

Decomposing and Deducing the Coordinate Structure Constraint

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Abstract

In this paper, I show that the Coordinate Structure Constraint (CSC) can be violated in a number of languages, and propose that the CSC should be separated into two conditions: (i) the ban on extraction *of* a conjunct, and (ii) the ban on extraction *out of* a conjunct. This means that the whole coordinate structure (ConjP) and each conjunct are islands independently of each other. I also argue that languages that allow extraction *of* a conjunct constitute a natural class, and provide a phase-based account of cross-linguistic variation regarding the CSC under a particular contextual approach to phases. Moreover, I address the long-standing debate on where in the grammar the CSC applies, arguing that the two different conditions (i) and (ii) that result from the separation of the traditional CSC are deduced from different mechanisms in the architecture of the grammar: one is a purely syntactic condition, and the other is an interface condition.

Keywords: Coordinate Structure Constraint, anti-locality, contextual approach to phasehood,

Left Branch Extraction, Structural Parallelism

1. Introduction

Since Ross (1967), locality of movement has been one of the central issues in theoretical linguistics. Ross discovered and formulated various locality constraints (so-called *islands*). Among them, a well-known but relatively less examined constraint is the coordinate structure constraint (CSC), which bans extraction out of a coordinate structure. The CSC was originally formulated by Ross (1967) as in (1).

- (1) In a coordinate structure, no conjunct may be moved, nor may any element contained in a conjunct be moved out of that conjunct.

This formulation means that both extraction *of* a conjunct and extraction *out of* a conjunct are prohibited, which is exemplified in (2).

- (2) a. ***[Which table]_i** will he buy [**t_i** and the chair]?
 b. ***[Which trombone]_i** did [[the nurse polish **t_i**] and [the plumber compute the tax]]?(Ross 1967)

The more or less standard view in the literature is that the CSC is universal across languages. However, scrambling in Japanese shows a puzzling behavior for this view: (3) indicates that scrambling is sensitive to the CSC, whereas (4) indicates that it is not.

- (3) ***[Taro-o]_i** John-wa [Yamada-kyoozyu-ga [**t_i** home](&)[Hanako-o shikatta] to] itta.
 Taro-ACC John-TOP Yamada-Prof.-NOM praise Hanako-ACC scolded C said
 ‘John said that Prof. Yamada praised Taro and scolded Hanako.’ (Kato 2005: 317)

- (4) a. ?**Kyoodai-to** kanojo-wa [**t_i** Toodai]-ni akogareteiru.
 Kyoto.University-and she-TOP Tokyo.University-DAT admire
 ‘She admires Kyoto University and Tokyo University.’ (adapted from Yatabe 2003)
 b. (?)**Nani-to_i** Taro-ga [**t_i** mizu]-o katta no?
 what-and Taro-NOM water-ACC bought Q?
 lit. ‘What did Taro buy and water?’

In this paper, I show that the CSC can be violated in a number of languages and argue in the spirit of

Grosu (1973) and Postal (1998) (for more recent discussion see also Bošković 2017, Stjepanović 2014) that the CSC should be separated into two different conditions, contrary to the standard view.¹ I then propose that both ConjP and each conjunct are islands independently of each other, and provide an account for the CSC violation in (4) based on a contextual approach to phasehood advocated by Bošković (2013, 2014). Moreover, I argue that the languages that allow CSC violations form a natural class under Talić's (2015) observation regarding cross-linguistic variation with respect to adverb Left Branch Extraction out of predicative adjectives, and provide an account of cross-linguistic variation regarding the CSC by extending Talić's (2015) Structural Parallelism hypothesis to coordinate structures.

On a more theoretical level, the present paper sheds new light on the long-standing debate of the nature of the traditional CSC, namely, where in the grammar the CSC applies (narrow syntax (Johnson 2002, Postal 1998, Ross 1967 among others), LF (Fox 2000, Goodall 1987, Kehler 1996, Lin 2001, Munn 1993, Ruys 1993 among others), or PF (Merchant 2001, Kasai & Takahashi 2001 among others; see Kato 2006 for an overview)). I provide a more fine-grained answer to this issue that could not have been provided without the separation of the CSC into two conditions argued for here. More specifically, the present paper argues that the two different conditions that result from the separation of the traditional CSC are deduced from different mechanisms in the architecture of the grammar: one is a purely syntactic condition, and the other is an interface condition.

The paper is organized as follows: in section 2, I provide a cross-linguistic survey of the possibility of CSC violations and argue that the CSC has to be separated into two conditions, which indicates that both the whole coordinate structure (i.e., ConjP) and the conjuncts themselves are islands independently of each other. In section 3, I provide a generalization regarding the property that languages that allow CSC violations share, and propose a phase-based account in connection to the structure of the conjunction

¹ Grosu (1973) argues for the separation of the CSC based on pronominalization and pseudo-clefts, which is very different from the current concerns.

phrase. In section 4, I briefly discuss Bošković's (2018a) approach to one part of the traditional CSC and its consequences for the proposal in this paper as well as to the status of the CSC. Section 5 concludes the paper.

2. Separating the CSC

As mentioned above, the CSC has standardly been considered to apply in all languages. Thus, extraction out of a coordinate structure is not allowed in languages such as English, Dutch, Spanish, Italian, and Brazilian Portuguese, as illustrated in (5)-(9).

(5) English

***The wine_i**, he bought [**t_i** and the cheese].

(6) Dutch

***De wijn_i** kocht Jan [**t_i** en de kaas].

the wine bought Jan and the cheese

'Jan bought the wine and the cheese.'

(7) Spanish

?***El vino_i**, compré [**t_i** y el queso].

the wine I.bought and the cheese

'I bought the wine and the cheese.'

(8) Italian

***Il vino_i**, ho comprato [**t_i** e il formaggio].

the wine, I.have bought and the cheese

'I bought the wine and the cheese.'

(9) Brazilian Portuguese

***O vinho_i**, ele comprou [**t_i** e o queijo].

the wine he bought and the cheese

‘He bought the wine and the cheese.’

However, there are languages that allow a type of extraction out of a coordinate structure in addition to Japanese, which was noted above. Let us consider (10)-(22).

(10) Japanese (= (4a))

?**Kyoodai-to** kanojo-wa [**t**_i Toodai]-ni akogareteiru.

Kyoto.University-and she-TOP Tokyo.University-DAT admire

‘She admires Kyoto University and Tokyo University.’

(11) Korean

a. ?[**Hankuk-kwa**]_i kuney-nun [**t**_i ilpon]-ul conkyinghanta.

Korea-and she-TOP Japan-ACC admire

‘She admires Korea and Japan.’

b. ?[**Mwuess-kwa**]_i John-i [**t**_i mwul]-ul sanni?

what-and John-NOM water-ACC buy.Q?

lit. ‘What did John buy and water?’

(12) SC

?**Knjige**_i je Marko [**t**_i i filmove] kupio.

books is Marko and movies bought

‘Marko bought books and movies.’ (Stjepanović 2014)

(13) Russian

Kn’ig’i Pasha [**t**_i i f’il’mi] kupil.

books Pasha and movies bought

‘Pasha bought books and movies.’

(14) Polish

?**Książki**, Jan [t_i i filmy] kupił.

books John and movies bought

‘John bought books and movies.’

(15) Old English

Ond he **hine**_i miclum [t_i ond his geferan] mid feo weorðude

and he him greatly and his companions with money honored

‘And he much honored him and his companions with money’ (*AS Chron.* 878, Lightfoot 1999)

(16) Latin

a. neminem **sapientiae**_i laudem [t_i et eloquentiae] sine summo studio et labore

nobody wisdom reputation and eloquence without greatest effort and industry

et doctrina consequi posse.

and study obtain can

‘no one can achieve high distinction for wisdom and eloquence without a very great amount of zeal and industry and study.’ (Cicero, *de Oratore* 2.363: Sutton & Rachham 1942)

b. Etrusci campi, qui **Faesulas**_i inter [t_i Arretium-que] iacent

Etruscan plains which Faesulae between Arretium-and lie

‘the Etruscan plains between Faesulae and Arretium’ (Livy, 22.3.3: Foster 1929)

(17) Classical Greek²

² Extraction out of a coordinate structure is attested in the Homeric Greek period (8th century BC) and the Classical Greek period (5th-4th century BC), where definite articles were not fully developed, but it is not reported in the Koine Greek period (1st century AD), where definite articles were fully developed (see Agbayani & Golston 2010 and Devine & Stephens 2000 for more data). This coincides with Taylor’s (1990) observation that the occurrences of split NPs/wh-phrases decreased from the Homeric Greek

polémou_i péri [**t_i** kai asp^haleíās]

war.GEN about and safety.GEN

‘about war and safety’

(Thucydides 5.11.4: Agbayani & Golston 2010)

(18) Sanskrit

[imān ca lokān]_i upa-hváyate [**t_i** etāni ca sāmāni]

these.ACC.SG and world.ACC.SG summon.2.SG.PRES these.ACC.PL and chants.ACC.PL

‘He summons these worlds and these chants.’ (Sathapathabrahmaṇa, 1.8.1.19, Mitrović 2011: 78)

(19) Gitksan

Gwi-hl_i gubis Henry [**t_i** gan-hl miyup]?

what-CN eat.TRA.PN Henry and-CN rice

‘What did Henry eat and rice?’

