Taking Case out of the Person-Case Constraint

Adrian Stegovec

Manuscript: 26th October 2018

Abstract The Person-Case Constraint (PCC) is a restriction on co-occurring weak pronominal direct (DO) and indirect objects (IO) that restricts the person value of the DO. This article presents a previously unnoticed variant of the PCC found in Slovenian, where the canonical PCC operates alongside a reverse PCC, where the restriction applies to the IO. This pattern is not predicted by standard syntactic approaches to the PCC (which rely on inherent asymmetries between the IO and DO). It is argued that the PCC (in all its forms) arises with pronouns that are inherently unspecified for a person value and need to receive it externally from a functional head via Agree. The structurally higher pronoun blocks the structurally lower pronoun from receiving a person value, giving rise to the PCC. The reverse PCC then arises due to optional DO-over-IO clitic movement prior to person valuation. The proposed analysis is shown to capture cross-linguistic variation regarding the PCC including the Strong/Weak PCC split, which is attributed to a variation in the structure of pronouns. The article also establishes a cross-linguistic typology of the reverse PCC, where the reverse PCC exists exclusively as an optional pattern alongside the baseline PCC pattern.

Keywords Agree · clitic movement · deficient pronouns · minimal pronouns · Person-Case Constraint · Slovenian · unvalued interpretable features

1 Introduction

Compared to number and gender, person stands out as the class of φ-features with the most constrained distribution (see Baker 2008b for a recent cross-linguistic study). This exceptional behavior of person is central to the *Person-Case Constraint* (*PCC*) (Perlmutter 1971, Bonet 1991; 1994), which concerns the inability of some pronominal markers to express particular person values. The PCC is traditionally seen as a constraint on co-occurring weak pronominal markers (clitic/weak pronouns and

University of Connecticut
E-mail: adrian.stegovec@uconn.edu

agreement markers); specifically, co-occurring direct objects (DO) and indirect objects (IO). Although different iterations of the PCC have been noted, the most prevalent is the *Strong PCC*, which descriptively amounts to the generalization in (1).

(1) ***Strong PCC.*** *When a weak DO and IO co-occur, the DO has to be 3rd person.* (based on Bonet 1991:182)

A prototypical case of (1) is found in Greek (Anagnostopoulou 2003; 2005), where both the IO and DO may be clitic pronouns, but only if the DO is 3rd person, as in (2a).[1] As (2b) shows, a 1st or 2nd person DO clitic cannot co-occur with an IO clitic.

(2) a. Tha { **mu** | **su** | **tu** } **to** stilune. IO+3.DO
FUT 1.GEN | 2.GEN | 3.M.GEN 3.N.ACC send.3PL
'They will send it to me/you/him.'

b. *Tha { **mu** | **su** | **tu** } { **se** | **me** } sistisune. *IO+2/1.DO
FUT 1.GEN | 2.GEN | 3.M.GEN 2.ACC | 1.ACC introduce.3PL
'They will introduce you/me to me/you/him.'
(Greek; Anagnostopoulou 2005:202)

Cross-linguistically, we find at least one other version of the constraint, the *Weak PCC* (Bonet 1991; 1994, Anagnostopoulou 2005); see the descriptive generalization in (3). Note that the Weak PCC permits more object combinations than the Strong PCC.

(3) ***Weak PCC.*** *When a weak DO and IO co-occur, if one of them is 3rd person it has to be the DO.* (based on Bonet 1991:182)

The Weak PCC is found in Catalan. There, unlike in Greek, a 1st/2nd person DO clitic is allowed in the context of an IO clitic, but *only* if the IO clitic is also 1st/2nd person:

(4) *A en Josep, { **me** | **te** } **li** va recomenar la Mireia. *3.IO+1/2.DO
to the Josep, { 1.DO | 2.DO } 3.DAT recommended the Mireia
'She (M) recommended me/you to him (J).' (Catalan; Bonet 1991:178–179)

(5) a. **Te** **m'** ha venut el mercader més important. 1.IO+2.DO
2.DO 1.IO has sold the merchant most important
'The most important merchant has sold you to me.'

b. **Vi** **ci** manderá. 2.IO+1.DO
2.IO 1PL.DO send.FUT.3
'S/he will send us to you (pl).' (Catalan; Anagnostopoulou 2005:203)

Both variants of the PCC appear to be sensitive to the IO vs. DO distinction, which is reflected in the general consensus that the constraint should be tied to an asymmetry between inherent grammatical properties of the IO and DO. In particular, in minimalist syntactic analyses of the PCC like Anagnostopoulou (2003; 2005) and Béjar and Řezáč (2003), the constraint has been argued to follow from a direct connection between Case checking and φ-agreement as proposed by Chomsky (2000; 2001).

