December 2016; revised April 2018

On the Syntax and Prosody of Verb Second and Clitic Second

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While this paper addresses a number of properties of V-2 and clitic second phenomena, which includes accounting for the immobility of V-2 clauses and determining the factor responsible for the availability of second position systems, the overarching unifying concern in the discussion is to examine to what extent V-2 and clitic second can be unified structurally and prosodically.

The V-2 and the clitic second effect have attracted a great deal of attention in the literature on the languages that exhibit them due to the pervasive effect they have on such languages. At least superficially, there is clearly some similarity between the two. It is then not surprising that there have been attempts to treat them in a unified manner. This paper examines the viability of unifying the two structurally. Approaches along these lines typically unify the two by extending the account of V-2 to clitic second. Under such approaches, clitics in clitic second languages are treated like verbs in V-2 languages: they are located in C, with the element preceding them in SpecCP.[1] The paper will argue against such unification. The main argument will be typological: clitic second languages share an important syntactic property not found with V-2 languages.[2] Other arguments will also be presented, one of them based on the properties of clitics in clitic second languages (such clitics do not all occur in the same position, and can in fact occur rather low in the structure), and one of them based on a curious property of V-2, the immobility of V-2 clauses, which does not have a parallel with clitic second. A labeling account of the immobility of V-2 clauses will also be provided. The paper will also consider the possibility of a unification of V-2 and clitic second that goes in the opposite direction from the one standardly taken in the literature, by considering the viability of extending the account of clitic second to V-2. Prosody plays a heavy role in clitic second; in fact, we will see that the phenomenon itself is defined in prosodic terms. From that perspective, the paper will consider the role of prosodic factors in V-2: it will in fact be argued that prosody plays an important role in V-2 and that including a prosodic module in the account of V-2 enables us to simplify the syntax of V-2 and gain a better understanding of the history of V-2 and relevant crosslinguistic variation.

The paper is organized as follows. Section 1 is a typological study which examines what clitic second languages have in common. Altogether 53 languages with second position clitics are examined—it is shown that they all share a particular syntactic property. Importantly, this property is irrelevant to V-2, i.e. V-2 languages do not share it. Section 2 examines the structural position of second position clitics, showing that they are lower in the structure than the verb in V-2 clauses. Section 3 discusses the prosodic properties of clitic second and V-2, showing that prosody plays an important role with both, in fact in the same way. Section 4 examines the immobility of V-2 clauses. It provides an account of their immobility, also extending it to other phrases (including phrases whose immobility has not been explained before). The section also considers clitic second from this perspective, noting that clitic second clauses are not immobile.

1. On clitic second, V-2, and articles

*For helpful comments, I thank anonymous reviewers, Anders Holmberg, Ian Roberts, and the participants of the *Rethinking Verb Second* workshop at University of Cambridge.

[1]Unless directly relevant, I will not be appealing to split CP, simply using CP for left periphery.

[2]To some extent, V-2 and clitic second are not either-or phenomena, since they can be present to a limited extent in particular languages, i.e. they can be confined to particular environments. The discussion in the paper concerns languages with fully productive V-2 and clitic second systems.

In this section I discuss clitic second, focusing on a factor that determines the availability of second position clitic systems crosslinguistically. We will then see that this factor is irrelevant to V-2, which will provide an argument against unifying clitic second and V-2.

Languages with clausal clitics typically have either verbal or second position clitics.[3] The latter type is illustrated by (1), which gives the only possible placements of the clitics (in boldface) in these contexts (both auxiliary and pronominal clitics are second position clitics in SC).

(1) a. Mi/Zašto **smo mu je** predstavili juče
We/why are him.dat her.acc introduced yesterday
'We introduced her to him yesterday.'/ Why did we introduce her to him yesterday?'
b. Ona tvrdi da **smo mu je** mi predstavili juče.
she claims that are him.dat her.acc we introduced yesterday
'She claims that we introduced her to him yesterday.'
c. Predstavili **smo mu je** juče.
introduced are him.dat her.acc yesterday
'We introduced her to him yesterday.' (Serbo-Croatian (SC))

Bošković (2016a) conducts a crosslinguistic study of the availability of second-position clitic systems in an effort to establish the factor that determines the availability of second-position clitic systems. The study examines a wide variety of languages, including Pama-Nyungan, Slavic, Romance, Iranian, and Uto-Aztecan languages. Altogether, fifty-three languages with second position clitic systems are identified. The list is given below:

(2) Second-position clitic languages: Serbo-Croatian, Czech, Slovak, Slovenian, Sorbian, Hucul Ukrainian, Latin, Ancient Greek, Old English, Hittite, Sanskrit, Ossetic, Northern Talysh, Southern Tati, Pashto, Tagalog, Yingkarta, Wajarri, Ngiyamba, Warlpiri, Warumungu, Yir-Yoront, Pitjantjatjara, Nhanda, Gurindji, Djaru, Ngarinyman, Mudburra, Walmajarri, Wergaia, Wembawemba, Madimadi, Wathawurrung, Woiwurrung, Bilinarra, Warnman, Wambaya, Garrwa, Yukulta, Comanche, Chemehuevi, Southern Paiute/Ute, Cupeño, Luiseño, Serrano, Gabrielino, Tubatulabal, Mayo, Yaqui, Pima, Tepehuan, Tohono O'odham/Papago, and Cora.

The list in (2) comprises a rather diverse group of languages. In spite of that diversity, there is one factor that all these languages have in common. In particular, they all lack definite articles, which leads to the generalization in (3).[4]

(3) Second position clitic systems are found only in languages without definite articles.

As an illustration of the relevance of articles to the second-position clitic effect, consider Slavic and Romance language with auxiliary and/or pronominal clitics. Second-position cliticization is a common property of Slavic languages. Bulgarian and Macedonian are glaring exceptions in this respect. Importantly, they are the only two Slavic languages with articles.

[3]True second position clitics are not simply enclitics (see section 2; we are dealing here with the traditional Wackernagel, not Tobler-Mussafia effect). Note that I put aside clitics like Slavic +wh-C enclitic *li* that due to their high base position can end up in second position essentially by accident.

[4]Languages with indefinite but not definite articles are rare. Some of them do have second position clitics. Thus, Slovenian has indefinite, but not definite articles and has second position clitics. This is the reason why (3) is stated in terms of definite articles, not articles in general. However, given the rarity of languages like Slovenian, below for ease of exposition I will often simply use the term article.

Romance shows the same kind of correlation. While Latin lacked articles and had second position clitics, Modern Romance languages have articles and lack second position clitics.[5]

The history of Greek provides a particularly strong confirmation of the generalization in (3). Ancient Greek underwent a change from an article-less to an article language. Thus, while Homeric Greek was an article-less language, Koine Greek was a full-blown article language. Importantly, Taylor (1990) shows that 90% of enclitics in the Homeric period, when Greek did not have articles, were in second position. This second position cliticization system broke down in the later, article stages of Greek. Thus, it was not present in Koine Greek.

Another strong confirmation of (3) is provided by Ossetic, an Iranian language with two distinct main dialects (they are actually barely mutually intelligible), Iron and Digor. They differ regarding articles: Digor has a definite article but Iron doesn't (see Abaev 1964). Significantly, Erschler (2012) notes that Iron and Digor also differ regarding second position cliticization: "Both language varieties possess a large number of pronominal and adverbial enclitics. In Iron, they are obligatorily placed in the (appropriately defined) second position, whereas in Digor their placement is less constrained." As an illustration of second position cliticization in Iron consider multiple wh-fronting. Iron and Digor are multiple wh-fronting languages, where non-D-linked wh-phrases cluster together in front of the verb. Significantly, clitics intervene even between fronted wh-phrases in Iron, but not in Digor, due to the second position requirement.

(4) či=ma=**šən** sə žonə asə fešivad-ɐn?
who=also=DAT.3PL what know.PRS.3SG this youth-DAT
'Who knows what about them, about this youth?' (Erschler 2012:678)

It should be noted that (3) is part of a much broader typological difference between languages with and without articles. Thus, Bošković (2008a, 2012; see also references therein) establishes over 20 crosslinguistic generalizations where languages differ regarding many syntactic and semantic phenomena (e.g. left-branch extraction, superiority effects, clitic doubling, negative raising, scrambling, polysynthesis, the semantics of superlatives, radical pro-drop, sequence of tense) depending on whether or not they have articles. The generalization in (3) should then be considered within this broader typology. Based on these generalizations, Bošković (2008a,2012) argues that there is a fundamental structural difference between languages with articles and languages without articles—in particular, Bošković (2008a,2012) shows that all the differences in question can be reduced to a single factor and deduced in a uniform manner if languages with articles have DP and those without articles lack it.[6] In light of this, (3) can be restated as in (5).

(5) Second position clitic systems are found only in NP languages.

To understand the scope of (5), it is important to clarify what is meant by NP languages. First, what matters here is definite articles, only languages without definite articles lack DP (see fn 4). The term definite article is often used rather loosely, for elements with very different properties. What is meant by *definite article* for the purpose of (3) and other generalizations from Bošković (2012) is the following: the article must be unique in the sense that it has a form distinct from demonstratives and occurs only once per NP. This e.g. makes irrelevant NPs with long-form

[5]Old Spanish is sometimes cited as having second position clitics (see Fontana 1993). It is, however, not an exception to (3), see Wanner (2001).

[6]Note, however, that this does not mean that the nominal domain in languages without articles must lack all functional structure, see Bošković (2012) and Despić (2011).

adjectives in SC, where the relevant elements have been argued to arise through agreement (in fact, Talić 2015 shows that the adjectival endings in question are part of the extended domain of A, not N). Importantly, there is also a semantic requirement. What is considered a definite article for the purpose of the NP/DP generalizations roughly has the meaning of an iota-operator, yielding an element of type e. Given Chierchia's (1998) proposal that type shift from type <e,t> to type e is possible only in the absence a definite article (i.e. only in languages without a definite article), which means that bare NPs can have definite interpretation only in NP languages, what is considered to be a definite article then must be present for definite interpretation in a DP language. In this respect, notice that bare NPs "cats" and "window" can have an e-type interpretation in SC (6a), which in English requires the presence of *the* (6b).

(6) a. Mačke razbiše prozor. b. The cats broke the window.
cats broke window
'The cats broke the window.'

From this perspective, consider the Pama-Nyungan languages from the list of second-position clitic languages in (2), namely Yingkarta, Wajarri, Ngiyamba, Warlpiri, Warumungu, Bilinarra, Warnman, Nhanda, Pitjantjatjara, Yir-Yoront, Gurindji, Djaru, Ngarinyman, Mudburra, Walmajarri, Wembawemba, Wergaia, Madimadi, Wathawurrung, and Woiwurrung. They all lack definite articles and allow NPs without demonstratives (or obviously articles) to receive an e-type interpretation. (7) illustrates this with examples where bare NPs receive an e-type reading.