(Davis & Brown 2011:58)

(20) Nisgha

Ksax̣ **haxwadakw-hl_i** dii jabit, [**t_i** gan-hl hawil].

only bow-CN CNTR make-TRA-3SG.II and-CN arrow

‘He did nothing but make bows and arrows.’

(Tarpent 1987: 452)

(21) Shona

?**Ndi-Ø-ani_i** wa-v-aka-teng-er-a [**t_i** na-Ø-Tendai] ma-rokwe?

NI-1a-who 1a.NSE-2.SM-TA-buy-APPL-FV and-1a-Tendai 6-dress

‘Who(m)_i did they buy [**t_i** and Tendai] dresses?’ (Zentz 2016: 137)

(22) Tümpisa Shoshone

period to the Koine Greek period, which Bošković (2012) takes as indicating that the development of definite articles played an important role in the loss of adjective Left Branch Extraction (LBE) and hence as evidence for his generalization regarding the correlation between the availability of definite articles and adjective LBE.

Niiii **isapaippii-a**_i punikkappiihantii [**t_i** tunga kammuttsi(-a)].

I coyote-OBJ saw and jackrabbit(-OBJ)

‘I saw a coyote and a jackrabbit’ (Dayley 1989: 341)

All the examples above involve extraction *of* a conjunct. However, the languages that allow extraction *of* a conjunct listed above still ban another type of extraction out of a coordinate structure. Consider (23)-(27).

(23) Japanese (= (3))

*[**Taro-o**]_i John-wa [Yamada-kyoozyu-ga [**t_i** home](&)[Hanako-o shikatta] to] itta.

Taro-ACC John-TOP Yamada-Prof.-NOM praise Hanako-ACC scolded C said

‘John said that Prof. Yamada praised Taro and scolded Hanako.’

(24) Korean

*[**Taro-lul**]_i John-un [Yamada-kywosu-ka [**t_i** chinchanha-ko] [Hanako-lul pipanhasstako]

Taro-ACC John-TOP Yamada-prof.-NOM praise-and Hanako-ACC criticize

malhassta.

said

‘John said that prof. Yamada praised Taro and scolded Hanako.’

(25) SC

***Sobu**_i, Ivan je ušao [[u veliku **t_i**] i [u malu kuhinju]].

room Ivan is entered in big and in small kitchen

‘Ivan entered a bog room and a small kitchen.’

(26) Russian

***Komnatu**_i, Van'a voshol [[v bol'shuju **t_i**] i [v mal'en'kuju kuhn'u]].

room Vanja entered in big and in small kitchen

‘Vanja entered a big room and a small room.’

(27) Polish

***Pokoju_i**, Jan wszedł [[do dużego **t_i**] i [do małej kuchni]].

room John entered to big and to small kitchen

‘John entered a big room and a small kitchen.’

The common characteristic of the data in (23)-(27) is that they involve movement from within a conjunct. This means that extraction *out of* a conjunct is banned even in the languages that allow extraction *of* a conjunct.

If the CSC were a single locality condition as Ross (1967) originally formulated it, it would be mysterious why extraction *of* a conjunct is allowed but extraction *out of* a conjunct is banned in the same languages. This leads us to the conclusion that the CSC should be separated into two conditions, as in (28).

(28) CSC I: a conjunct may not be extracted out of a coordinate structure.

CSC II: an element inside a conjunct may not be extracted out of a coordinate structure.

In languages like Japanese, Korean, SC, Russian and Polish, the CSC I can be violated whereas the CSC II cannot be. In languages like English, Spanish and Italian, neither the CSC I nor the CSC II can be violated.

I take the above cross-linguistic pattern to indicate that the whole coordinate structure (ConjP) and the conjuncts themselves independently ban extraction from inside themselves, and I interpret this state of affairs to mean that both ConjP and individual conjuncts are islands independently of each other.³ An

³ In fact, extraction out of a conjunct is even worse than extraction of a conjunct according to my informants. This intuition is straightforwardly captured by the current proposal, since extraction out of a

immediate question then arises: why the islandhood of ConjP but not of a conjunct can be voided in certain languages (namely, in those that allow extraction of conjuncts but not out of conjuncts). This issue will be discussed in the following sections.

3. A Phase-based Approach to Violations of the CSC I

3.1. What languages allow the CSC I violation?

Now that we saw that a number of languages allow violations of the CSC I, a question that arises is whether there is a common characteristic among languages that allow such violations. Interestingly, all the languages that allow violations of the CSC (namely, Japanese, Korean, SC, Russian, Polish, Old English, Latin, Classic Greek, Sanskrit, Gitksan, Nisgha, Shona, and Tümpisa Shoshone) lack definite articles. This is reminiscent of Bošković's (2008, 2012) NP/DP language distinction, according to which languages that do not have definite articles show many properties that languages which have definite articles do not show. Bošković gives a number of properties of this kind, several of which in fact involve extraction (e.g., Left Branch Extraction (LBE) of adjective may be allowed only in languages without articles). It then seems that the following generalization can be made regarding CSC I violations:

(29) Generalization of CSC I violations (to be revised)

Only languages that do not have a definite article may allow CSC I violations.

In all the examples in (10)-(22) the first conjunct is extracted out of a coordinate structure. Extraction of a conjunct is thus allowed in these languages, in contrast to the languages in (5)-(9), where extraction of

conjunct crosses two islands (ConjP and a conjunct), whereas extraction of a conjunct crosses just one (ConjP).

a conjunct is disallowed. This is unexpected by Ross's original formulation of the CSC.⁴

However, the situation is more complex than that; we do not seem to be dealing here simply with a distinction between languages with and without definite articles. Thus, Johannessen (1998) reports that Norwegian, Swedish, and Old Norse allow violations of the CSC I, even though these languages have a definite article.^{5,6}

⁴ See below for extraction of non-initial conjuncts.

⁵ (i) shows that Old Norse had a definite article.

(i) hestr-**inn**

horse-DEF

'the horse' (Faarlund 2009:619)

⁶ Anders Holmberg (p.c.) points out that an intonational pause is not needed between *jag* 'I' and *och* 'and' in (31), unlike its counterpart in English, which requires an intonational break before *and* (indicating an afterthought). This indicates that the part *och hans gamla dragspelsorkester* is not an afterthought (the same holds for languages like Japanese or SC). However, he also points out that when *i går* 'yesterday' appears after the second conjunct as in (i), the sentence becomes ungrammatical without an intonational break before *och* 'and' (if there is an intonational break there, the sentence is grammatical). The same pattern is noted by Johannessen (1998) for Norwegian.

(i) *[Kalle Jularbo]_i hörde jag [_i och hans gamla dragspelsorkester] i går.

K.J. heard I and his old accordion.band in yesterday

'K.J., I heard, and his old accordion band yesterday.'

One possibility to explain this effect could be that the remnant of the coordinate structure after movement of the first conjunct needs to be focalized by the Nuclear Stress Rule, which essentially affects the last element in an intonational phrase. In Spanish, *wh-in-situ* is limited to the sentence final position (if an adverb follows it, it must be separated by a pause); Reglero (2007) argues that this can be explained by

(30) Norwegian

Per_i så jeg [**t**_i og Ola].

Per saw I and Ola

‘Per, I saw, and Ola.’ (Johannessen 1998:216)

(31) Swedish

[Kalle Jularbo]_i hörde jag [**t**_i och hans gamla dragspelsorkester].

K.J. heard I and his old accordion.band

‘K.J., I heard and his old accordion band.’ (Anderson 1982)

(32) Old Norse

Skegg-Ávaldi_i átti búð saman [**t**_i ok Hermundr], son hans.

Beard-Avald.SG had.SG hut together and Hermund.SG son his

‘Beard-Avald and his son, Hermund, lived together.’ (Nygaard 1917:13)

an interaction of the Nuclear Stress Rule with the Focus Stress Rule. In SC, CSC I violations are most acceptable if the remnant of the coordinate structure precedes the verb, which is a focus position in the language. This can be taken to indicate that there may be a requirement to focalize the remnant of CSC I violations on a par with Spanish *wh-in-situ*. Turning to Swedish (and Icelandic in footnote 7), in these languages, the Nuclear Stress Rule applies, assigning stress to the rightmost element in an intonational phrase (usually the last phrase in a sentence; see Ambrazaitis 2009 and Myrberg & Riad 2015 for Swedish and Árnason 1985 for Icelandic). It is, then, not implausible that the remnant of the movement involving CSC I violations in these languages may have to be focalized, with the Nuclear Stress Rule applying to it in the same way as in Spanish *wh-in-situ*. ((i) is acceptable with a pause before the adverb, on a par with *wh-in-situ* in Spanish, since the domain of Nuclear Stress Rule application is an intonational phrase.)

