [_S Lo [[podría [_{t_{VP}}]] [~~podría~~ [_{t_{VP}}]] y₂ [debería [_{t_{VP}}]] [~~debería~~ [_{t_{VP}}]]] [_{VP} terminar t_{CL}] y [_{VP} publicar t_{CL}]] (via post-cyclic ATB clitic movement + adjunction (as in (28) above))

As is to be expected, the most complex example (**Scenario 3**) requires a combination of the mechanisms used to derive **Scenarios 1** and **2** in an appropriate order. Once again, applying the operations *across the board* in a different order gives different outputs, predicted by the present approach to be equally legitimate (but not identical). Step by step again, the derivation proceeds as follows:

- (40) a. [S [Podría [VP terminarlo]] y₁ [podría [VP publicarlo]] y₂ [debería [VP terminarlo]] y₃ [debería [VP publicarlo]]]
- b. [S [Podría [VP terminarlo]] y₁ [~~podría~~ [VP publicarlo]] y₂ [debería [VP terminarlo]] y₃ [~~debería~~ [VP publicarlo]]] (via *Gapping*)
- c. [S [lo podría [VP terminar t_{CL}]] y₁ [publicar t_{CL}]] y₂ [lo debería [VP terminar t_{CL}]] y [publicar t_{CL}]] (via ATB clitic climbing)
- d. [S [lo podría [VP t_V t_{CL}]] y [t_V t_{CL}]] y [lo debería [VP t_V t_{CL}]] y [t_V t_{CL}] [v terminar] y [v publicar]] (via RNR of the lexical verbs applied *across the board*)

5. Some conclusions

This paper has argued in favour of a syntactic approach to CC in Spanish (in line with the *weak syntax* standpoint, as defined in Bošković, 2000), looking at a set of data that has not received attention in the literature: the interaction between coordination, auxiliary verb constructions, and CC. Arguments were put forth that an analysis of clitic climbing in coordinated structures in terms of structural descriptions which must comply with Ross' (1967) *Coordinate Structure Constraint* (CSC) can adequately filter out the ungrammatical cases without the need to invoke *ad hoc* constraints. Furthermore, an analysis of the relevant coordinated structures in terms of *Gapping* and *Right Node Raising* (RNR) can account for the distribution of the meaning of auxiliaries external to the lexical verbs that are coordinated as well as mirror-image versions of those. A crucial condition on coordinated structures

(which is independent from both the specific structural description assigned to coordinated structures and the hypothesised nature of clitic climbing), as specified in the CSC, is that operations must apply *across the board* (ATB), that is, affecting *all* terms of a true coordination; we have seen that the motivations for an ATB application of rules are not only syntactic, but also semantic (pertaining to the distribution of modification relations across coordinated terms). When the operations considered here apply in an ATB manner, even if in different orders, distinct but equally grammatical outputs are obtained.

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