(7) a. ayu njinanja parnangka
child-ABS sit-PST ground-LOC
'The child sat on the ground' (Wajarri, Douglas 1981:230)
b. nyarlu-nggu yawarda nha-'i
woman-ERG kangaroo.ABS see-PAST
'The woman saw the kangaroo.' (Nhanda, Blevins 2001:48)
c. Billy-lu tjitji nya-ngu
Billy-erg child see-past
'Billy saw the child.' (Pitjantjatjara, Aissen 2003:452)
d. Kuyi-ϕ ma-rna- ϕ-rla- ϕ yinya parri- ϕ.
meat-NOM MR1-1S-3O-sgO-sgS gave boy-NOM
'I gave meat to the boy.' (Walmajarri, Hudson 1978:222)

WALS actually gives Yingkarta as a language with a definite affix (*–ja*), based on Dench (1998). However, this is incorrect (see also Austin 1995,2006 for a different treatment of Mantharta *–thu*, which Dench cites as a cognate of *–ja*). Thus, *-ja* is not required for definite interpretation: e.g. it is not present in (8). Consider also (9): *–ja* can be used with pronouns (9a-b), adverbs (9c), adverbial wh-phrases (9d), and verbs (9e-g), which also indicates that it is not a definite article.

(8) Thuthu-ngku jarti-lanyi mantu.
dog-erg eat-pres meat
'The dog is eating the meat.' (Dench 1998:22)
(9) a. Kurra-rtu mangu nyina-angkulpa nganhu-**ja**.
not-1plS good sit-IMPF 1plNOM-DEF
'We're not good (well, happy), staying here.' (Dench 1998:40)

b. Kurra ngaka-ka ngathangu …, ngathangu-**ja**!
not touch-IMP 1sgGEN 1sgGEN-DEF
'Don't touch my…, that's mine!' (Dench 1998:48)

c. Wanthapara-rtu nyina-angku, mangu-**ja**?
how-1plS sit-IMPF good-DEF
'How will we be (after this wind stops), good?' (Dench 1998:44)

d. Nhalaparta-**ja**? Warlamayi-**ja**, kurra kuwarti-**ja**.
when-DEF later-DEF not now-DEF
'When (are you going)? Later, not now.' (Dench 1998:70)

f. Ngurlupiya-nyi-**ja** maru-ngka yana-wara.
fear-PRES-DEF night-LOC go-PURP
'(They're) frightened to go at night.' (JD) (Dench 1998:30)

f. Kartanha-**ja** kulyirri-nyi-**ja** pukata-la pilipinya-tha, mayu.
that-DEF swim-PRES-DEF (river)-LOC run-RELds child
'The children are swimming in the river which (while it) is flowing.' (Dench 1998:72)

g, Wanthawu yana-npa-**ja**? Marlu yana-npa nhanya-nhuru ngatha-rna.
where go-IMPF-DEF kangaroo go-IMPF see-RELss 1sgNOM-1sgS
'Where are (you) going? I'm going out looking for kangaroos.' (Dench 1998:72)

Consider also the Uto-Aztecan (UA) languages from (2): Comanche, Chemehuevi, Southern Paiute/Ute (Numic languages); Cupeño, Luiseño, Serrano, Gabrielino (Takic languages); Tubatulabal; Mayo, Tarahumara, Yaqui (Taracahitic languages); Pima, Tepehuan, Tohono O'odham/Papago (Tepiman languaguages), and Cora (Corachol languages). For illustration, consider Comanche, which has second position subject clitics and lacks articles. The former is illustrated by (10)-(12). The subject in these examples is a clitic located in the second position, the verb can either precede it or follow it. Furthermore, the clitic does not have to be V-adjacent (see (11)), and either one word or a full phrase (VP in (12b)) can precede it, as (12) shows.[7]

(10) a. tɨasi-se **nɨ** tɨhka
again-DM I eat
'Again I ate.'

b. * **nɨ** tiɨka
I eat
'I ate.'

c. tɨhka **nɨ**
eat I (McDaniels 2008)

(11) i-*H/pu*=**u** tɨhɨya katɨ-miʔa-tɨ=

[7]Comanche also has object clitics (underlined below). However, they occur in the first position of the verbal complex, and do not cluster with subject clitics. ((ii) is repeated from (12b).)

(i) nihi-tɨɨtuʔa
us=DU=EXCL help
'Help us!'

(ii) tahi-taʔo-ʔai-kɨ=-i **nɨɨ**
us=DU=INCL-pound=meat=make-BEN=CMPL:ASP I
'I made pound of meat for the two of us.' (Charney 1993:101)

here-pu=he horse sit(SG SUBJ)-go-GEN:ASP
'He's riding along on a horse, going this way. Or he's going this way, riding along on a horse.' (Charney 1993:83)

(12) a. tɨhka **nɨ**
eat I
'I ate.' (McDaniels 2008)

b. tahi-taʔo-ʔai-kɨ=-i **nɨɨ**
us=DU=INCL-pound=meat=make-BEN=CMPL:ASP I
'I made pound of meat for the two of us.'

c. ke **nɨɨ** toHtin-kaHtu=miʔa-wai-tɬ
NEG I name-toward go-wai-GEN:ASP
'I will not go to Lawton.' (Charney 1993:147)

Regarding the NP/DP typology, Comanche clearly does not have a definite article. Other UA languages from (3) are also classified as NP languages in Bošković's (2012) typology though some of them are sometimes cited as having articles, namely, Southern Paiute, Cupeño, Tohono O'odham, Yaqui, Cora. However, these languages turn out not to have articles under the criteria that are relevant to the NP/DP generalizations. Thus, there is no form that only functions as a definite article in Southern Paiute. The form that is sometimes considered to be a definite article, *-u'*, is actually a demonstrative (Givón 2011). It is also not obligatory for definite interpretation (Givón 2011, Shopen 2007). The same holds for Cupeño *pe'* (Hill 2005) and Yaqui *u*, which is not needed for definite interpretation and is also a demonstrative (Guerrero 2004:20, Guerrero & Belloro 2010:118,121, Dedrick & Casad 1999:68,193). As for Tohono O'odham, the form that is sometimes considered a definite article, *g*, can be apparently used either as definite or indefinite "article", can be used without a noun, and is not required for definite interpretation (Zepeda 1983). It is also not distinct from a demonstrative (Mason 1950). The same holds for Cora, which I will use to illustrate these issues since WALS reports it as having definite articles. The forms that are sometimes translated as definite articles (Casad 1984), like the word glossed as ART, are actually demonstratives. They also do not obligatorily yield definite interpretation (compare the two ARTs in (13)), and are in fact not required for definite interpretation (14).

(13) an-ká-cu'u-ta'i-ri-'i ɨ itʸa'ɨh ɨ táih kɨme'e
on.top-down-break-burn-make-STAT ART spoon ART fire with
'The edge of the head of the spoon is burned off by a fire.' (Casad 1984:191)

(14) ka-nú=r-áh-ča'ɨ sápun
NEG-I=DISTR:SG-(?)-have soap
'I don't have the soap.' (Casad 1984: 188)

The 53 languages with second position clitics from (2) then all conform with the generalizations in (3)/(5). The lack of definite articles/DP is thus crucial to the availability of the second position clitic system, which is incompatible with the presence of definite articles/DP in a language.

On the other hand, this is quite clearly not the case with V-2. In fact, prototypical V-2 languages like German have definite articles (and DP). That the crucial prerequisite for the availability of the second-position clitic system, which is structural in nature, is not found with V-2 in itself argues against a structural unification of the two phenomena.

I will not be concerned here with the deduction of (5), referring the reader to Bošković (2016a) for that. I merely note that the generalization can be taken to argue against Roberts's (2010) account of second position clitics, where second position clitics (but not verbal clitics) are DPs. However, while the generalization argues against the details of Roberts's account, it actually does not argue against its spirit. Roberts's account is based on a difference in the category (i.e. the amount of structure projected) between clitics in second-position and verbal clitic languages. The most straightforward interpretation of (5) is that the category indeed matters here, which conforms with the spirit of Roberts's analysis. In fact, the account of (5) in Bošković (2016a) (the work actually gives two alternative accounts) crucially capitalizes on a categorial difference between clitics in second-position and verbal-clitic languages.

In the next section I discuss additional factors that militate against structural unification of clitic second and V-2, also discussing the possibility that the two may be unified prosodically.

2. Clitic second is not structural in nature

Most accounts that unify clitic second and V-2 structurally essentially extend the account of the latter to the former. This requires clitics in second-position clitic languages all to occur in the same head position which is furthermore located very high in the structure. However, there is a great deal of evidence that this is not the case, as will be shown below with respect to SC, a language where the second position clitic effect has probably been most extensively studied.

For one thing, there is a great deal of evidence that although all SC clitics are subject to the second position requirement, they do not all occur in the same structural position. Thus, as shown in Bošković (2001), Stjepanović (1998), Franks (2010), Franks and King (2000), and Wilder and Ćavar (1997) (see Bošković 2001 for a summary; for discussion of some of the tests below see also Roberts 2010), clitic sequences can be split in SC by a variety of operations that otherwise cannot split complex heads (i.e. head-adjoined structures). Thus, in (15) the clitic sequence is split by ellipsis, and in (16) by VP-fronting.

(15) a. Mi **smo mu ga** dali, a i vi **ste** (?**mu)** (takodje).
we are him.dat it.acc given and also you are him.dat too
'We gave it to him, and you did too.'
b. *Mi **smo mu ga** dali, a i vi **ste ga** (takodje). (Stjepanović 1998)

(16) [Dali **ga** Mariji] **su** Ivan i Stipe.
given it.acc Marija.dat are Ivan and Stipe
'Give it to Marija, Ivan and Stipe did.' (Bošković 2001)

In (17) the clitics are split through coordination.

(17) Ivan **je** [$_{VP}$ kupio auto] i [$_{VP}$ razbio **ga**]
Ivan is bought car and ruined it
'Ivan bought a car and ruined it.' (Wilder and Ćavar 1997)

(16) shows that it is possible to climb only one pronominal clitic. [8]

[8]The contrast in (18c-d) is an intervention effect (see Stjepanović 1998): the dative being higher than the accusative, if only one clitic climbs it must be the dative. This is confirmed by the ellipsis contrast in (15): the dative is in a higher projection than the accusative, hence it is not possible to elide the dative while leaving the accusative clitic unelided. Further confirmation is provided by the lack of ambiguity in (19), with accusative/genitive clitics (the *of*-argument corresponds to the genitive, see Franks 2010).

(18) a. Marija želi da **mu** **ga** predstavi.
Marija wants that him.dat him.acc introduces
'Marija wants to introduce him to him.'
b. ?Marija **mu ga** želi da predstavi.
c. ?Marija **mu** želi da **ga** predstavi.
d. *Marija **ga** želi da **mu** predstavi. (Stjepanović 1998)

(19) shows that even clause-mate clitics can be separated as long as the intervening material is a full intonational phrase so that each clitic is second in its intonational phrase (this is actually the correct generalization regarding the clitic second effect, see below). Such examples quite conclusively show that clause-mate clitics are not all located in the same position in SC.