Icelandic, which has a definite article, also allows a CSC I violation.⁷

(33) Icelandic

Pétur_i sá ég [t_i og Maríu].

Pétur.ACC saw I and Mary.ACC

‘I saw Peter and Mary.’

Pană Dindelegan (2016) also reports that a violation of the CSC I is attested in Old Romanian, which also had a definite article.⁸

(34) Old Romanian

nu puteți [lu **Dumnezeu**]_i sluji [t_i și lu Mamon].

not can.PRES.2PL LUI.DAT God serve.INF and LUI.DAT Mammon

⁷ Gísli Rúnar Harðarson (p.c.) points out the same pattern as in Swedish regarding an intonational break and an element after the second conjunct: in (32) an intonational break is not required before *og* ‘and’, unlike its English counterpart, but when there is a phrase after the second conjunct as in (i), the sentence is ungrammatical unless there is an intonational break before *og*. (See footnote 6 for a possible account.)

(i) ***Pétur**_i sá ég [t_i og Maríu] í gær.

Pétur.ACC saw I and Mary.ACC in yesterday

‘I saw Peter and Mary yesterday.’

⁸ (i) shows that Old Romanian had a definite article.

(i) oameni-**i**

men.M-DEF.PL.NOM

‘the men’ (Coresi, *Evanghelie cu învățătură* 13: Pană Dindelegan 2016)

‘you cannot serve God and Mammon.’ (Coresi, *Tâlcul Evangheliilor* 56^v; Pană Dindelegan 2016)

What is then the class of languages that allow CSC I violations? More specifically, what is the difference between the languages with a definite article that allow CSC I violations and those which do not? The answer is the nature of definite articles. Crucially, definite articles in the languages that allow CSC I violations are affixal, whereas those in the languages that do not allow such violations are non-affixal. Thus, the more precise generalization regarding CSC I violations which puts together (28) and the facts noted above is given in (35).

(35) Generalization of CSC I violations⁹

Languages with non-affixal definite articles disallow CSC I violations, whereas languages without definite articles and languages with affixal definite articles may allow them.

At a first glance, this generalization looks surprising because languages without definite articles and languages with affixal articles are grouped together. However, it turns out that there are other phenomena that show similar cross-linguistic distribution.

3.2. Talić’s (2015) Structural Parallelism

Interestingly, the generalization in (35) is quite similar to the one that Talić (2015) proposes regarding adverbial LBE. Talić (2015) shows that an intensifier adverb can be extracted from a predicative traditional adjective phrase (TAP) only in languages without a definite article and languages with affixal articles. Thus, English, Spanish, Italian and Brazilian Portuguese do not allow adverb LBE (36)-(39), whereas SC, Russian, Polish, Icelandic and Romanian allow it (40)-(44). Japanese, which was not

⁹ Note that this is a one-way correlation.

discussed by Talić, patterns with SC, Russian, Polish, Icelandic, and Romanian in this respect, as shown in (45).

(36) English

***Terribly**_i, he was [**t**_i tired].

(37) Spanish

***Extremadamente**_i (yo) estoy [**t**_i cansado] (Spanish)

extremely I am tired

cf. (Yo) estoy extremadamente cansado.

‘I am extremely tired.’ (Talić 2015: 420)

(38) Italian

***Molto**_i, sono [**t**_i stanco].

very am tired

Cf. Sono molto stanco.

‘I am very tired.’

(39) Brazilian Portuguese

***Terrivelmente**_i eu estou [**t**_i cansado].

terribly I am tired

Cf. Eu estou terrivelmente cansado.

‘I am very tired.’ (Talić 2015: 420)

(40) SC

Strašno_i je bila [**t**_i umorna]. (BCS)

terribly is been tired.F.SF

Cf. Bila je strašno umorna.

‘She was terribly tired.’ (Talić 2015: 420)

(41) Russian

Užasno_i ja byl [**t_i** rad tebj_a videt’].

terribly I was glad.SF you see

Cf. Byl užasno rad tebj_a videt’.

‘I was very glad to see you.’ (Talić 2015: 420)

(42) Polish

Okropnie_i on był [**t_i** zmęczony].

terribly he was tired

Cf. On był okropnie zmęczony.

‘He was terribly tired.’ (Talić 2015: 420)

(43) Icelandic

Rosalega_i er hún [**t_i** falleg].

extremely is she beautiful.SG.F

Cf. Hún er rosalega falleg.

‘She is extremely beautiful.’ (Talić 2015: 420)

(44) Romanian

Foarte_i sunt [**t_i** obosită].

very am tired

Cf. Sunt foarte obosită.

‘I am very tired.’ (Talić 2015: 420)

(45) Japanese

Totemo_i John-wa [**t_i** shinsetsu] da.

very John-TOP kind is

Cf. John-wa totemo shinsetsu da.

‘John is very kind.’

Based on these data, Talić (2015) provides the following generalization:

(46) Generalization of adverb LBE out of predicative TAPs

Languages with non-affixal articles disallow Adv-extraction out of predicative TAPs, but languages without articles and languages with affixal articles may allow it.

Notice now that Talić's classification of the languages that allow adverb LBE out of predicative TAPs is the same as the one regarding CSC I violations that I provided in the previous section.

Talić proposes an account of the generalization in (46) based on Bošković's (2013, 2014) approach to LBE out of traditional noun phrases (TNPs). Bošković (2008, 2012) established the generalization regarding LBE out of TNPs in (47).¹⁰

(47) Generalization of adjective LBE out of TNPs

Only languages without articles may allow LBE, while languages without articles never allow it.

(48) BCS

Pametni_i su oni [_i studenti].

smart are they students

¹⁰ Bošković (2012) gives the following languages as allowing adjective LBE, all of which lack definite articles: SC, Russian, Polish, Czech, Ukrainian, Slovenian, Latin, Mohawk, Southern Tiwa, Gunwinjguan languages, Hindi, Bangla, Angika, and Magah. Franks (2007) observes that Colloquial Finnish has developed a definite article and disallows LBE, unlike literary Finnish, which does not have a definite article and allows LBE. As mentioned in footnote 2, Bošković (2012) also discusses the history of Ancient Greek and argues that the development of a definite article led to loss of LBE.

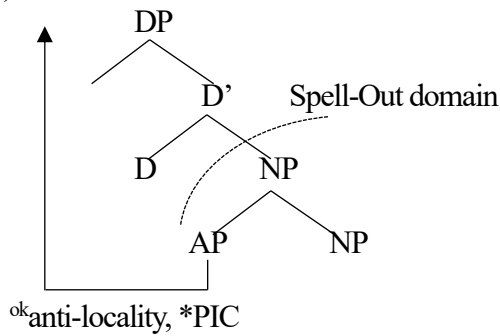
‘They are smart students.’

(49) English

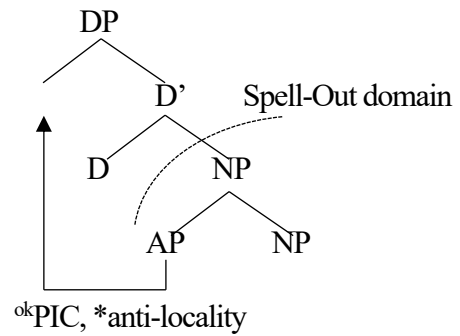
***Smart**_i, they are [_i students].

To account for (47), Bošković adopts Chomsky’s (2000) Phase Impenetrability Condition (PIC): after Spell-Out (completion of a phase), only the head of the phase and its edge (specifiers and adjuncts) remain accessible for further syntactic operations, as a result of which movement out of a complement of a phase head is blocked after Spell-Out. He also adopts the anti-locality condition argued for in Bošković (1994), Saito & Murasugi (1999), Ishii (1999), Abels (2003), Grohmann (2003), among others: in the formulation of Bošković (2013), movement has to cross at least one full phrase, not a segment. In addition, Bošković (2013, 2014) argues that the highest phrase in the extended projection of a lexical head, including NP, constitutes a phase. Based on a number of cross-linguistic generalizations like the one in (47), Bošković argues that there is a structural difference between languages with and without articles where the latter lack DP. As a result, in languages with definite articles, DP is a phase in the TNP (as the highest phrase in the extended projection of N) whereas in languages without definite articles, NP is a phase in the TNP. Consequently, in languages with definite articles, when an AP, which Bošković assumes is adjoined to NP, undergoes LBE, this AP either has to violate the PIC to satisfy the anti-locality condition if it moves directly out of DP, as in (50a), or has to violate the anti-locality condition to obey the PIC if it moves to Spec,DP before Spell-Out since it crosses just a segment, not a full phrase, as in (50b).

(50) a.