In this paper, I discuss a previously unnoticed PCC type found in Slovenian, which allows both IO»DO and DO»IO as the base clitic order. As we saw above, the canonical

[1] All examples are glossed using Leipzig glossing rules. Unmarked number, case, and tense are left out unless relevant, while caseless/case-syncretic pronouns are glossed according to their grammatical role.

PCC restricts the person of DO clitics co-occurring with IO clitics, as illustrated in (6). In contrast, in Slovenian the person restriction applies consistently to the linearly second clitic regardless of its case or grammatical role, as illustrated in (7).

(6) canonical PCC (Strong):
a. ✓ IO+3.DO
b. ✗ IO+**1/2.DO**

(7) PCC (Strong) in Slovenian:
a. ✓ IO/DO»3.DO/IO
b. ✗ IO/DO»**1/2.DO/IO**

I argue that not only is (7) a PCC effect, but that the standardly assumed case sensitivity of the PCC does not hold, which will be also confirmed by languages other than Slovenian (including Zürich German, Haya, and Maasai). I argue instead for a return to the intuition present in Perlmutter (1971) and Bonet (1991) that the PCC should be tied to the type of the pronouns involved. Specifically, I propose that the PCC effect arises because the relevant pronouns are inherently underspecified for a person value (cf. *minimal pronouns* of Kratzer 2009). These pronouns can only be 1st or 2nd person if valued as such by an accessible functional head (Kratzer 2009, Zanuttini et al. 2012), and the PCC occurs when such valuation is blocked due to the local nature of *Agree* (Chomsky 2000). This analysis divorces Case from φ-valuation, but retains the insight of Anagnostopoulou (2003) and Béjar and Řezáč (2003) that the PCC is essentially an intervention effect. It also derives the PCC directly from the feature make-up of the pronouns without having to posit extrinsic conditions on person licensing or φ-feature asymmetries between IO and DO, in contrast to the previous works.

Since the proposed mechanism of person valuation only concerns the φ-feature make-up of IO and DO, we can explain why the PCC in Slovenian is sensitive only to clitic order. In fact, I will argue that the PCC is always sensitive only to the relative position of IO and DO. This is transparent in Slovenian, but not in most other languages with a more rigid clitic order. I propose that these languages can only have a canonical PCC because of the structure of double-object constructions, where the IO universally asymmetrically c-commands the DO in the base positions. Slovenian-style PCC arises only in languages where IO and DO clitics can reorder at the right point in the derivation, otherwise the result is always a canonical PCC. The same basic mechanism—movement affecting φ-valuation possibilities—can be extended to other cases of cross-linguistic variation in the PCC domain. Differences in pronoun movement will be shown to derive the Strong/Weak PCC distinction, obviation of PCC effects in specific constructions (e.g. imperatives in Slovenian), as well as account for a broad cross-linguistic typology of possible PCC/clitic order interactions I establish.

The paper is organized as follows: Section 2 presents the Slovenian data. Section 3 reviews a popular syntactic approach to the PCC and shows why Slovenian is problematic for it. Section 4 proposes the new analysis of the PCC. Section 5 discusses the PCC-voiding imperatives in Slovenian which support the proposed analysis. Section 6 discusses the cross-linguistic implications of the analysis. Section 7 concludes.

2 The Slovenian clitic person restriction

In Slovenian, object clitics are generally part of the clitic cluster in the 2nd clausal position. As was the case with Greek and Catalan above, both objects can be expressed

as clitics in double-object constructions (DOCs). In such cases, the DO clitic is marked as accusative (ACC) and the IO clitic as dative (DAT) regardless of person, number, or gender. Another parallel with Greek and Catalan is that Slovenian also appears to disallow 3rd person (3P) IO clitics to co-occur with 1st/2nd person (1P/2P) DO clitics, as seen with the contrast in (8).[2] However, we will see that this is not always the case.

(8) a. Mama { **mi** | **ti** | **mu** } **ga** bo predstavila. IO»3.DO
mom 1.DAT | 2.DAT | 3.M.DAT 3.M.ACC will.3 introduce.F
'Mom will introduce him to me/you/him.'

b. *Mama **mu** { **me** | **te** } bo predstavila. *3.IO»1/2.DO
mom 3.M.DAT 1.ACC | 2.ACC will.3 introduce.F
'Mom will introduce me/you to him.'

The crucial contrast between Greek/Catalan and Slovenian is that the order of object clitics is much more flexible in the latter; both IO»DO and DO»IO clitic orders are allowed. The two clitic orders are presented in (9) for 3P IO and DO clitic pairs.[3]

(9) a. Mama **mu** **ga** je opisala. IO»DO
mom 3.M.DAT 3.M.ACC is described.F

b. Mama **ga** **mu** je opisala. DO»IO
mom 3.M.ACC 3.M.DAT is described.F
'Mom described him to him.'

Interestingly, this alternation interacts with the restriction on 1/2P.DO clitics we have seen in (8); the DO»IO equivalents of (8b) are in fact grammatical, as shown in (10a). But the DO»IO order is not entirely devoid of person restrictions. As shown in (10b), a 1/2P.IO clitic is banned in the context of a 3P.DO clitic with the DO»IO order. Notice that this combination is allowed with the IO»DO order in (8b).