(19) a. ?Oni **su**, kao što **sam vam** rekla, predstavili **se** Petru.
they are as am you.dat said introduced self.acc Petar.dat
'They, as I told you, introduced themselves to Petar.' (Bošković 2001)
b. Ti **si me**, kao što **sam** već rekla, lišio **ih** juče.
you are me as am already said deprive them yesterday
'You, as I already said, deprived me of them.'
'*You, as I already said, deprived them of me.' (Franks 2010)

Adverb placement is also relevant: (20a) shows that the auxiliary and the ethical dative clitic can occur above sentential adverbs, which is not possible with argumental dative (and accusative) clitics (20b), indicating that they do not all occur in the same position.

(20) a. Oni **su ti** pravilno odgovorili Mileni. (ti=ethical dative)
they are you.dat correctly answered Milena.dat
'They did the right thing in answering Milena.'
'They gave Milena a correct answer.'
b. Oni **su joj** pravilno odgovorili.
they are her.dat correctly answered
'*They did the right thing in answering her.'
'They gave her a correct answer.' (Bošković 2001)

Talić (in press) discusses an accent shift clitics trigger in a dialect spoken in central Bosnia and Herzegovina. She shows that there is a structural requirement for the shift, where the clitic must be located in the same projection as the host to which the clitic spreads a high tone. Consider (21), which only gives the tones (in capitals) that arise as a result of high tone spread from the enclitic (in bold) to its host. Given the requirement on accent shift Talić establishes (the clitic and the host must be in the same projection), (21) indicates that the interrogative complementizer enclitic *li* and the auxiliary enclitic in questions are located within the CP projection, hence they trigger high tone spread (cf. (21a) for the former and (21b) for the latter), but auxiliary clitics in declarative clauses and pronominal clitics more generally are not located in the CP projection, hence they do not trigger high tone spread (cf. (21d) for the former and (21c) for the latter).

(21) a. ŠtÁ **li** hoće?
what Q wants
'I wonder what he wants.'

b. ŠtÁ **su** rekli?
what are said
'What did they say?'
c. Šta **mu** govori?
what him.dat says
'What is (s)he telling him?"
d. da **su** **mu** govorili
that are him.dat said
'that they were telling him' (Talić in press)

The above behavior of SC clitics is particularly glaring in comparison to Bulgarian and Macedonian, related languages whose clitics are verbal clitics. None of the operations that can split a clitic cluster in SC are possible in Bulgarian/Macedonian (see Bošković 2001), where the clitic cluster is inseparable (it also cannot be separated from the verb by non-clitics). Some illustrations are provided by Bulgarian (22) (see Bošković 2001 for additional data).

(22) a. *Nie **sme mu** **go** dali, i vie **ste** ~~**mu** **go** dali~~ (sŭšto).
we are him.dat it.acc given and you are him.dat it.acc given too
'We gave it to him, and you did too.'
b. *Nie **sme mu go** dali, i vie **ste mu** ~~**go** dali~~ (sŭšto).
c. *Te **sa**, kakto **ti** kazax, predstavili **se** na Petŭr.
they are as you.dat told introduced self.acc to Peter
'They have, as I told you, introduced themselves to Peter.' (Bošković 2001)

Bošković (2001) takes these differences to indicate that SC clitics are located in separate projections--they do not all cluster in the same head position, while Bulgarian clitics do cluster in the same head position. As a result, SC clitics can be split, while Bulgarian clitics cannot be.

What is important for us is that the above data show that SC clitics do not occur in the same position. They can also occur rather low in the structure, as in (15)-(16), where clitics are elided under VP ellipsis and fronted under VP fronting. In (17), a clitic is part of a VP-coordination. The clitics *se/ih* are also quite clearly rather low in the structure in (19). These data show that SC clitics are located in separate projections, as a result of which they can be separated by different operations. Bošković (2004a) gives (23) as the structural representation of SC clitics; I add here (24) to indicate that auxiliary clitics can be in C in questions, as Talić's (in press) accent shift data show. (The interrogative complementizer clitic *li*, which is not represented below, occurs in C; note that the exact labels are not important here, what is important is the relative height, as well as the placement of clitics in separate projections, which is confirmed by the above data).[9]

(23) [$_{CP}$ [$_{AgrsP}$ aux [$_{\Delta P}$ ethical dative [$_{AgrioP}$ dative [$_{AgrdoP}$ accusative [$_{VP}$ (declaratives)
(24) [$_{CP}$ aux [$_{AgrsP}$ [$_{\Delta P}$ ethical dative [$_{AgrioP}$ dative [$_{AgrdoP}$ accusative [$_{VP}$ (interrogatives)

Crucially, <u>all</u> the clitics in question are subject to the second position clitic effect, even those that occur low in the structure and those that occur in embedded clauses. This quite strongly argues against a unification of the clitic second effect with the V-2 effect (given that the verb is

[9] For detailed discussion of the structural position of SC clitics, the movements they undergo, and ways of deriving all word order possibilities in constructions with clitics, see Bošković (2001).

located high in the structure in V-2 and that V-2 is characterized by a significant difference in productivity between matrix and embedded clauses, see below).

In fact, the facts discussed above also argue against a structural account of the clitic second effect. As discussed in detail in Bošković (2001) and Radanović-Kocić (1988), the correct statement of the clitic second effect in SC is actually not syntactic, but prosodic. The above data show that clitics do not have to be second within their clause, consider e.g. *ih* in (19b) in this respect. Rather, they have to be second within their intonational phrase: while *ih* in (19b) is clearly not located in the second position of its clause it is located in the second position of its intonational phrase. (What is important here is that elements in different structural positions can still be in the same position linearly in their intonational phrase.)

(25) SC clitics occur in the second position of their intonational phrase.

In fact, SC second position clitics provide a textbook case of intonational phrasing. Nespor & Vogel (1986), Selkirk (1986), Hayes (1989), a.o., have proposed a theory of prosodic structure that is determined by the syntactic structure though it does not completely correspond to it. The units of this prosodic structure are: prosodic word, phonological phrase, intonational phrase (I-phrase), and utterance. The unit that is important for us is the I-phrase. It is standardly assumed that if not interrupted by a special element that forms a separate intonational phrase, each clause is mapped to a single I-phrase, the left edge of a CP corresponding to an I-phrase boundary. Certain elements, such as appositives, parentheticals, and heavy fronted constituents, are special in that they form separate I-phrases, evidence for which is provided by the fact that they are followed by pauses. It turns out that exactly those elements that are parsed as separate I-phrases are also able to delay clitic placement in SC, placing clitics further from the second position of their clause. This was already illustrated by (19) with parentheticals: the parenthetical in (19) brings in an additional I-phrase, as a result of which each clitic in (19) is located in the second position of its I-phrase (# indicates the relevant I-phrase boundaries; notice also that given (25), clause-mate clitics can only be split if there is more than one intonational phrase in the clause).[10]

(26) #Ti **si** **me**, # kao što **sam** već rekla, #lišio **ih** juče.
you are me as am already said deprive them yesterday
'You, as I already said, deprived me of them.'

Additional illustrations are given below: the delayer, which brings in an additional I-phrase, is a heavy fronted constituent in (27a), a parenthetical in (27b), and an appositive relative in (27c); (27d) shows the clitic can even occur in the fourth position as long as it is located in the second position of its I-phrase. In fact, the clitics are located in the second position of their I-phrase in all the examples given above (note that the conjunct in (17) is parsed as a separate I-phrase).

(27) a. Sa Petrom Petrovićem #srela **se** samo Milena.
with Peter Petrović met self only Milena
'With Peter Petrović, only Milena met.'

[10] The presence of the parenthetical is crucial in (26). Without it, (26) is unacceptable (the issue with (i) is that, in contrast to (26), *ih* is not second within its intonational phrase in (i)).
(i) *Ti **si** **me** lišio **ih** juče.
you are me deprive them yesterday

b. Znači da, kao što rekoh, #oni **će** sutra doći.
means that as said they will tomorrow arrive
'It means that, as I said, they will arrive tomorrow.'

c. Ja, tvoja mama, #obećala **sam ti** sladoled.
I your mother promised am you ice cream
'I, your mother, promised you an ice cream.'

d. Prije nekoliko godina #sa Petrom Petrovićem #srela **se** samo Milena.
before several years with Peter Petrović met refl only Milena
'A few years ago, with Peter Petrović, only Milena met.' (Bošković 2001)

The contrasts below are also informative: in the acceptable cases the delayer is one of the elements parsed as a separate I-phrase, which is not the case in the unacceptable cases (compare the heaviness of the delayer in (28a) and (29a) with (28b) and (29b); note that (31a) and (31b) and (30a) and (30b) differ in the presence of a parenthetical/appositive. Note also that a D-linked reading does not improve (29a)--phonological heaviness, not D-linking, is crucial here).

(28) a. *Ona tvrdi da Ivanu prodali **su** knjigu.
she claims that Ivan.dat sold are book
'She claims that to Ivan, they sold the book.'

b. Ona tvrdi da tvome najboljem prijatelju prodali **su** knjigu.
she claims that your best friend.dat sold are book

(29) a. *Ko koga **je** poljubio?
who whom is kissed
'Who kissed whom?'

b. ?Koji čovjek, koju **je** knjigu kupio?
which man which is book bought
'Which man bought which book?'

(30) a. *Ja obećala **sam ti** sladoled.
I promised am you ice cream
'I promised you an ice cream.'

b. Ja, tvoja mama, obećala **sam ti** sladoled.
I your mother promised am you ice cream
'I, your mother, promised you an ice cream.'

(31) a. *Znači da oni **će** sutra doći.
means that they will tomorrow arrive

b. Znači da, kao što rekoh, oni **će** sutra doći.
means that, as said, they will tomorrow arrive
'It means that, as I said, they will arrive tomorrow.'

These data show there is no unifying syntactic requirement that clitics in SC would be subject to which would force them all to move to the same position. Various aux and pronominal clitics have their own independent requirements, they undergo different movements in the syntax to satisfy them, as a result of which they end up in different projections (see fn 9). The clitic second effect is a prosodic requirement which is enforced through a filtering effect of PF on the syntax. Constructions where the syntax places clitics in positions where they cannot satisfy (25) are filtered out in PF, those where the syntax places them in positions where they can satisfy it

pass through PF unharmed. The syntax then does not need to know anything about the prosodic requirement in question, it does its job without paying any attention to it. What is special about clitic second is prosodic in nature. In fact, we have seen above that clitics must be second within their intonational phrase, not their clause; intonational phrase-mate clitics must cluster together (this is the only way for all of them to satisfy (25)), clause-mate clitics need not cluster together.

3. Clitic second and V-2 in prosody

The above facts indicate that the second-position clitic effect is fundamentally different from V-2; it is prosodic, not structural in nature. SC clitics can be placed in the third, even fourth position of their clause as long as they are second within their I-phrase. They are also not located in the same position; even clause-mate clitics can be split as long as they end up being second in their I-phrase. Should this be taken to indicate that the clitic second effect is completely different from the V-2 effect? This is the case structurally, but may not necessarily be the case prosodically: there may be a remnant of the prosodic second position effect with V-2 in Germanic. Thus, while the finite verb must appear in the second position of matrix clauses in most Germanic languages (32), there are well-known cases where verb placement is delayed.