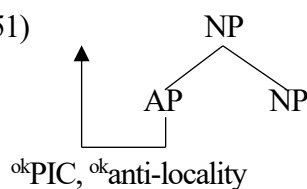


b.



In contrast, in languages without definite articles, the highest projection of a TNP is NP, so that the AP undergoing LBE violates neither the PIC nor the anti-locality condition, as shown in (51).

(51)



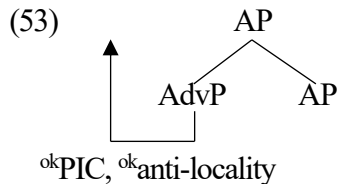
Talić (2015) extends this idea to adverbial LBE. She proposes the following condition regarding a functional layer above a lexical projection:

(52) Structural Parallelism (Talić 2015):

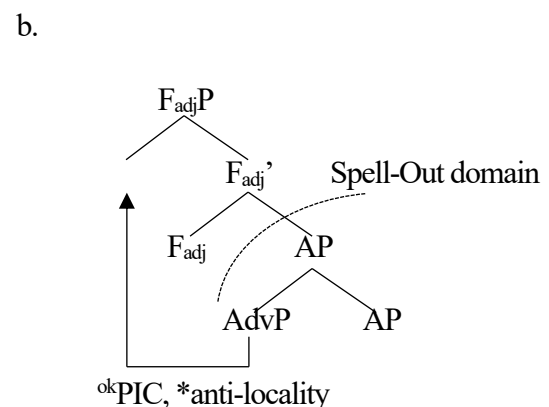
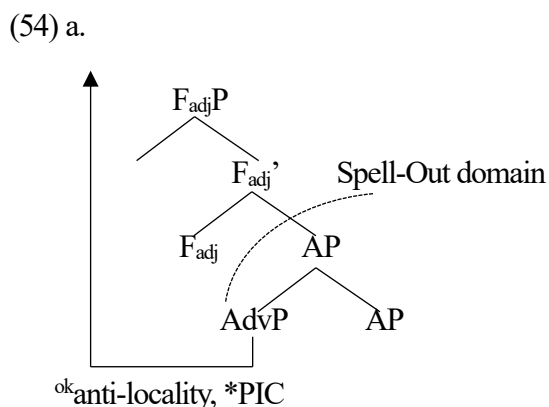
- a. If a language allows bare lexical structure without a functional layer in the domain of one lexical category, it may allow bare lexical structure in the domain of other lexical categories. (e.g., a language can have both bare NP and bare AP)
- b. If a language never allows bare lexical structure, that is, it always requires a functional layer in the domain of one lexical category, it must have a functional layer in the domain of all lexical categories (e.g., such a language will never have bare NP or bare AP).

According to (52a), given that languages without definite articles may lack DP above NP, those languages

may also lack a functional projection above AP. Thus, in languages like BCS, adverb LBE out of a predicative TAP is possible on a par with LBE out of a TNP, as in (53), the underlying assumption being that the adverb in question is AP-adjoined.



On the other hand, as (52b) states, languages with non-affixal definite articles always have a functional projection above NP or AP. This means that as in the NP domain, there must be a functional projection above AP, as a result of which adverb LBE out of a predicative TAP is not allowed, just like LBE out of a TNP is not, as illustrated in (54).



What about affixal-article languages? The data regarding adverbial LBE indicate that affixal-article languages may lack a functional layer above a TAP, since these languages pattern with article-less languages in the relevant respect. We may then expect to find similarities between affixal-article languages and article-less languages in the nominal domain that would indicate that TNPs in affixal-article languages may lack a DP layer (when the article is not present). Talić (2015) in fact argues that this

is indeed the case. More specifically, she shows that in affixal-article languages a definite article is not required when a definite article is not semantically motivated: that is, when definiteness/uniqueness is encoded in something other than the definite article. One such case is superlatives, whose uniqueness is standardly assumed to be encoded by the superlative morpheme (*-est* in English). Thus, unlike in English (55), the definite article is optional in Bulgarian as in (56).

(55) Ivan has ***(the)** best album by U2.

(56) a. Ivan ima naj-dobri-te albumi ot U2.

Ivan has SUPERLATIVE-good-the albums by U2. (Pancheva & Tomaszewicz 2012:296)

b. Ivan ima naj-dobri albumi ot U2.

Ivan has SUPERLATIVE-good albums by U2

‘Ivan has the best albums by U2.’ (Pancheva & Tomaszewicz 2012: 295)

There is also a difference in terms of interpretation of superlatives. Pancheva & Tomaszewicz (2012) observe that (55) only has the interpretation (57a), whereas BCS allows both (57a) and (57b).

(57) a. ‘Ivan has better albums by U2 than anyone else does.’

b. ‘Ivan has better albums by U2 than by any other band.’

Crucially, they also observe that Bulgarian superlatives without a definite article as in (56b) have both the reading (57a) and the reading (57b). Shen (2014) in fact argues that the DP layer is absent in Bulgarian when the definite article is absent, which supports Talić’s idea that when a language allows a bare AP, it also allows a bare NP (and vice versa).

In addition, definite articles in affixal-article languages can be omitted in an environment where a prototypical interpretation of a definite article is absent (so-called *weak definites*; see Aguilar-Guevara

2014 and Scholten 2010). Thus, in (58)-(60), a definite article is omitted even though it is obligatory in English.

(58) Icelandic

a. Hún fór til tannlæknis.

she went to dentist

‘She went to the dentist.’

b. Ég tók rútu í skóla-nn.

I took bus in school-the

‘I took the bus to school all my life.’

c. Hann fór út í búð.

He went out in store

‘He went to the store.’ (Talić 2015: 432)

(59) Bulgarian

a. (Toj) slusha radio.

(he) listens radio.

‘He is listening to the radio.’

b. (Tja) otide na zəbolekar.

(she) went to dentist

‘She went to the dentist.’

c. Cjal jivot pətuvah s avtobus.

whole life travelled with bus

‘I travelled with the bus all of my life.’ (Talić 2015: 432)

(60) Romanian

S-a dus la pravalie.

REFL-has went to store.INDEF

‘He went to the store.’ (Talić 2015: 432)

Talić (2015) takes this as another piece of evidence that the DP layer can be absent in TNPs in affixal-article languages.¹¹

To summarize so far, we have seen that both violations of the CSC I and adverb LBE from predicative TAPs may be allowed only in languages without definite articles and languages with affixal definite articles. I have then discussed Talić’s (2015) phase-based proposal regarding adverb LBE which is tied to the Structural Parallelism hypothesis, according to which languages that lack the functional layer in a lexical projection (e.g., NP) may lack it in another lexical projection (e.g., AP).

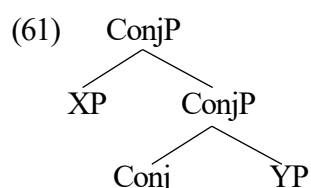
3.3. Explanation of the CSC I violation: The Structural Parallelism in the Conjunction Phrase

The discussion in section 3.2. immediately raises a question regarding CSC I: given that adverb LBE and CSC I violations are both allowed in both article-less and affixal-article languages, can we explain CSC I violations in line with Talić’s (2015) approach to adverb LBE? In this section, I propose a phase-based account of the cross-linguistic variation regarding CSC I violations by extending Talić’s Structural Parallelism hypothesis to the coordinate structure.

First, I propose, following Chino & Hiraiwa (2014), Kayne (1994), and Zwart (2005, 2009), that ConjP is universally head-initial, even if the language is otherwise head-final (see especially Zwart 2005, 2009 for a cross-linguistic survey). In addition, I propose, following Kayne (1994) and Stjepanović

¹¹ See Talić (2015) for an analysis of why LBE out of TNPs is disallowed in affixal-article languages. See also Despić (2015) for a similarity between article-less languages and affixal-article languages regarding reflexive possessives; his analysis also appeals to the affixal nature of D in the latter type of languages.

(2014), that the first conjunct is left-adjoined to ConjP. Thus, the structure of a coordinate structure is (61).



The proposal that conjuncts are left-adjoined can capture some parallelisms between LBE and CSC I violations, on the assumption that adjectives and adverbs are adjoined to NPs and APs respectively (Bošković 2013, Talić 2015). First, Stjepanović (2014), who discusses SC, observes that LBE and CSC I violations are allowed and disallowed in the same syntactic environments in SC. Thus, both LBE and CSC I violations are disallowed from a genitive complement of a noun (62) and from a complement of a noun modified by a quantifier (63).