(32) a. Das Buch hat die Frau gelesen. b. *Das Buch die Frau hat gelesen.
the book has the woman read
'The woman has read the book.' (German)

Importantly, at least in some cases of this type, while the verb is third in its own clause it is still second in its I-phrase. This is the case with (33), where in spite of being third in its clause, the verb is still second within its I-phrase, given that the sentence-initial constituent is parsed as a separate I-phrase, as indicated by the fact that it is followed by a pause. This is the same prosodic pattern as the one found with clitic second.

(33) Wie reich sie auch sei,# ich heiratete sie nicht.
however rich she too may-be I would-marry her not
'However rich she may be, I would not marry her.' (Boeckx 1998)

Furthermore, it is not possible to have a pause in front of the verb in V-2 constructions. This holds even for cases like (34). While English *however* is typically followed by a pause, this is not the case with *emellertid* in (34), which cannot be followed by a pause (A. Holmberg, p.c.).

(34) Emellertid kan du inte använda en DVD-RAM skiva som startskiva.
however can you not use a DVD-RAM disc as start-up disc
'However, you cannot use a DVD-RAM disc as a start-up disc.' (Swedish, Holmberg 2015)

Returning to V-3, it is often assumed that whether a phrase can be ignored for V-2, in effect delaying V-placement beyond 2nd position, corresponds to whether it has moved to the left periphery or is base-generated there, where only the latter is ignored for V-2 (see Poletto 2002, Beninca & Poletto 2004, Holmberg 2015[11]), though in practice it has not been easy to accommodate all data this way. From the current perspective, the issue can be recast differently, namely as whether or not the relevant phrase forms a separate I-phrase. If it does, as in (33), it would not count for the second position effect since although located third in its clause, the verb in (33) is still second in its I-phrase (*Wie reich sie auch sei* forms a separate I-phrase).

[11] Note that Holmberg (2015) argues that *emellertid* in (34) moves to SpecCP from a lower position.

Many cases of delayed V-placement in V-2 languages seem to fit this pattern, e.g. (35)-(38). A note is however in order regarding Swedish (36). Anders Holmberg (p.c.) observes that in spite of the commas following each adverbial in (36), the prosodic relationship between the adverbials themselves, and the last adverbial and the verb, is different. The adverbials are separated by a comma break from each other, indicating that an adverbial that is followed by an adverbial forms an I-phrase in (36). On the other hand, while due to the high pitch at the end of the adverbial there can be a sharp drop between the final adverbial and the verb, a comma break is not possible here. While additional testing is needed, it appears that the most natural way of capturing the difference in the prosodic relationship between the adverbials themselves and the adverbial and the verb is that there is an I-phrase boundary after the adverbials that are followed by an adverbial and a phonological phrase boundary after the adverbial that is followed by the verb. Importantly, this makes *mötte* second in its I-phrase in (36).

(35) rameshan kyaa dyutnay tse
Ramesh-E what gave you-D
'As for Ramesh, what is it that he gave you?' (Kashmiri, Bhatt 1999)

(36) I går, vid femtiden, utanför stationen, när jag kom från jobbet, mötte jag en gammal skolkamrat.
yesterday at about.five outside the.station, when I came from work, met I an old schoolmate (Swedish, Holmberg 2015)

(37) Peter, ich werde ihn Morgen sehen.
Peter I will him tomorrow see (German, Holmberg 2015)

(38) a. Die man, die ken ik niet.
that man him know I not (Dutch, Holmberg 2015)
b. För två veckor sen, då köpte Johan sin första bil.
for two weeks ago then bought Johan his first car
'Two weeks ago Johan bought his new car.' (Swedish, Holmberg 2015)

As for the syntax of such cases, as Holmberg (2015) notes, while the delayer in the hanging topic left dislocation (HTLD) case in (37) is plausibly base-generated in the left periphery (cf. the resumptive pronoun in situ), as would be expected under the approach where this determines whether an element is ignored for V-2, it is far from clear that the delayer in (35) and the contrastive left dislocation construction (CLD) case in (38) can be analyzed this way. (See e.g. Bhatt 1999 regarding (35). Note also that Breton allows elements that are base-generated in the left periphery to satisfy V-2, see Jouitteau 2008.)

On the other hand, the prosodic approach may be able to unify all these cases, also capturing the prosodic properties of the constructions under consideration. (The base-generation/ movement distinction regarding the delayers noted above can be reflected in prosodic phrasing, but it need not fully correspond to it.) Note that under the prosodic view, the delayers need not be necessarily parsed as separate I-phrases; see in fact (45)/(48) below. In this respect, it should be noted that while a pause is obligatory following the delayer in HTLD, a pause following the delayer in CLD is optional in Swedish (A. Holmberg, p.c.). When no pause is present, CLD example (38b) may be analyzable on a par with (48) below, with what precedes the verb forming a prosodic constituent.[12] In fact, A. Holmberg (p.c.) notes that the presence vs absence of a

[12]In this respect, K. Djärv (p.c.) notes that for her, (i) is acceptable with no pause between the adverbials (which can be taken to indicate that the adverbials form a prosodic constituent here).

pause may indicate different structures. With no pause, the delayer and the pronoun may then be treated as forming a syntactic constituent.(Resumptive pronoun constructions and clitic doubling constructions have in fact often been argued to involve base-generation of the relevant elements as a single constituent (see Boeckx 2003 and references therein), and de Vries 2009, van Haaften, Smits and Vat 1983, and Grewendorf 2002 in fact propose such analyses for CLD in Dutch and German.) This constituent is then split under movement of the non-pronominal part when there is a pause following it. (Grewendorf 2002 in fact argues for such movement, which under the proposal made here would take place optionally, with the movement reflected in the prosody).

Pursuing clitic second/V-2 similarities, recall also that there is no structurally fixed second position for clitics in SC. This may also at least to some extent hold for V-2. Thus, Travis (1984, 1994), Zwart (1993), Koster (1994), and Branigan (1996) argue that the verb in V-2 clauses is not always located in C (in particular, they argue that it is lower in subject V-2 clauses (for relevant discussion, see also Biberauer 2002; Holmberg 2015 and Wolfe 2015, among others, suggests that there may even be variation among V-2 languages regarding the exact position of the verb in non-subject V-2 clauses in that the verb is not always located in the same position in the left periphery).

I take these similarities between Slavic clitic second and verb second in Germanic to indicate that a unified analysis for the two is warranted at least to some extent. However, in light of the above discussion the two should be unified prosodically, not structurally.This means that instead of extending the account of V-2 to clitic second, which would involve structural unification, we should extend the account of clitic second to V-2. What they would then have in common is the prosodic requirement that the clitics and the verb in the constructions in question be second within their I-phrase; the syntax of the two would be different, which is indeed the case, as we have seen above. It is worth noting here that Bošković (2001) breaks (25) into two requirements, given in (39). (39a) requires a phonologically overt element in front of the clitic, and (39b) requires left adjacency to an I-phrase boundary. As discussed in Bošković (2001), the seemingly conflicting requirements can be satisfied by having the clitic encliticize to an element that is left-adjacent to an I-phrase boundary. In effect, (39) then forces SC clitics to be second in their I-phrase. The account would then extend to V in Germanic V-2 in the same way.[13]

(39) a. Suffix
b. #_

Subjecting the verb in Germanic to the second position clitic requirement is not as strange as it may appear at first sight when considered from a historical perspective. It is well-known that in early Indo-European, finite verbs in main clauses were in fact accentless second position elements (see Wackernagel 1892). What we may be dealing with in the case of the Germanic V-2 effect may then simply be a remnant of the more general clitic second requirement on verbs in

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(i) igår vid femtiden mötte jag en gammal skolkamrat.
yesterday at about.five met I an old schoolmate (Swedish)

[13]Regarding contexts such as yes-no questions, where the verb in Germanic main clauses is sentence-initial, we can assume that the requirement in (39a) is suppressed in such contexts (after all, the Germanic verb cannot be subject to the requirements in question in all contexts); in other words, it would be similar to clitics in Slovenian, which either enclitize to the initial element of their I-phrase, or they are themselves initial in their I-phrase (as discussed in Bošković 2001; see, however, below for a different perspective on this issue).

early Indo-European (though the effect is no longer confined to accentless verbs; see also the discussion of Northern Norwegian below).[14]

Returning to the early Indo-European V-2 that held for accentless verbs, from that perspective (39a), simply an enclitic requirement, is not surprising (given that the relevant elements were accentless). As for why adjacency to an I-phrase boundary (i.e. (39b)) matters, there is often an adjacency effect with clitics. Often it's adjacency to the verb, which obviously cannot kick in when the verb itself is the relevant unstressed element, as in the original V-2. However, note that we are dealing here with an exceptional prosodic process, where the lexical verb is distressed in certain contexts. Exceptional processes of this kind often occur at I-phrase boundaries (there are also opposite effects, e.g. Japanese case-markers can be stranded under NP-ellipsis, getting exceptionally stressed in this case, only when adjacent to an I-phrase boundary (see Shibata 2014, Bošković 2015a). I speculate that this is the reason why the prosodic constituent that includes the distressed verb needed to be adjacent to an I-phrase boundary.

Interestingly, the Japanese case-drop, illustrated by (40), where the case particle is exceptionally stressed, is a main clause phenomenon, which is of course reminiscent of V-2.[15]

(40) Naomi-mo moo tsuki-masi-ta ka? ~~Naomi-~~GA mada tsuki-mase-n
Naomi-also already arrive-POL-PAST Q Naomi-NOM yet arrive-POL-NEG
'Has Naomi already arrived? She has not arrived yet.' (Otaki 2011)

Bošković (2015a) gives a prosodic account where what matters here is that the I-phrase boundary is stronger with main clauses in that it also corresponds to an utterance boundary (the relevant boundary is both an I-phrase boundary and an utterance boundary here; recall that utterance is the highest unit in the prosodic hierarchy). Bošković (2015a) also observes certain differences in SC clitic placement which are sensitive to the utterance+I-phrase boundary vs pure I-phrase boundary distinction. The gist of the difference is that the host of an enclitic with the latter is a single prosodic word (cf. (42b) vs (42a) and (41c) vs (41d)), while with the former it can be either a phonological phrase or a single prosodic word (cf. (41a-b)). (‖ indicates an utterance+I-phrase boundary; only the prosodic boundaries preceding the clitic host are given below.)

(41) a. ‖Koji **je** čovjek koju knjigu kupio?
which is man which book bought
'Which man bought which book?'
b. ‖Koji čovjek **je** koju knjigu kupio?
c. ??Koji čovjek #koju knjigu **je** kupio?
d. Koji čovjek #koju **je** knjigu kupio?

(42) a. ...da u velikoj sobi #taj **je** čovjek poljubio Mariju
that in big room that is man kissed Marija
'that in the big room, that man kissed Marija.'
b. ??...da u velikoj sobi #taj čovjek **je** poljubio Mariju (Bošković 2015a)

[14]Wackernagel in fact suggested that finite verb cliticization led to the development of verb second (where verb second began with mono and disyllabic verbs, getting extended to longer forms); for relevant discussion see also Hock 1991, Anderson 1993, Kuhn 1933, Suzuki 2008, among others). Wackernagel also traced back modern German V-2 to Proto-Indo-European, where finite verbs cliticized to the clause-initial word in main clauses (but see Kiparsky 1995 for a different perspective).