(62) a. *Čije_i je on [djecu [_{NP} t_i prijateljice]] vidio? (LBE)

whose is he kid.ACC friend.ACC seen

‘The kids of whose friend did he see?’

b. *Marije je on [djecu [_{ConjP} t_i i Petra]] video. (CSC I violation)

Marija.GEN is he kid.ACC Petar.GEN seen

‘He saw [Marija and Peter]’s kids.’ (Stjepanović 2014)

(63) a. *Čije_i je on upoznao [mnogo djece [t_i majke]]? (LBE)

whose is he met many kids mother

‘Whose mother did he met many kids of?’

b. *Marije_i je on upoznao [mnogo djece [t_i i Petra]]. (CSC I violation)

Marija.GEN is he met many djece and Petar.GEN

‘He met many Marija and Peter’s kids.’ (Stjepanović 2014)

On the other hand, LBE and CSC I violations are both allowed from an inherently case-marked complement of a noun (64) and from an adjunct (65).

(64) a. Kakvom_i ga je pretnja [t_i smrću] uplašila? (LBE)

what.kind.GEN him is threat death.INSTR scared

‘The threat of what kind of death scared him?’

b. Zatvorom ga je pretnja [t_i i ubistvom] uplašila. (CSC I violation)

prison.INSTR him is threat murder.INSTR scared

‘The threat of prison and murder scared him.’ (Stjepanović 2014)

(65) a. [Zbog čijih]_i je on to [t_i studenata] uradio? (LBE)

because.of whose is he that students done

‘Because of whose students did he do it?’

b. [Zbog mene]_i je on to [t_i i njih] uradio. (CSC I violation)

because.of me is he that and them done

‘He did it because of me and them.’ (Stjepanović 2014)

Stjepanović (2014) therefore claims that LBE and CSC I violations are essentially the same phenomena.

The second argument for the similarity between LBE and CSC I violations comes from reconstruction effects in Japanese scrambling. Recall from section 2 that Japanese allows violations of the CSC I. In addition, Takahashi & Funakoshi (2013) and Shiobara (2017) show that LBE in Japanese is possible (but rather restricted). Crucially, Arano & Oda (to appear) show that neither LBE nor movements that involve CSC I violations which do not cross a clause boundary affect scope and binding, even though clause internal scrambling (i.e., scrambling that does not cross a clause boundary) can otherwise affect scope and binding. It is well-known that Japanese is a scope-rigid language, as

exemplified by (66a,c,e).¹² As shown in (66b), when a scope bearer (‘everyone’) undergoes clause-internal scrambling and crosses another scope bearer (‘someone’), the scrambled element can take wide scope over the other scope bearer. However, when the same scope bearer (‘everyone’) undergoes LBE within a single clause, it cannot take scope over the other scope bearer, as shown in (66d). Crucially, when the first conjunct is scrambled clause-internally, it does not affect scope either, just like LBE, as shown in (66f).

(66) Scope

- a. Dareka-ga minna-e tegami-o kaita.
 someone-NOM everyone-to letter-ACC wrote
 ‘Someone wrote a letter to everyone.’ $\exists > \forall; * \forall > \exists$
- b. **Minna-e**₁ dareka-ga [**t**₁ tegami]-o kaita. (scrambling)
 everyone-to someone-NOM letter-ACC wrote
 ‘To everyone, someone wrote a letter.’ $\exists > \forall; \forall > \exists$
- c. Dareka-ga [_{NP} minna-e-no [_{NP} tegami]]-o kaita.
 someone-NOM everyone-to-GEN letter-ACC wrote
 ‘Someone wrote [[a letter] to everyone].’ $\exists > \forall; * \forall > \exists$
- d. ?**Minna-e-no**₁ dareka-ga [_{NP} **t**₁ [_{NP} tegami]]-o kaita. (LBE)
 everyone-to-GEN someone-NOM letter-ACC wrote
 ‘[To everyone]; someone wrote [[a letter] t_i].’ $\exists > \forall; * \forall > \exists$
- e. Dareka-ga [_{ConjP} san-bon-izyoo-no ronbun-to hon]-o yonda.
 someone-NOM three-CL-more.than-GEN paper-and book-ACC read

¹² It should be noted that *minna-e-no* ‘to-everyone’ in (66c) is not a complement of *tegami* ‘letter’ but a modifier adjoined to the NP, unlike its English counterpart; see Takahashi & Funakoshi (2013).

‘Someone read [[more than three papers] and books].’ $\exists > \text{more than } 3; * \text{more than } 3 > \exists$

f. ?[**San-bon-izyoo-no ronbun-to**]_i dareka-ga [_{ConjP} **t_i hon**]-o yonda. (CSC I violation)

three-CL-more.than-GEN paper-and someone-NOM book-ACC read

lit. ‘[More than three papers and]_i someone read [_{t_i} books].’ $\exists > \text{more than } 3; * \text{more than } 3 > \exists$

(Arano & Oda to appear)

Binding tests show the same pattern as scope. (67a,c,e) are cases where the anaphor ‘each other’ is not c-commanded by its antecedent. When the antecedent undergoes clause-internal scrambling, it can bind the anaphor, as in (67b). However, when the antecedent undergoes LBE within a clause, it does not bind the anaphor, as shown in (67d). The same result is observed with extraction of the first conjunct as in (67f).

(67) Binding

a. *[Otagai_i-no sensei]_i-ga [John-to Mary]_i-o hihanshita.

each.other-GEN teacher-NOM John-and Mary-ACC criticized

‘Each other’s teachers criticized John and Mary.’

b. [**John-to Mary**]_i-o₁ [otagai_i-no sensei]_i-ga **t₁** hihanshita. (scrambling)

John-and Mary-ACC each.other-GEN teacher-NOM criticized

‘[John and Mary]₁, each other’s teachers criticized _{t₁}.’

c. *Otagai_i-ga [_{NP} [John-to Mary]_i-no [_{NP} tegami]]-o yonda.

each.other-NOM John-and Mary-GEN letter-ACC read

‘Each other read John and Mary’s letter.’

d. *[**John-to Mary**]_i-no₁ otagai_i-ga [_{NP} **t₁** [_{NP} tegami]]-o yonda. (LBE)

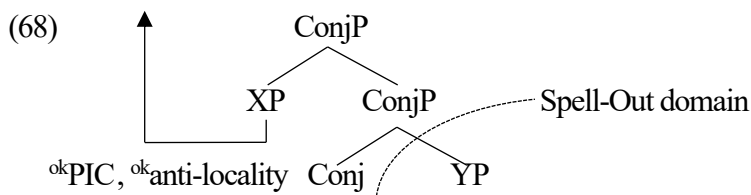
John-and Mary- GEN each.other-NOM letter-ACC read

‘[John and Mary’s]₁ each other read [_{t₁} letter].’

- e. *Otagai-ga [ConjP karera_i-to John]-o hihanshita.
 each.other-NOM they-and John-ACC criticized
 ‘Each other criticized them and John.’
- f. ***Karera_i-to₁** otagai-ga [ConjP t₁ John]-o hihanshita. (CSC I violation)
 they-and each.other-NOM John-ACC criticized
 lit. ‘[Them-and]₁, each other criticized [t₁ John].’ (Adapted from Arano & Oda to appear)

The facts regarding scope and binding thus show that LBE and CSC I violations are similar to each other, which can be interpreted as indicating that a conjunct is adjoined to ConjP just like an adjective and an adverb are adjoined to NP and AP, respectively, which gives us a similar configuration in all these cases.

Now, the proposed structure (61) can explain the CSC I violation cases. I assume that ConjP projects a phrasal domain (see also Bošković 2017 and Stjepanović 2014). Following Bošković’s (2013, 2014) contextual phasehood approach, the highest phrase in the conjunction domain is then the phase. In article-less languages, ConjP is the phase, so that the initial conjunct, which is left-adjoined to the edge of ConjP, can move out of ConjP after Spell-Out without violating the PIC or the anti-locality condition, on a par with adjective LBE out of TNPs and adverb LBE out of TAPs. This is illustrated in (68).



This analysis predicts that the second conjunct cannot move out of a coordinate structure. When the second conjunct (YP) is extracted, it either has to violate the PIC to satisfy the anti-locality condition if it moves directly out of ConjP, or has to violate the anti-locality condition to obey the PIC if it moves to the edge of ConjP before Spell-Out since it would cross just a segment, not a full phrase. This prediction is

borne out, as shown in (69).^{13,14}

(69) Japanese

***Toodai-ni** kanojo-wa [Kyoodai-to **ti**] akogareteiru.
 Tokyo.University-DAT she-TOP Kyoto.University-and admire
 ‘She admires Kyoto University and Tokyo University.’ (Oda 2017)

Turning to non-affixal article languages, I propose that Talić’s (2015) Structural Parallelism is extended to ConjP; more specifically, just like these languages require a functional projection above NP and AP, they also require a functional projection above ConjP, which I call $F_{\text{conj}}P$.¹⁵ Given that the highest phrase of an extended projection is a phase (Bošković 2014), it follows that this $F_{\text{conj}}P$ is a phase instead of ConjP in non-affixal article languages.