[15]Note in this respect that the early V-2, where the verb was exceptionally distressed, was in fact confined to main clauses (see Wackernagel 1892, Kuhn 1933).

Applying this to V-2, as a result, the V-2 requirement is more difficult to satisfy in embedded clauses, which form separate I-phrases hence their edge corresponds to a pure I-phrase boundary (the I-phrase boundary here is not an utterance boundary), since what typically ends up satisfying V-2 is movement to SpecCP, which is a phrasal movement that often affects phonological phrases with more than one prosodic word. The prosodic approach then may also enable us to capture the matrix-embedded clause asymmetry regarding the V-2 effect. Under this analysis, cases where embedded V-2 is found are more likely to involve grammaticalization of the prosodic second effect (see below).[16]

Returning to modern Germanic, there actually is a clear case where the V-2 effect in Germanic is indeed phonological in nature, which involves V-2 in Northern Norwegian (NN), discussed by Rice and Svenonius (1998) (see also Westergaard 2009).[17] NN is a V-2 language.

(43) Korsen kom ho hit?
how came she here
'How did she get here?' (Rice and Svenonius 1998)

However, Rice & Svenonius note an additional requirement on V-2 in NN: what precedes the verb must be a phonological phrase, which minimally contains one foot (two syllables). The requirement is satisfied in (43) but not (44), where the wh-phrase is too "light" phonologically.

(44) *Kor kom du fra?
where came you from
'Where did you come from?' (Rice and Svenonius 1998)

(44) can be saved by placing the verb in the third position, following the subject.

(45) Kor du kom fra? (Rice and Svenonius 1998)

These data indicate that the NN V-2 effect is phonological in nature. From the current perspective, the requirement in (39a) has to be a bit more specific in NN. It doesn't suffice to simply put a phonologically realized element in front of the V; the 'host' (i.e. the element in question) must be a phonological phrase. While this captures (43)-(45), a question still arises regarding how (45) is derived. Bošković (2001:174-176) gives an account of (45) based on the approach to the pronunciation of copies of non-trivial chains proposed in Franks (2010), argued for by many authors. Under that approach, the highest copy of a chain is pronounced in PF unless that would lead to a PF violation. If the violation can be voided by pronouncing a lower copy, a lower copy is pronounced.[18] (45) is then derived as follows. As is usually the case, the

[16] Alternatively, the prosodic restriction from (41)-(42) would exceptionally not be at work in that context. Note, however, that the grammaticalization process discussed below would actually void the prosodic effect from (41)-(42).

[17] The following discussion focuses on the dialect described by Rice and Svenonius; regarding relevant variation within Norwegian, see Vangsnes et al 2016 and fn 19.

[18] There are many cases of lower copy pronunciation motivated by PF considerations. Perhaps the most dramatic one is the multiple wh-fronting case noted in Bošković (2002a) (see (i); word order possibilities in second position clitic constructions in SC are in fact heavily affected by this, see Bošković 2001).

(i) a. Cine ce precede? b. *Cine precede ce?
who what precedes 'Who precedes what?'
c. Ce precede ce? d. *Ce ce precede?
what precedes what (Romanian)

verb in (45) moves to C, leaving a copy in I. If the highest copy of the verb is pronounced in PF, a PF violation occurs. The violation is avoided by pronouncing a lower copy of the verb.[19]

(46) [$_{CP}$ Kor ~~kom~~ [$_{IP}$ du kom fra]]

Notice that (47a) is then ruled out because, in contrast to (46), in (47a) there is no reason to pronounce the verb in a lower position (cf. the structure in (47b)).[20]

(47) a. *Korsen ho kom hit? b. [$_{CP}$ Korsen kom [$_{IP}$ ho kom hit]]
how she came here
'How did she get here?' (Rice and Svenonius 1998)

At any rate, Northern Norwegian shows a clear PF effect associated with V-2.

Recall that examples where the delayer of verb placement is parsed as a separate I-phrase (see (33)-(38)) can be easily accommodated under the prosodic approach. The discussion of NN suggests that in some cases even phonologically light elements may have a delaying effect. In fact, this could happen even in a language without the NN one-foot-requirement. All that is needed is that the delayer is parsed into the same phonological phrase as the element that immediately precedes the verb (as discussed in Bošković 2001, the element that precedes a second position clitic within its I-phrase must be a prosodic constituent). It may then be possible to accommodate even light delayer cases like Danish (48a) and Swedish (48b) if the question particle *mon* and *han* in (48a), and *bara* and *han* in (48b), are parsed as a single phonological

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Romanian is a multiple wh-fronting language that fronts all wh-phrases (ia-b). An exception occurs when the fronting would result in a sequence of homophonous wh-phrases (ic-d). Bošković (2002a) argues for the following account of (ic). Like all wh-phrases in Romanian, the second wh-phrase in (ic) must be fronted. Many languages have PF constraints against sequences of homophonous elements. This is what is at work in (id), which is ruled out by this PF constraint. As for (ic), since lower copy pronunciation is allowed when PF considerations require it, the lower copy of the fronted wh-phrase is pronounced here. Strong evidence for the analysis, where the second wh-phrase in (ic) moves in overt syntax, is provided by the fact that this wh-phrase represents a rare case of a wh-phrase in situ that licenses a parasitic gap. That *what* in (iic) can license a parasitic gap, in contrast to *what* in (iib) and like *what* in (iia), is not surprising given that *what* in (iic) undergoes overt movement, just like *what* in (iia).

(ii) a. What did John read without filing? b. *Who read what without filing?
c. Ce precede ce fără să influenţeze?
what precedes what without subj.particle influence.3p.sg
'What precedes what without influencing?'

[19]The monosyllabic wh-phrase and the subject are parsed as a single phonological phrase, see Bošković (2001) for details. As noted there, this prosodic option is not universally available. From this perspective, variation within Norwegian regarding such cases that Vangsnes et al (2016) note may be capturable at least partially in prosodic terms, by taking into consideration the possibilities for the prosodic phrasing of the wh-phrase and the subject in such cases, as well as the exact statement of the prosodic second effect.

[20]See also Bošković (2001:176-178) for a similar account of Icelandic multiple subject constructions that Chomsky (1995) treats in terms of multiple Specs of TP with a PF permutation that places the verb in the second position to satisfy the second position requirement, which Chomsky (1995) assumes is a PF requirement. Bošković (2001) analyzes such cases as in (i), in terms of lower copy pronunciation.

(i) a. Það ~~einhver~~ luku einhver verkefninu. b. [$_{TP}$ Subject1 [$_{T'}$ ~~Subject2~~ V [Subject2]]]
there someone finished someone the.assignment
'Someone finished the assignment.'

phrase here, in which case the verb would still be second within its I-phrase, having only one prosodic constituent in front of it.[21]

(48) a. Mon han er syg? b. Bara han kommer smart!
Q he is ill only he comes soon
'I wonder if he is ill.' 'If only he'd be here soon.' (Holmberg 2015)

To sum up, this section has explored the possibility of a unification of V-2 and clitic second from the prosodic side, which would extend the account of clitic second to V-2 (given that clitic second is prosodic in nature). As a result, the discussion has explored the possibility that at least to some extent V-2 is a remnant of the prosodic second requirement, which is still fully operative with SC clitics.[22] As is often the case in such cases, the effect can be limited to some contexts (i.e. suppressed in some contexts), and V-2 languages can vary in this respect. Under this approach, which does not actually change anything regarding the position of the verb, which is still located in the left periphery, at least some constructions that are assumed to be ruled out because they violate the second position requirement would actually be fine from the perspective of syntax, i.e. nothing would go wrong with them in the syntax; they would instead be filtered out in PF due to a violation of the prosodic second position requirement. This may open up new perspectives on V-2, the issue being to which extent the prosodic requirement got grammaticalized by turning into an actual syntactic requirement,[23] where an unacceptable V-1 construction would be ruled out in the syntax, the idea here being that the prosodic second requirement has undergone a change to a syntactic requirement to have a Spec.[24]

This may also put us in a position to explain the otherwise rather exceptional non-pickiness of the V-2 requirement, where, in contrast to the usual situation where a head is picky regarding the kind of element that satisfies its Spec requirement, just about anything can satisfy V-2.[25] In more technical terms, where the pickiness is standardly implemented by assuming that movement involves Agree+EPP feature satisfaction, with the Agree part implementing the pickiness, it may be that the first step in the grammaticalization of the prosodic second requirement is to

[21]There may in fact be another option for cases like Icelandic (i); if *bara* is parsed as a prosodic constituent with either *han* or the verb itself, the prosodic constituent headed by the verb would still be second in its I-phrase.
(i) Han bara hló að mér.
he just laughed at me (Sigurðsson 1990)

[22]As noted below, the original V-2 was actually a combined syntax/prosody effect, with the V in the left periphery and examples where the syntax leaves it in a position where it is not second in its I-phrase filtered out in PF. Since SC clitics are often much lower in the structure, i.e. not in the left periphery (which means they lost the syntactic part of V-2, see below), the latter kicks in quite often to rule out clitic 3rd examples.

[23]Note that I use the term grammaticalization for ease of exposition to indicate a change from a non-syntactic to a syntactic requirement.

[24]V-1 cases like yes-no questions and imperatives, which have been argued to have a null question/ imperative Op in SpecCP (see Holmberg 2015 and references therein), can then be considered fully grammaticalized, with the prosodic requirement replaced with the syntactic requirement (see below). German topic drop where the element in SpecCP is deleted may be another such case. However, such cases can still conform with the prosodic requirement if deletion takes place after the prosodic second requirement is met (see Bošković 2001 for evidence that the requirement can be satisfied during the PF derivation based on cases where the relevant element is in the second position of its I-phrase during the PF derivation but not in the final PF representation).

[25]But see fn 37 for an indication that some pickiness may be present, or developing, at least in some V-2 cases.

exceptionally have movement driven only by the EPP (i.e. the I-need-a-Spec) requirement, without the concomitant Agree relation (as in Roberts's 2004 account of V-2). A question that can arise here is then whether all cases of EPP-without-Agree movement can be looked at from this perspective, as arising from the grammaticalization of prosodic (or more broadly, non-syntactic) requirements. Movement that is completely divorced from such requirements, i.e. which is fully syntactic, would then always come with the Agree+EPP schema.[26] This may be a promising line to purse regarding exceptional EPP-without-Agree (i.e. pickiness) cases.

From this perspective, V-1 constructions like yes-no questions and imperatives, which are standardly analyzed as involving a null question/imperative Op in SpecCP, can be considered fully grammaticalized in that they fit the Agree+EPP schema. In these cases there plausibly is agreement involved, SpecCP being filled by a particular type of element. It may not then be surprising in light of the above discussion that in such cases there isn't even a remnant of the prosodic second requirement, as evidenced by the fact that the verb is I-phrase initial.