At this point, one might wonder if it is appropriate to extend the Structural Parallelism, which is originally stated to apply to lexical projections, to ConjP, which seems to be a functional projection rather than a lexical projection. It is standardly assumed that ConjP “inherits” certain properties of the conjuncts. I thus assume that ConjP “inherits” the nature of lexical projections from its conjuncts, so that ConjP can be considered as a sort of a lexical projection. The intuition behind this idea is that when NPs, APs, or VPs are conjoined, the whole coordinate structure also functions as NP, AP, or VP, respectively. In fact, Zoerner (1995) argues that ConjP lacks inherent categorial features such as $[\pm V]$ and $[\pm N]$, and inherits the relevant feature specifications of its conjunct (see also Biberauer et al. 2014 for a similar idea from a

¹³ The same holds for SC; see Stjepanović (2014).

¹⁴ We will, however, see below that an additional problem arises with extraction of lower conjuncts.

¹⁵ A candidate for the realization of the head of $F_{\text{conj}}P$ may be ‘both’. See footnote 19 for a more extensive discussion.

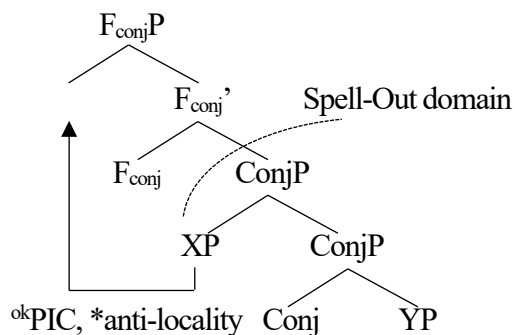
viewpoint of word order restrictions). Thus, based on Zoerner (1995), I suggest that ConjP has an unspecified/unvalued categorial feature, whose value is determined by “feature-sharing” (Pesetsky & Torrego 2007, Bošković 2011; Chomsky 2013) with its conjuncts. Under this proposal, ConjP can be considered as an unspecified lexical category that takes over categorial status of conjuncts, as a result of which the application of the Structural Parallelism would not go beyond the scope of Talić’s original statement.¹⁶

Notice now that this $F_{\text{conj}}P$ structure correctly excludes extraction of the first conjunct in non-affixal article languages. More specifically, when the first conjunct moves out of a coordinate structure, this movement has to violate either the PIC or the anti-locality condition in the same way as LBE. If the first conjunct moves to $\text{Spec},F_{\text{conj}}P$ not to violate the PIC, it violates the anti-locality condition since XP crosses a segment and not a full category (70a). If it moves to a higher projection than $F_{\text{conj}}P$ to obey the anti-locality condition, it violates the PIC (70b). Thus, the first conjunct cannot move out of the coordinate structure.¹⁷

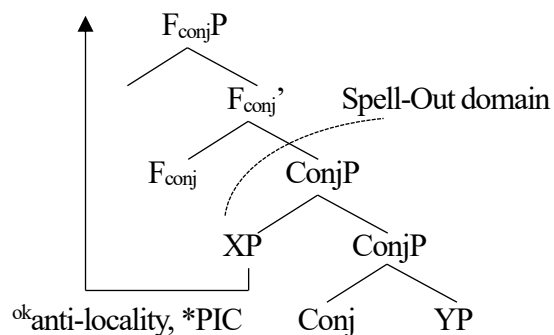
¹⁶ Another possibility is that the Structural Parallelism is not limited to lexical projections but can be extended to functional projections (under the assumption that ConjP is a functional projection). It is worth mentioning here that Bošković (2012) suggests that article-less languages may also lack TP in the clausal spine as the counterpart of lacking DP in the TNP, which is essentially Structural Parallelism holding for functional projections.

¹⁷ Like (46) are and (47), (35) is a one-way generalization as with these other generalizations. It does not mean that all languages without definite articles will allow CSC I violations. In fact, Slovenian and Tamil, which lack definite articles, disallow CSC I violations. It then seems that there is an additional factor concerning CSC I violations. For what this additional factor may be, see Stjepanović (2014) and Oda (2017).

(70) a.



b.



As for the second conjunct, I suggest that the movement of the second conjunct is blocked by Rizzi's (1990, 2004) Relativized Minimality, i.e., we are dealing here with another intervention effect. Following Bošković (2018a) and Johnson (2002), I assume that the first conjunct induces an intervention effect for extraction of the second conjunct. To implement this suggestion, I assume that each conjunct has a coordination feature which is necessary to participate in coordination, and thus this feature induces a Relativized Minimality violation when the second conjunct moves across the first conjunct, although the precise technicality has to be worked out in future research.¹⁸

Let us now turn to affixal-article languages. Recall that affixal-article languages allow CSC I violations, just like article-less languages. This can be naturally explained by the current proposal. The Structural Parallelism allows languages that have a bare lexical structure in one domain to have a bare structure in another domain. When this is extended to ConjP, it follows that ConjP may lack $F_{conj}P$ in affixal-article languages, since these languages lack a functional projection above TAPs, which allows adverb LBE out of predicative TAPs. Thus, the coordinate structure in these languages has the same structure as in article-less languages, and hence a CSC I violation is allowed both in affixal-article languages and article-less languages.¹⁹

¹⁸ Actually, this analysis also extends to languages that lack $F_{conj}P$.

¹⁹ Notice that this analysis does not exclude the possibility that the affixal-article languages that allow

To conclude this section, I have shown that CSC I violations pattern with adverb LBE out of predicative TAPs in that both are allowed in article-less and affixal-article languages but not in non-affixal article languages. I have then proposed a phase-based account of CSC I violations following Talić's (2015) Structural Parallelism and her account of adverb LBE out of predicative TAPs.

4. The CSC II and Across-the-board Movement: Bošković's (2018a) Labeling Approach

CSC I violations may have $F_{\text{conj}}P$ in some circumstances. As mentioned in footnote 15, 'both' can be a candidate of realization of F_{conj}^0 . In fact, in Swedish and Icelandic, when 'both' appears in the coordinate structure, extraction of the first conjunct is disallowed, as shown in (i). This can be interpreted as evidence for the suggestion that 'both' is F_{conj}^0 , which blocks CSC I violations.

- (i) a. *Pétur_i sá ég bæði [_i og Maríu].

Peter saw I both and Mary (Icelandic: Gísli Rúnar Harðarson, p.c.)

- b. *[Kalle Jularbo]_i hörde jag både [_i och hans gamla dragspelsorkester].

K.J. heard I both and his old accordion.band

(Swedish: Anders Holmberg, p.c.)

The optional presence of $F_{\text{conj}}P$ in these languages makes sense under the current proposal which appeals to the Structural Parallelism. Recall from section 3.2 that affixal-article languages can optionally have a definite article with superlatives, and when a definite article is present, only one interpretation is possible just like in non-affixal article languages, which indicates that a functional projection relevant for disallowing ambiguity of superlatives is present with the presence of a definite article in affixal-article languages. This is quite similar to the case of 'both' in the coordinate structure: when 'both' is present, there is a functional projection relevant for blocking extraction of the first conjunct. Thus, it is not implausible that $F_{\text{conj}}P$ can be present in affixal-article languages in the presence of 'both' as realization of F_{conj}^0 .

So far, I have discussed the CSC I, one of the two locality conditions of a coordinate structure. In this section, I discuss the other condition, the CSC II, based on Bošković's (2018a) labeling approach in connection to the current proposal for the CSC I.

Recall that I have argued that the traditional Coordinate Structure Constraint should be separated into two conditions, the CSC I and the CSC II, and that both traditional ConjP (TConjP) and each conjunct are islands independently of each other. There are two important questions that arise from these arguments. First, what is the nature of the CSC II? Under the current proposal, the CSC I is deduced from independently established syntactic conditions: the PIC and the anti-locality condition. Here one might argue that the CSC II should be treated in the same way as the CSC I, because they are both related to islandhood of a coordinate structure (TConjP and each conjunct) and the islandhood of TConjP (the CSC I) is deduced from the PIC. Notice, however, that there is no principled natural connection (in the relevant respect) between TConjP and the conjuncts apart from both being involved in a coordinate structure. Rather, it is perfectly logically possible that the islandhood of the TConjP and that of the conjunct could come from completely different mechanisms. The second question concerns the so-called across-the-board (ATB) movement. It is well-known that extraction out of a coordinate structure is possible even in non-affixal article languages like English, when an element is extracted out of each conjunct, as exemplified by (71).

(71) **Who**_i did you see [[friends of **t**_i] and [enemies of **t**_i]]?

This is surprising given the argument in the present paper that TConjP and the conjuncts are islands, because *who* in (71) is extracted out of TConjP, the first conjunct, and the second conjunct, which should lead to a violation of both the CSC I and the CSC II. However, the fact is that the sentence is perfectly grammatical. This raises an issue for the current proposal.

In this context, Bošković (2018a) proposes an interesting account of the CSC II and ATB movement.