Another issue the above discussion brings to light concerns constructions where the verb superficially doesn't occur in second position, but further in the clause, in the 3rd, even 4th position. There is a good deal of recent research on such constructions, with attention also being paid to the issue of why they are not more prevalent. One factor that may need to be taken into consideration with ungrammatical examples of this type is whether the verb in such cases satisfies the prosodic second requirement; if it does not, it is possible that such cases are ruled out in PF, with no syntactic violation. Thus, it is possible that the reason for the contrast between Swedish (36) and (49) (from Holmberg 2015) has to do with prosody, in that the delayers in (36) can all be parsed as separate I-phrases, which is not the case with all the delayers in (49) (note that the same element can be parsed differently prosodically in different contexts).

(49) *Nede vid ån, under bron, tydligen aldrig har det bott en bisamråtta.
down by the-river, under the-bridge, apparently never has there lived a muskrat

In fact, from the current perspective it may not be necessary to assume that V-2 languages are syntactically special in that they differ from non-V-2 languages in the richness of the left periphery, or that the possibilities for movement within the left periphery are syntactically more constrained in V-2 languages, both of which have been suggested to account for the special properties of V-2 languages. Given the above discussion, V-2 languages may in fact have the same kind of possibilities available to them syntactically in the relevant respects as non-V-2 languages. What makes them special is a non-syntactic (i.e. prosodic) factor, which may filter out in PF examples that may be well-formed in the syntax. In other words, rich left periphery examples of the kind found in non-V-2 languages where a number of constituents precede the verb may in principle be also possible syntactically in V-2 languages (see Holmberg 2016). They would, however, be filtered out in PF (as suggested above regarding (49)).

This may also put us in a better position to capture the relative rarity of V-2 languages since their specialness would be taken outside of the syntax, hence there would be no need to tie it to special syntactic mechanisms that would be completely independent from non-syntactic factors (recall in fact that the special status of V-2 languages can be traced back to a special prosodic factor historically). Moreover, the fact that that there is a good deal of variation among V-2 languages regarding the availability of exceptional non-V-2 cases may also be easier to capture

[26]A possible exception is noted below where however neither EPP nor Agree is involved.

since much of it may come from prosody (it is well-known that there is variation both across languages and individual lexical items of a single language regarding their prosodic properties, including intonational phrasing), differences in the extent to which the V-2 requirement got grammaticalized providing another source of variation here.[27] At any rate, the above discussion shows that any syntactic account of V-2 may benefit (in fact may require) including a prosody-based module.

Consider finally the potential path of development of the second position effect. The original Indo-European second position effect with verbs can be looked at as a combined syntax/ prosody effect, with the verb located in the left periphery and constructions where the syntax leaves the verb in a position where it is not parsed as second in its I-phrase filtered out in PF.[28]

(50) Second position requirement

(S) Syntactic (V-in-C^0) (P) Prosodic (enclitic/adjacency to an I-phrase boundary)

SC clitics, which can occur quite low in the structure, only have P (i.e. they are only subject to P from (50)). Germanic V-2 involves S (hence it involves V-movement into the left periphery), with the remnant of P, which got grammaticalized in many cases, as discussed above.

The reason for this may have to do with word order. Early Indo-European languages had way more freedom of word order than modern Germanic. Suppose that what was responsible for this difference is a difference in the availability of Japanese-style scrambling (JSS) (which is very different from what is referred to as scrambling in Germanic, see e.g. Bošković 2004b), under Fukui and Saito's (1998) analysis of JSS, where JSS does not involve satisfaction of any syntactic feature checking requirements at all (i.e. it involves neither Agree nor EPP).[29] The loss of JSS has made it more difficult for the relevant element to be subject to S (i.e. to be located high in the structure) and still satisfy P given the unavailability of JSS, which could "accidentally" satisfy P in proto-Indo-European. This then led to the grammaticalization of P in terms of an EPP requirement (without Agree, as discussed above).[30]

4. On the immobility of V-2 clauses

This section discusses a curious property of V-2 clauses in German, namely their immobility. As Reis (1997) notes (see also Wurmbrand 2014, Holmberg 2015), V-2 clauses in German cannot move. As illustration, a V-2 clause is moved to SpecIP in (51a) and SpecCP in (51b). Both examples are unacceptable, in contrast to (51c), where the V-2 clause is in situ.

(51) a. *weil [$_{CP}$ den Peter mag niemand] allgemein bekannt ist.
since the.ACC Peter likes nobody.NOM commonly known is
'since nobody likes Peter is commonly known' (Wurmbrand 2014:155)

b. *[Er$_i$ sei unheimlich beliebt], möchte jeder$_i$ gern glauben.
he is.SUBJ immensely popular would.like everyone like believe
'Everyone would like to believe he is immensely popular.' (Wurmbrand 2014:155)

[27] The former factor (prosodic variation) is more likely to be involved in V-3 cases, and the latter (the extent of grammaticalization) in V-1 cases.

[28] It is possible that that the earliest second position requirement was P alone, with S developed for verbs which were subject to P, given that C^0 is otherwise an available landing site for V-movement.

[29] Fukui and Saito (1998) show the analysis explains why JSS is not sensitive to relativized minimality.

[30] As a side remark, note that one of Bošković's (2008a, 2012) NP/DP generalization concerns what I refer to as JSS here, JSS being available only in languages without articles.

c. Sie sagte [den Peter mag niemand].
she said the.ACC Peter likes nobody.NOM (Wurmbrand 2014: 153)

We will see in this section that the immobility of V-2 CPs can be captured in Chomsky's (2013) labeling system, in fact in the same way the ban on movement from moved elements is captured in Bošković (2018). Before discussing (51a), I will then make a digression to discuss the ban in question. After returning to V-2, I will examine clitic second from this perspective.

4. 1. On the ban on movement out of moved elements

Many have argued that movement out of moved elements is disallowed (e.g. Wexler & Culicover 1980, Diesing 1992, Takahashi 1994, Müller 1998, Stepanov 2001, Bošković 2018).

(52) Movement is not possible out of moved elements.

One illustration of (52) is provided by the Subject Condition: under the VP Internal Subject Hypothesis extraction out of a subject in SpecIP involves extraction out of a moved element.[31]

(53) ?*I wonder [$_{CP}$ who$_i$ [$_{DP}$ friends of t_i]$_j$ [$_{vP}$ t_j hired Mary]]

Extraction is also disallowed from moved objects. This is shown by the pseudogapping example in (54), where under Lasnik's (2001) analysis of pseudogapping the object undergoes movement, followed by VP ellipsis. Particle constructions where the object precedes the particle also involve object movement (Lasnik 2001, Johnson 1991). Importantly, extraction from the moved object is disallowed in both (54) and (55a). That such extraction is disallowed is confirmed by Spanish (56), given that, as shown in Torrego (1998), Spanish *a*-marked objects must move.

(54)?*Who will Bill select a painting of, and who$_j$ will Susan [a photograph of t_j]$_i$ ~~[$_{VP}$ select t_i]~~
(55) a. ?*Who$_j$ did you call [friends of t_j]$_i$ up t_i?
b. cf. Who$_i$ did you call up friends of t_i?
(56) ?*[De quién]$_j$ has visitado [$_{DP}$ a muchos amigos t_j]$_i$ [$_{VP}$ … t_i]
of whom have-2sg visited a many friends
'Who have you visited many friends of?' (Gallego and Uriagereka 2007)

(52) also holds for A'-moved (57) and rightward moved (58) elements.[32]

(57) ?*Vowel harmony, I think that [articles about t_i]$_j$ you should read carefully t_j
(Corver in press)
(58) ?*What$_i$ did you give t_j to John [a movie about t_i]$_j$?

(52) thus has strong motivation. Bošković (2018) shows it follows from independent assumptions regarding phases and labeling. The former concerns Chomsky's criteria for differentiating phases and non-phases, namely the one in (59) (see Chomsky 2000, 2001, Rackowski & Richards 2005, Cheng 2012, Matushansky 2005, Harwood 2013, Legate 2014, Bošković 2015b).

(59) Only phases can undergo movement.

[31] Extraction is allowed from subjects in SpecvP, see e.g. Stepanov (2007) and Takahashi (1994).
[32]Torrego (1985) claimed that movement out of SpecCP is allowed in Spanish, but Gallego (2007) shows that her cases involve extraction from a prothetic object, not SpecCP; see also Bošković (2018) for several cases where movement from a moved element has been claimed to be allowed; in fact, Bošković's (2018) analysis does not rule out all such movement.

As for labeling, Chomsky (2013) proposes a theory of labeling where in the case where a head and a phrase merge, the head labels the resulting object. When two phrases merge, there are two ways to implement labeling: through prominent feature sharing or traces, traces being ignored for labeling. The former is illustrated by (60): the wh-phrase and the wh-C (CP at the relevant point of the derivation) both have the Q-feature; what is projected (i.e. determines the label of the resulting object via prominent feature-sharing) is the Q-feature.

(60) I wonder [$_{CP}$ which book$_i$ [$_{C'}$ C [John bought t$_i$]]]

Consider now (61a), with the relevant derivational point given in (61b). Chomsky assumes that successive cyclic movement does not involve feature sharing, which follows Bošković (1997a, 2002a, 2007, 2008b). As a result, there is no feature sharing between *that* and the wh-phrase passing through its edge. Since labeling via feature sharing is not an option here the embedded clause cannot be labeled when *what* moves to its edge (61b). However, since traces are ignored for labeling, ? is labeled as CP after *what* moves to the matrix clause.

(61) a. What$_i$ do you think [$_{CP}$ t'$_i$ [$_{C'}$ that [he bought t$_i$]]]
b. [$_?$ what [$_{CP}$ that [John bought t$_i$]]]

In light of the above discussion, consider (62a), where YP moves out of moved XP. (62a) has the structure given in (62b) before these movements.

(62) a. YP$_i$ [$_{XP}$ ... t$_i$ ...]$_j$ ... t$_j$
b. [$_{XP}$ ... YP ...]

Given that only phases can move, for XP to be able to move it must be a phase. As a result, given the PIC, for YP to be able to move out of XP, YP must move to the edge of XP. Crucially, given the cycle, movement to the edge of XP must precede the movement of XP itself. As is always the case with successive cyclic movement, the merger of YP and XP yields an unlabeled object. Now, for Chomsky, phases are CPs, vPs, and DPs (see Bošković 2013a, 2014 on APs and PPs). However, the object formed by the merger of YP and XP does not have a label at all, hence it is not a phase (in other words, phases require label-determination, hence unlabeled objects cannot be phases). Since only phases can move, the object in question then cannot move.

For illustration, consider the Subject Condition case in (63a), with the structure in (63b).

(63) a. *I wonder who$_i$ [friends of t$_i$] left Mary
b. [$_{IP}$ I... [$_{vP}$ [$_?$ who [$_{DP}$ subject]]]]

Subjects being phases, *who* must move to the edge of the subject DP. Given the cycle, this must occur before the subject moves from vP. Merger of *who* and the subject DP yields an unlabeled object, which, not having a label, is not a phase. The phrase marked with ? then cannot move.[33]

What is relevant for us is that the above account provides a new perspective on (52) where the problem with moving YP from moved XP doesn't arise when YP moves from XP—it arises already with movement of XP: XP itself cannot move here. In other words, moving XP does not freeze the internal structure of XP for movement. Rather, movement of YP to the edge of XP

[33]As discussed in Bošković (2018), remnant movement is still allowed, the difference being that with remnant movement YP moves from XP in (62) before XP moves. Since traces are ignored for labeling, movement of YP then has no relevant effect on the labeling of XP.

prevents movement of XP. We will see in the next section that V-2 clauses are prevented from moving for exactly the same reason, which will unify the immobility of V-2 clauses and the ban in (52); what makes the unification possible is that under the above account of (52), movement out of a moved element, which doesn't take place in V-2 cases like (51a-b), is in fact irrelevant. All the cases given above to illustrate (52) involve successive-cyclic movement via the Spec of XP. As a result, they also involve movement of SpecXP since it's the very nature of successive-cyclic movement that a phrase undergoing it cannot stay in an intermediate Spec for independent reasons. This is the reason why they involve movement out of a moved element. This movement has masked the real reason for the unacceptability of the relevant cases, which is that they involve movement of a phrase with a non-agreeing Spec (later movement out of that phrase is irrelevant). The lack of agreement delabels the relevant phrase, rendering it immobile, as discussed above. The fact that the later movement does not take place in (51a-b) is then not an impediment to unifying the ungrammaticality of (51a-b) and examples like (53)-(58).

4.2. Deducing the immobility of V-2 clauses

I now return to the immobility of V-2 clauses in German, illustrated by (51a)/(64).

(64) * [$_{CP}$ weil [$_{IP}$ [$_{CP}$ den Peter mag niemand] allgemein bekannt ist]].
since the.ACC Peter likes nobody.NOM commonly known is

As discussed in section 3, V-2 clauses are notorious for their non-pickiness when it comes to what fills their SpecCP, which has led to the proposals that they do not involve agreement—they involve EPP without Agree. Since feature-sharing is tied to agreement, a natural consequence of this is that V-2 clauses do not involve feature-sharing, which means that they are not labeled (see also Blümel 2017). But this accounts for their immobility given that, as discussed above, unlabeled elements cannot move. The labeling account of the ban on movement out of moved elements in fact straightforwardly extends to the immobility of V-2 clauses. As discussed above, the ban in question holds for successive-cyclic movement, which is characterized by the lack of agreement in intermediate positions. This is in fact the property of V-2 clauses, which the EPP-without-Agree account of V-2 makes quite explicit. In the labeling system, phrases with non-agreeing Specs cannot undergo movement, since a non-agreeing Spec delabels the relevant phrase, rendering it immobile. It is then not surprising that, just like phrases that host successive-cyclic movement, V-2 clauses cannot undergo movement.[34]

This account capitalizes on the fact that under accounts like Haegeman (1996), Roberts & Roussou (2002), Roberts (2004), Jouitteau (2008), Holmberg (2016), the V-2 movement to SpecCP is treated essentially like successive-cyclic movement in Chomsky (2013) (neither involves an agreement relation). We have seen that applying the account of successive-cyclic movement from Chomsky (2013) to the V-2 movement to SpecCP makes V-2 clauses immobile, which they indeed are.

Recall now that a number of authors have argued that the clitic second effect should be treated in the same way structurally as the V-2 effect, with the clitics located in C and the element preceding them in SpecCP. Given that anything can precede such clitics (clitic second is in fact even more promiscuous in this respect than V-2), a unified analysis would treat clitic second

[34]Note that the lack of labeling does not fully void V-2 clauses of phasehood effects. The merger of C and IP is still labeled as a case of a head-phrase merger (feature-sharing is irrelevant here), which is enough to send the IP to spell-out. The only thing that is not labeled is the result of the merger of this CP and the element that moves to merge with it.

clauses as another instance of EPP-without-Agree. We would then expect clitic second clauses to behave parallel to V-2 clauses regarding mobility, in that they should be immobile. This is, however, not what happens: in contrast to V-2 clauses, clitic second clauses can be moved.

(65) [Knjigu **mu** dati]$_i$ bilo bi preporučljivo t_i.
book.acc him.dat to-give been would advisable
'It would be advisable to give him the book.'

This then also argues against a syntactic unification of the two phenomena. The difference is not surprising in light of the discussion in section 2. Recall that clitics are second prosodically, not structurally. Different clitics are located in different projections, and can in fact be rather low in the structure. As a result, elements that precede clitics are not located in a fixed position. A variety of elements can precede clitics because these elements are located in a variety of positions, we are not dealing here with the situation where they all fill the same Spec position, which in turn would indicate that this Spec position involves no agreement, hence no labeling. It is then not surprising that clitic second clauses undergo movement, in contrast to V-2 clauses.

Turning now to the theoretical consequences of the analysis, we have seen that the EPP-without-Agree account of V-2 clauses naturally leads to the analysis where such clauses are not labeled, which in turn explains their immobility. This rather natural treatment of V-2 clauses implies that some unlabeled objects can be interpreted at the interfaces. This in fact is not such a stretch, since, as noted in Bošković (2016b), it is actually not obvious that labels are needed for interpretation; in fact, formal semantics models typically don't make recourse to labels. Bošković (2016b) then raises the possibility that labeling may not always be needed for interpretation, i.e. that some syntactic objects can be interpreted even without labels (but see section 4.3).[35]

It should, however, be noted that the ungrammaticality of (51a-b) can actually be accounted for even if the moving V-2 clauses are assumed to be labeled under a particular approach to the timing of labeling. Under that analysis, the contrast between the mobility of V-2 and clitic second clauses still argues against their structural unification. However, the alternative analysis has much broader consequences, extending the account of the immobility of V-2 clauses to a range of other constructions. It also has different consequences from the no-labeling analysis for subject V-2 clauses. I will therefore explore this alternative analysis in the following section. A digression is first in order to discuss the relevant assumption regarding the timing of labeling.

4.3. On the timing of labeling

In Chomsky (2013), the syntax doesn't need labels, the interfaces do. As a result, labeling occurs when structure is sent to the interfaces, i.e. at the phasal level. The approach faces several issues (see Bošković 2015b, 2016b). Thus, to determine that a phasal level has been reached, which in turn determines spell-out points (i.e. when the structure is sent to the interfaces), some labeling is needed. E.g., we cannot determine whether a phasal level has been reached with the object in (66) before the labeling of this object. However, the problem is that labeling is done only when a phasal level is reached. This leads to a chicken-or-the-egg problem: To determine whether a phasal level has been reached we need labeling, but for labeling we need to reach a phasal level.

(66) [$_?$ X Y]

[35]Bošković (2015b) in fact suggests this for adjunction, which could be extended to V-2 clauses if we assume that such clauses do not involve movement to SpecCP but the CP-adjoined position, reserving movement to the Spec position only for cases involving agreement/feature-sharing (see Bošković 2015b).

A problem also arises when both elements, e.g. the complement and the head, move (see also Shlonsky 2014). Traces being ignored for labeling, no labeling can then be done in this case. Furthermore, if the head moves, but the complement does not, the complement will label the object formed by their merger. To illustrate, if labeling takes place only at the phasal level, i.e. when Z is introduced into the structure in (67) (ZP being the only phase), given that traces are ignored for labeling the result of the merger of Y and KP in (67) cannot be labeled (by Y) as YP.

(67) Z^0 [$_{XP}$ Y^0+X^0 [$_{YP}$ t_y KP]]

Bošković (2016b) proposes an approach to the timing of labeling (referred to as TOL) that resolves these problems, where the labeling of a head-complement merger occurs when the relevant configuration is created (since it takes place for syntactic reasons), while the labeling of a merger of two phrases occurs when the structure is sent to the interfaces, given the assumption that unlabeled objects are uninterpretable. Under TOL, labeling of a head-complement merger occurs for a syntactic reason, namely subcategorization: satisfying subcategorization requires that the element with the requirement to take a complement projects, or there would be no head-complement relation here. This concern does not arise with feature-sharing Spec labeling (i.e. phrase-phrase merger).

TOL resolves the above problems with Chomsky (2013). Thus, no problem arises when both the complement and the head of a phrase move, or when only the head moves although traces are ignored for labeling since the result of a head-complement merger is labeled immediately: the head then determines the label before moving. The spell-out issue is also resolved. Recall the problem: phases determine when the structure is sent to the interfaces. If labeling occurs for interpretative reasons this is when it should occur. A chicken-or-the-egg problem then arises. Phasehood determination requires labeling: to know whether something is a phase we need to know its label. Since phases determine spell-out points, without any labeling structure cannot be sent to the interfaces, which in turn is needed for labeling to occur under a purely interpretative approach to labeling. The issue is resolved if head-complement merger is labeled immediately since this is all we need to determine spell-out points. (Bošković 2016b also shows that a number of locality effects (the Subject and Adjunct Condition, Richards's 2001 tucking in, and the full range of Comp-t effects) can be accounted for in a unified manner under TOL.)

What's important here is that under TOL, labeling with feature-sharing Specs (i.e. phrase-phrase merger) doesn't occur immediately but only when the structure is sent to the interfaces.[36]

Given this background, I return to the immobility of V-2 clauses, illustrated by (64). The analysis of (64) adopted earlier assumed that V-2 clauses are not labeled. The alternative analysis about to be proposed on the other hand assumes that the V-2 clause undergoing movement in (64) is labeled. There are several options here. V-2 clauses undergoing movement necessarily involve embedded V-2. As discussed in section 3, it is possible that embedded V-2 involves full grammaticalization, which can be interpreted as embedded V-2 involving traditional Spec-Head agreement, and feature-sharing. Alternatively, if we adopt Chomsky's (2013) assumption that labeling is always required at the interfaces, all V-2 clauses should be labeled. Given that they do involve a Spec-head configuration, it is possible that they are labeled via prominent feature sharing.[37] There is another option, which is also in line with Chomsky's

[36]This differs from Bošković (2018), who assumes that all labeling may occur as soon as possible.

[37]V-2 clauses are actually not completely non-picky; thus the element in SpecCP cannot be a focus in Germanic V-2 (see e.g. Holmberg 2015). It is then not completely out of question that some kind of

assumption that labeling is required at the interfaces. It is possible that V-2 structures are labeled exceptionally by simply ignoring the element in SpecCP—this would then be a case of a phrase-phrase merger where one phrase is exceptionally ignored for labeling with the other phrase providing the label (at the point when the structure is sent to the interfaces). Regardless of which of the above options is adopted, the V-2 clause from (64) would be labeled (for ease of exposition I will ignore the option on which only embedded V-2 clauses are labeled). However, given the TOL, it would be labeled only when the relevant structure is sent to spell-out.

Consider then the derivation of (64) under TOL. It is standardly assumed that what is sent to spell-out is the phasal complement and that the complement of phase α is sent to spell-out only after movement to the edge of α (the final structure is also sent to spell-out). Given this, the V-2 CP in (64) will not be sent to spell-out until the full structure is built-it will be sent to spell-out only after *weil* triggers the spell-out of its IP complement. (If passive vP is a phase, the V-2 CP will move to its edge before the VP complement of v is sent to spell-out.) This means that the V-2 CP in (64) moves before it is sent to spell-out. However, since the CP is created by a phrase-phrase merger, the labeling of this CP occurs only after it moves. What we are then moving here is actually not a CP but an unlabeled element, which is disallowed.