He argues that the CSC II is essentially a requirement on conjunct labeling and that ATB movement does not violate this requirement (in contrast to extraction out of only one conjunct). He assumes following Bošković (2017) and Oda (2017) that conjuncts are phases. This is derived from Bošković's (2013, 2014) contextual phasehood approach that I have also adopted here: whatever the category of the conjunct is (e.g., NP, AP, VP), when a Conj head merges with the conjunct, the extended domain of the conjunct is closed, so that the highest phrase of the conjunct becomes a phase. When a phrase undergoes successive-cyclic movement, the phrase has to move to the edge of phase to avoid the PIC, which in this case means that movement from a conjunct has to proceed through the edge of the conjunct.

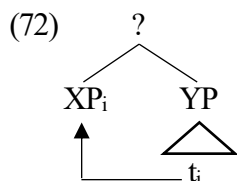
Before showing how this deduces CSC II, it should be noted that a question that arises here is whether Bošković's contextual phasehood approach to conjuncts is compatible with the proposal regarding the application of the Structural Parallelism to ConjP suggested in section 3.3. Recall from section 3.3 that I suggested that ConjP "inherits" the categorial status of conjuncts. The implementation of the category inheritance suggested there is that Conj has an unvalued categorial feature which is valued via feature-sharing with conjuncts. An immediate issue that arises here is that if ConjP inherits categorial status of conjuncts as a lexical category, it might count as an extended projection of the conjuncts, which would prevent the conjuncts from being phases under Bošković's contextual approach to phasehood. I suggest that a specific definition of extended projections and the timing of evaluation matter here. The intuition behind the notion of extended projections is that certain functional categories share the same categorial status with their lexical base (e.g., DP, QP and NP as nominal elements within the TNP). Biberauer et al. (2014) in fact propose that extended projections have the same categorial feature inherently specified such as [+V], [-N]. Based on this proposal, I suggest that whether a phrase counts as an extended domain of a lexical projection depends on whether the head of the phrase has the same inherently specified categorial feature with its sister at the point of merge. If head X, which has a [+N] feature, merges with YP, which also has a [+N] feature, XP is part of the extended domain of the nominal projection to which YP belongs. On the other hand, if a head X merged with the YP does not have a [+N] feature (e.g., a verb

which has [+V]), the nominal domain is closed at YP and hence YP becomes a phase under Bošković's implementation of phasehood. Recall now that Conj does not have an inherently specified categorial feature under the proposal in this paper. This means that when Conj merges with the conjuncts, it does not count as an extended projection of the conjuncts due to the lack of an inherently specified categorial feature.²⁰ Then, the highest projection of the conjuncts serves as a phase and ConjP counts as a distinct phasal domain, as proposed by Bošković, even though ConjP later inherits the categorial status of the conjuncts. This explains the dual status of Conj as a lexical domain under Talić's Structural Parallelism and as a distinct phasal domain from conjuncts (more precisely, as closing the conjunct phasal domain) under Bošković's contextual approach to phasehood.

Turning back to the account of the CSC II, Bošković also adopts Chomsky's (2013) labeling theory. In this theory, when a phrase merges with a head, the head projects, but when a phrase merges with another phrase, either they have to undergo feature-sharing or one of them has to move to a higher position so that the other one can project a label. Crucially, in this theory, when successive-cyclic movement targets a phase edge, the highest node is unlabeled since two phrases are merged together without feature sharing, as illustrated in (72). (All successive-cyclic movement is treated this way in the labeling framework: lack of feature sharing creates an intermediate structure like (72), which then forces

²⁰ The assumption that ConjP is universally head-initial even in otherwise head-final languages (Chino & Hiraiwa 2014, Kayne 1994, Zwart 2005, 2009) could be deduced from this proposal. Whether a phrase is head-final or head-initial depends on the inherent categorial status of the phrase (see e.g. Biberauer et al. 2014). In German, for example, nominal projections are head-initial but verbal projections are head-final. As for conjunction, whether it is head-initial or head-final cannot be inherently specified, since the categorial status of conjunction is not inherently specified as discussed in the text. If Kayne (1994) is interpreted as indicating that languages are universally head-initial by default, it then follows that ConjP has to be head-initial as a default of UG in any language.

movement.)



In addition, Bošković assumes a version of the Coordination-of-Likes requirement (CL) (Chomsky 1957, Schachter 1977, Williams 1978, Gazdar 1981, Sag et al. 1985, Bowers 1993, Beavers & Sag 2004 among many others), which requires that “conjuncts be parallel in their categorial status” (Bošković 2018a:3) and which applies derivationally (i.e., when ConjP is formed). Combining all the ingredients, the CSC II is now deduced from the CL. When movement of an element takes place out of only one of the two conjuncts, this movement delabels the conjunct so that the conjuncts are no longer categorially parallel, which results in a CL violation. This is why extraction out of a conjunct is banned under Bošković’s account.²¹

Let us now look at how Bošković (2018a) accounts for the CSC II and ATB movement. Consider first (73), where an element is extracted from only one conjunct, violating the CSC II.

(73) *Who₁ did you see [[enemies of t₁] and John]?

In (73), each conjunct is built first and then enters the coordinate structure. Within the first conjunct, *who* undergoes successive-cyclic movement to the edge of DP, which makes the topmost node unlabeled. After this movement, the conjuncts enter the coordination structure, at which point the CL is evaluated.

²¹ Bošković shows that the ban in question actually holds only for successive-cyclic movement out of conjuncts, since only such movement has a de-labeling effect.

Crucially, there is no parallelism in terms of categorial status between the first conjunct and the second conjunct: the former lacks a label, while the latter is DP, as illustrated in (74).

(74) [[? who_i enemies of t_i] and [DP John]]

Thus, the CL is violated, which in turn means that the CSC II is violated, and hence the sentence is ungrammatical.

Consider next the ATB movement case (71), repeated as (75) here.

(75) Who_i did you see [[friends of t_i] and [enemies of t_i]]?

Here, successive-cyclic movement occurs in both conjuncts. More precisely, Bošković (2018a) adopts Nunes's (2004) sideward movement analysis of ATB, in which *who* undergoes successive-cyclic movement to the edge of the second conjunct from the complement of (*enemies*) *of*, and then merges to the complement of (*friends*) *of*; from there *who* moves to the edge of the first conjunct. It should be noted here that the copy of *who* at the edge of the second conjunct and the copies of *who* in the first conjunct do not form a chain at this point, since they do not c-command each other. As a result, neither the copy at the edge of the first conjunct nor the one at the edge of the second conjunct counts as a trace (there is no higher copy that c-commands either of these elements). What we then have here is an {XP, YP} structure at the topmost node of each conjunct without feature sharing, which makes each conjunct unlabeled. The unlabeled conjuncts then enter the coordinate structure as in (76).

(76) [[? who_i friends of t_i] and [? who_i enemies of t_i]]

Since both conjuncts are unlabeled, the CL is not violated. In other words, the two conjuncts are parallel

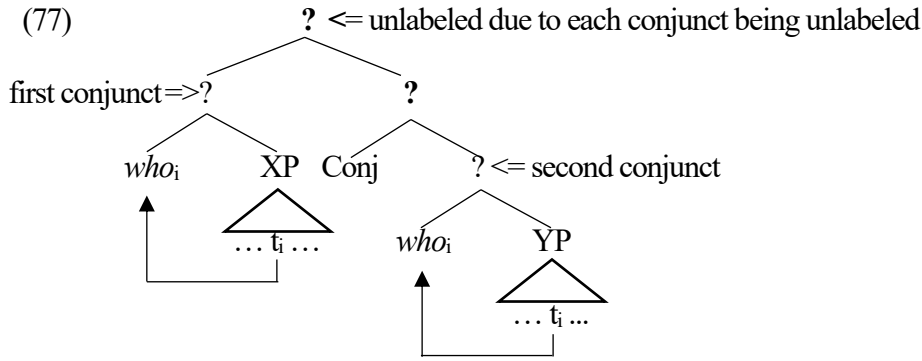
in their categorial status in that both of them are unlabeled. Thus, under Bošković's approach to the CSC II, ATB movement is correctly predicted to be licit.

It should be noted here that the reason why Bošković adopts Nunes's sideward movement is to avoid an intervention effect. As is standardly assumed (and also assumed here), the first conjunct is structurally higher than the second conjunct: in other words, the first conjunct asymmetrically c-commands the second conjunct (see Munn 1993). Bošković then argues that if *who* were to move out of the second conjunct without sideward movement in (76), the first conjunct would count as an intervener, which would block extraction of *who* from the second conjunct. Notice, however, that movement of an element inside the second conjunct, which itself is not a conjunct, would not be blocked by the presence of the first conjunct under the Relativized Minimality account of the first conjunct intervention effect adopted in section 3.3. Recall that I suggested in section 3.3 that extraction of the second conjunct over the first conjunct is blocked by Relativized Minimality because both conjuncts have a coordination feature and that this feature induces an RM violation. Under this proposal, the first conjunct should not block movement out of the second conjunct (it only blocks movement *of* the second conjunct), since the element moving from inside the second conjunct itself is not a conjunct and hence does not have the coordination feature that is required to participate in coordination, which would then allow ATB movement even without Nunes's sideward movement. Thus, we do not have to assume Nunes's sideward movement to account for ATB movement under the current proposal.