Recall that in contrast to V-2 clauses, clitic second clauses can move. The difference is also captured under the analysis from this section, but it is again crucial that V-2 and clitic second are not treated in the same way structurally. If clitic second is treated in the same way as V-2, with clitics in C and the element preceding them in SpecCP, we would expect clitic second clauses to behave parallel to V-2 clauses in being immobile. (65) can in fact be taken as a confirmation that SC clitics are not high in the structure. More precisely, while the verb in V-2 clauses occurs in the highest head position, this is not the case with the clitic in (65) (if the clitic were in the highest head position, the phrase preceding it would be in its Spec, which would make the bracketed phrase immobile (the bracketed phrase should then have a null head at the top of the structure on this analysis)).

Under the account from this section, V-2 CPs are labeled. However, since labeling of objects created by phrase-phrase merger is delayed until the structure is sent to the interfaces, such CPs are labeled too late to be able to move. On the other hand, under the account from section 4.2, the reason why V-2 clauses don't move is because they are not labeled at all.

While both accounts capture the immobility of V-2 clauses, the choice between them has consequences on related constructions; in fact, it also bears on the debated issue of whether subject V-2 clauses are CPs or IPs. If they are CPs, both accounts, which differ regarding whether such clauses are labeled or not, would extend to subject V-2 clauses. This is, however, not the case if they are IPs. If they are IPs, such clauses would be labeled anyway via regular feature-sharing (traditional Spec-Head agreement) that holds between the subject and the IP. The above account of (64) would then extend to subject V-2 clauses only on the TOL option, where labeling with feature-sharing is delayed.[38] Now, subject V-2 clauses are also immobile, as (51b) shows. This then leaves us with two options for subject V-2 clauses: if they are CPs, both accounts of (51) can be extended to them; if they are IPs, only the TOL account does.

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defective agreement, which would be responsible for the limited pickiness, is involved here (under the suggestion under consideration, Agree from the Agree+EPP schema might not fully overlap with prominent feature sharing (given the discussion from section 3)).

[38]Note that subject V-2 clauses are phases even under the IP analysis under the approach where the highest clausal projection is a phase (see Bošković 2014, 2015b, Wurmbrand 2014).

There are many other cases where the choice between the no-labeling account (from section 4.2) and the TOL account (from section 4.3) of the immobility of V-2 clauses matters. The latter is in fact much broader in its consequences—it extends to all phases with feature-sharing Specs, preventing such phases from moving. The former account does not have such a broad reach; since it appeals to a special property of V-2 clauses, it is pretty much confined to this case.

Consider, for example, embedded declarative clauses which are not introduced by the complementizer *that* in English. As is well-known, such clauses are also immobile.

(68) a. *[John likes Mary]$_i$ is widely believed t_i.
b. That John likes Mary is widely believed.
c. *[John likes Mary]$_i$ Jane believed t_i.
d. That John likes Mary, Jane believed.

A number of works have argued that the moved clause in (68a,c) is an IP (see Bošković 1997a and references therein). If, as argued in Bošković (2014, 2015b) and Wurmbrand (2014) (see fn 38), the highest clausal projection is as a phase (regardless of its category), the embedded clause is still a phase here. Note, however, that the embedded clause is then labeled via feature sharing. Under TOL, it is labeled after movement, which is too late. The TOL account of (51a-b) thus extends to (68) under the IP account of the moved clauses in (68). The categorial status of *that*-less declaratives in English is, however, controversial—it is often assumed that they are CPs. Can the above account of (51) extend to (68) under a CP analysis of such clauses? In fact it can, under Pesetsky and Torrego's (2001) account of such clauses. Pesetsky and Torrego argue that the clauses in question are CPs, with the subject located in SpecCP (and undergoing feature-checking with C). The TOL account of the immobility of *that*-less clauses can then be maintained under Pesetsky and Torrego's CP analysis. The TOL account thus extends to the immobility of *that*-less clauses, in fact regardless of whether they are CPs or IPs.

As noted above, the TOL account of the immobility of V-2 clauses has a much wider reach than the no-labeling account since it generalizes the immobility of V-2 clauses to all phases with feature-sharing Specs (in fact all phases with Specs, given that those with non-feature sharing Specs anyway cannot move, as discussed in section 4.1). As a result, it explains several previously mysterious cases, where certain phrases have been noted to be immobile for no clear reason. Thus, Abels (2003) observes that IPs cannot move. Examples like (69) are not surprising.

(69) *[$_{IP}$ His$_i$ brother likes Mary]$_j$ everyone$_i$ believes [$_{CP}$ that t_j]

(69) illustrates Abels's generalization that complements of phase heads cannot move (the IP that undergoes movement is a complement of C, a phase head). This follows from the PIC and antilocality, the ban on movement that is too short. CP being a phase, the PIC forces IP to move to SpecCP, which violates antilocality (another problem is that the IP from (69) is not a phase, cf. (59)). However, Abels (2003) shows that even IPs that are not dominated by CP cannot move (see also Bošković 2013b). Consider (70).

(70) *[$_{IP}$ morgen zu reparieren] hat ihn der Hans beschlossen. (Abels 2003: 151)
tomorrow to repair has it the Hans decided
'Hans decided to repair it tomorrow.'
(71) cf. weil ihn der Hans [$_{IP}$ morgen zu reparieren] beschlossen hat.
because it the Hans tomorrow to repair decided has

Following Wurmbrand (2001), Abels shows that the infinitive in (70) is an IP: the adverb indicates the presence of IP and pronominalization ensures the lack of CP, being banned out of CPs. (70) then indicates that even IPs that are not dominated by CP (i.e. IPs which are not phase head complements) cannot move. The TOL account of the immobility of V-2 CPs extends to this case. Assuming that the highest clausal projection is a phase, not being dominated by CP the IP in (70) is a phase. In principle, it could move. However, given the standard assumption that such cases involve PRO in SpecIP, the infinitival IP is labeled through feature sharing. Given that labeling through feature-sharing is delayed until structure is sent to the interfaces, the labeling of such IPs takes place too late for them to be able to move.[39] What we are then moving here is an unlabeled element, which is disallowed.

The TOL account, which bans movement of phrases with feature-sharing Specs, extends to a number of other cases, e.g. the otherwise mysterious ban on moving the wh-clause in specificational pseudoclefts, illustrated by (72) (see Higgins 1973, Bošković 1997b)[40] and the impossibility of passivizing indirect questions as in (73). (Passivization is used to minimize the possibility of analyzing what follows the clause as an adsentential, but Nordström 2010 notes that topicalization is also disallowed here.)[41]

(72) a.[What John is] is proud.
b. *[What John is]$_i$ seems t_i to be proud.
(73) *Who John hired$_i$ was asked t_i (by Mary).

Both of these cases involve movement of a CP phase with a feature-sharing Spec, which is disallowed under the TOL analysis. The TOL analysis of the impossibility of movement of V-2 clauses thus extends to a number of constructions, explaining the otherwise mysterious immobility of a number of phrases, unifying them with the immobility of V-2 clauses. The alternative no-labeling analysis does not extend to these additional cases; whatever is responsible for their ungrammaticality is then independent of the immobility of V-2 clauses under that analysis. However, while the TOL analysis has a wider coverage it is based on a rather strong prediction: it generalizes the immobility of V-2 clauses in a way that bans movement of phrases with feature-sharing Specs more generally. This calls for a reanalysis, or provides evidence for particular accounts, of a number of constructions.

To illustrate, consider English possessor DPs. Given the possibility of moving the possessor DP in (74), the DP cannot be analyzed as having *John('s)* in SpecDP since (74) would then involve movement of a phase with a feature-sharing Spec. However, a Kayne (1994) style account, where the possessor is in SpecPossP, with PossP dominated by DP, is fully consistent

[39]Bare IPs with no Spec can in principle move. However, I am not aware of clear cases of this type, where we can be sure there isn't even a null expletive in SpecIP (the thorny EPP issue also arises here).
[40]Predicational pseudoclefts are different here (*[What he is]$_i$ seems t_i to be worthwhile*).However, the wh-clause in predicational pseudoclefts is standardly analyzed as a free relative, free relatives being DPs, not CPs with a wh-phrase in their Spec (see Donati 2006, who argues the wh-phrase actually heads the DP).
[41](73) may not be ruled out universally (see Bošković 2016c). In many languages an overt C can precede a fronted wh-phrase, as in (i) (in fact, in Rizzi's 1997 split CP wh-phrases do not move to the highest clausal projection). Under the above analysis, languages that allow examples like (73) would be analyzed as involving additional structure above the fronted wh-phrase, which need not be manifested overtly.
(i) Julio preguntó que qué$_i$ íbamos a comprar t_i
Julio asked that what (we) were.going to buy (Spanish)

with the TOL analysis: under this analysis what is moved in (74) is a phase, but not a phase with a feature-sharing Spec (for additional cases, see Bošković 2016c).

(74) $[_{DP}$ John's picture$]_i$ was sold t_i

This issue regarding possessor DPs does not arise under the alternative no-labeling account from section 4.2., which ties the immobility of V-2 clauses to a special property of V-2 clauses, hence does not have as broad of an effect as the TOL analysis. Thus, the no-labeling analysis does not require the DP-PossP structure for possessor DPs (i.e. it is compatible with placing the possessor in SpecDP). The no-labeling analysis is, however, not completely void of broader consequences. Under that analysis, we may expect the immobility of V-2 clauses to extend only to phrases with Specs where there is no traditional Spec-head agreement, evidence for which would be provided by the lack of pickiness regarding the element that fills the Spec position, the assumption being that if anything can fill the Spec position, then there is no agreement/feature-sharing.

5. Conclusion

The paper has argued that V-2 and clitic second should not be unified structurally. Second position clitics do not all occur in a fixed position high in the clause (they can in fact occur rather low in the structure), differing from the verb in V-2 in this respect; second-position clitic systems are incompatible with the presence of definite articles/DP in a language, in contrast to V-2; and clitic second and V-2 clauses differ regarding their mobility.

Clitic second and V-2 do, however, share important prosodic characteristics, which was taken to indicate that the two should be unified at least to some extent prosodically, hence more attention should be paid to prosody in the investigations of V-2 (with clitic second, the second position is in fact defined prosodically: clitics are second within their intonational phrase), which was also shown to lead to a simplification of the syntax of V-2. From this perspective, I have also suggested accounts of a number of properties of V-2, like the root/embedded clause asymmetry regarding the productivity of V-2, the non-pickiness of the V-2 requirement (where just about anything can satisfy it), and the role of the freedom of word order in the development of syntactic V-2, where all these are ultimately traced to the presence of a prosodic requirement, which further indicates that investigations of V-2 should include the prosodic module.

The paper has also provided a labeling-based account of the immobility of V-2 clauses, which has consequences for a number of constructions.

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