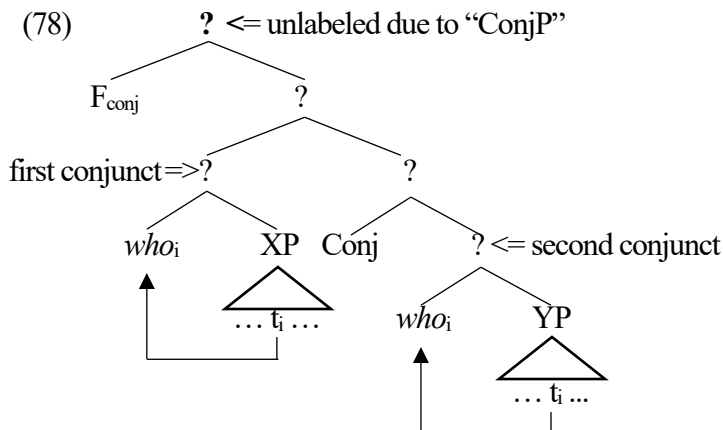
At this point, the reader may wonder whether Bošković's proposal regarding the CSC II is compatible with the one in this paper regarding the CSC I. Recall that I proposed in section 3.3 that in non-affixal article languages there is $F_{\text{conj}}P$ above $\text{Conj}P$, which serves as a phase, and that the reason why CSC I violations are not allowed in such languages is that $F_{\text{conj}}P$ counts as a phase and when $F_{\text{conj}}P$ is completed, movement of the (initial) conjunct either violates the PIC or the anti-locality condition. Given this reasoning, one might argue that my proposal would incorrectly rule out ATB movement, because the complement of $F_{\text{conj}}P$ which includes the element undergoing ATB movement would be sent to Spell-

Out.

I argue that the problem can be resolved once we consider the nature of F_{conj}^0 in detail. Recall that the categorial status of ConjP is dependent on each conjunct; that is, ConjP inherits the categorial status of each conjunct by categorial feature-sharing. Given Bošković's argument that successive-cyclic movement to the edge of a conjunct delabels the conjunct (before it merges with Conj^0), it follows that ConjP is unlabeled in the case of ATB movement, as illustrated in (77), since Conj^0 cannot inherit relevant features from unlabeled nodes. (Note that this does not violate the CL as discussed above.)



Recall also that $F_{\text{conj}}\text{P}$ is an extended functional projection of the ConjP domain. Since extended projections of a domain share the same categorial status with the bottom phrase of the same domain, it follows that $F_{\text{conj}}\text{P}$ has no categorial status either and hence is not labeled in the ATB case. This is illustrated in (78).



The issue now is whether the unlabeled highest node in (78) counts as a phase. Bošković (2018b) argues that unlabeled syntactic objects cannot be phases: under Chomsky’s original proposal, CP, vP, and DP are phases, but unlabeled syntactic objects are none of these. Under the contextual phasehood approach (e.g., Bošković 2014), the highest phrase of an extended projection is a phase, but there is no way to determine whether the unlabeled node is the highest phase of an extended projection or not, since no categorial information relevant for determining an ‘extended projection’ is provided. Thus, I conclude that the highest node in (78), which is supposed to be $F_{\text{conj}}P$, cannot be a phase. It then follows that ATB movement out of either conjunct is not blocked by the PIC, and thus ATB movement is allowed under the current proposal that assumes $F_{\text{conj}}P$.²²

We can now also address the question regarding the nature of the CSC I and the CSC II raised at the beginning of this section. The CSC II follows from the CL under Bošković’s (2018a) account, which is essentially an interface condition required for interpretation, unlike the CSC I, which is essentially a constraint within narrow syntax.²³ Given this account, ATB is no longer a problem for the view that both TConjP and each conjunct are islands. The “islandhood” of each conjunct is now understood as the categorial parallelism requirement on conjuncts; as long as the requirement is met, extraction out of each conjunct is allowed.

²² Notice that this movement can target a projection higher than $F_{\text{conj}}P$, which obeys the anti-locality condition.

The reader should bear in mind that the current account of ATB differs from Bošković’s since it resolves the intervention effect issue that arises under his account without the need to adopt Nunes’s (2004) sideward movement account.

²³ It should be noted that the CSC II is not a purely semantic condition though, since phases and the PIC are also involved. There is, however, no semantic component in the CSC I in contrast to the CSC II.

It is worth noting here that ATB movement ameliorates CSC II violations but not CSC I violations. As (79) shows, an element can be extracted *out of* two conjuncts at the same time, but if two conjuncts are extracted at the same time, the sentence is ungrammatical. This contrast itself can be taken as another argument against unifying the two parts of the traditional CSC, as argued in section 2 of this paper. It appears that ATB should save the CSC violations in both (79a) and (79b) if the two parts of the traditional CSC were a single condition.

(79) a. What_i did [[Mary buy t_i] and [John sell t_i]]?

b. *What_i did Mary buy [t_i and t_i]?

The impossibility of saving (79b) in contrast to (79a) by ATB movement in fact follows from the present proposal. Recall that extraction out of a single conjunct induces a CL violation, which is remedied by ATB movement out of each conjunct. What ATB movement remedies here is in fact only the CL/labeling problem that arises with CSC II violations. Extraction *of* conjuncts themselves, however, cannot be saved by ATB movement, because the CSC I is a pure syntactic locality condition and there is no CL/labeling problem involved in the first place. In other words, there is no CL/labeling problem to begin with here, so there is nothing that ATB can remedy. (Rather, when the second conjunct crosses the first conjunct, Relativized Minimality is violated; we are then dealing here with a pure syntactic locality violation.)

Another case where the separation of the CSC is relevant is the temporal sequence exception to the CSC (Ross 1967, Postal 1998). In (80), where there is a temporal sequence between the two conjuncts, extraction *out of* the second conjunct is possible, but extraction *of* the second conjunct itself is not, even if the two conjuncts in (80b) are interpreted as a temporal sequence. This can also be taken as evidence against the unification of the CSC, since extraction *out of* a conjunct and extraction *of* a conjunct should be saved by the same operation under a uniform CSC.

(80) a. What_i did you [[go to the store] and [buy t_i]]?

b. *What_i did you buy [the whisky and t_i]?

The current proposal may also enable us to capture the contrast between the CSC II and the CSC I with respect to the (un)availability of the temporal sequence exception. Since the semantic interpretation is relevant, there is room for the CSC II, as an interface condition related to interpretation, to be affected by an interpretational difference, whereas there is none for the CSC I, which is a pure syntactic condition (although I leave developing the technical details of the CSC II exception in this context for future research). Thus, the current proposal can be extended to explain the (un)availability of the two exceptional cases noted above.

6. Conclusion

In this paper, I have discussed the traditional CSC from a cross-linguistic perspective and argued that the traditional CSC has to be separated into two conditions: the CSC I, which bans extraction *of* a conjunct, and the CSC II, which bans extraction *out of* a conjunct. I have then showed that the CSC I can be violated in a number of languages. In particular, I have established the generalization that the CSC I can only be violated in languages without definite articles and languages with affixal definite articles. I have also argued that the traditional ConjP and each conjunct are islands independently of each other. The islandhood effect associated with extraction out of them was deduced from different mechanisms. The CSC I is essentially a syntactic constraint that derives from the interaction of the PIC and the anti-locality constraint, whereas the CSC II is essentially an interface condition that derives from the Coordination-of-likes and the interaction of Spell-Out and labeling, which is required for interpretation at the C-I interface according to Chomsky (2013). This conclusion is partially compatible with a widely discussed view in the literature that the traditional CSC is an LF condition, as mentioned in section 1 (see e.g., Kato 2006). However, it should be noted here that this view in the literature has mainly focused on the CSC II

in the current terms, not on the CSC I, and hence did not realize the possibility that different mechanisms can be responsible for the traditional CSC effects. The present paper has made it possible to investigate the traditional CSC in a more fine-grained manner from a cross-linguistic perspective.

As noted above, the present paper has also established the generalization regarding violations of the CSC I. In particular, it can be violated in languages without definite articles and languages with affixal definite articles. The generalization makes the same language cut as the possibility of adverb LBE out of predicative TAPs, which is also allowed only in languages without definite articles and languages with affixal definite articles. These two types of languages constitute a natural class under Talić's (2015) Structural Parallelism, according to which a bare structure in one lexical domain is possible if there is a bare structure in another domain. Based on this, a fine-grained structure of the traditional ConjP has been proposed, and the difference between article-less and affixal-article languages on the one hand and non-affixal article languages on the other hand has been explained by the absence/presence of a functional projection above ConjP. The discussion of the CSC I in this paper thus provides additional evidence for Talić's claim that these two types of languages constitute a natural class.

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