(10) a. Mama { **me** | **te** | **ga** } **mu** bo predstavila. DO»3.IO
mom 1.ACC | 2.ACC | 3.M.ACC 3.M.DAT will.3 introduce.F
'Mom will introduce me/you/him to him.'

b. *Mama **ga** { **mi** | **ti** } bo predstavila. *3.DO»1/2.IO
mom 3.M.ACC 1.DAT | 2.DAT will.3 introduce.F
'Mom will introduce him to me/you.'

When restricted to the IO»DO order, 3P and 1/2P clitics pattern identically with the canonical (Strong/Weak) PCC from Section 1. However, with the DO»IO order we observe a pattern I call the *reverse PCC*, a complete reversal of the canonical PCC.

Notice that I left out examples with exclusively 1/2P clitic combinations so far. This is because Slovenian speakers show variation with respect to such combinations parallel to the canonical Strong/Weak PCC split; this speaker variation is crucially observed with both the IO»DO and the DO»IO person restriction. Some speakers exhibit

[2] The data in this section are from a grammaticality judgment survey performed on 29th/30th May 2014 through Google Forms. 42 native speakers took part in the survey composed of 24 target and 24 filler sentences. The judgments in the rest of the paper are my own and verified with 4 other speakers.

[3] The two orders are not entirely equivalent in examples like (9). There seem to be discourse factors that influence the choice of one over the other. This will be briefly addressed in Section 4.1.1.

the equivalent of the Weak PCC with the IO»DO order, allowing combinations of two 1P and 2P clitics, as in (11), while still disallowing 1/2P.DO clitics in the presence of a 3P.IO clitic (cf. (8b)). Crucially, the same speakers also show a corresponding reverse pattern with DO»IO. They allow 1P.IO clitics in the presence of 2P.DO clitics (12), but disallow 1/2P.IO clitics when the DO is 3P (cf. (10b)).[4]

(11) %Mama { **mi** | **ti** } { **te** | **me** } bo predstavila. 1/2.IO»2/1.DO
mom 1.DAT | 2.DAT 2.ACC | 1.ACC will.3 introduce.F
'Mom will introduce you/me to me/you.'

(12) %Mama **te** **mi** bo predstavila. 2.DO»1.IO
mom 2.ACC 1.DAT will.3 introduce.F
'Mom will introduce you to me.'

Slovenian thus not only exhibits a person restriction with object clitics that is consistent with the PCC with the IO»DO order, but also speaker variation along the same lines as observed for canonical Strong and Weak PCC languages in that speakers differ in whether they allow two 1P and 2P person object clitics to co-occur. The speaker variation in question is quite idiosyncratic and fine grained, and generally does not conform to traditional dialectal divisions of Slovenian, which is consistent with what has been reported concerning other languages that exhibit the Weak PCC (see e.g. Bonet 1991, Ormazabal and Romero 2007, Anagnostopoulou 2005; 2008).

To reiterate the main point, note the full 'Strong pattern' of Slovenian in Table 1.

Table 1 Object clitic person restrictions in Slovenian (for 'Strong speakers')

Strong canonical:	3.IO»3.DO	1/2.IO»3.DO	***1/2.IO»2/1.DO**	***3.IO»1/2.DO**
Strong reverse:	3.DO»3.IO	1/2.DO»3.IO	***1/2.DO»2/1.IO**	***3.DO»1/2.IO**
Strong combined:	3.CL»3.CL	1/2.CL»3.CL	***1/2.CL»2/1.CL**	***3.CL»1/2.CL**

By ignoring case (as in the third row of the table), we see that there is a single person restriction sensitive only to the *order* of the two clitics, but not their *case* (or grammatical role). This can be observed in a language like Slovenian, since both IO»DO and DO»IO clitic orders are available. The existence of such case-insensitive person restrictions will be the key for the reanalysis of the PCC proposed in Section 4.

2.1 The status of the Slovenian person restriction

Due to the seeming cross-linguistic robustness of the PCC's sensitivity to case and the fact that most syntactic analyses of the constraint typically focus on case, θ-role,

[4] There is a contrast for 'Weak speakers' between 2P.DO»1P.IO and *1P.DO»2P.IO (i). I will argue in Section 4.1.4 that (i) is a restriction independent of the PCC (I put it aside pending the discussion below).

(i) *Mama **me** **ti** bo predstavila. *1.DO»2.IO
mom 1.ACC 2.DAT will.3 introduce.F
'Mom will introduce you/me to me/you.'

or φ-feature asymmetries between the two objects, one could argue that at least the DO»IO half of the Slovenian person restriction should not be equated to the PCC.

As pointed out by an anonymous reviewer, Slovenian in fact does not fit the descriptive generalizations in (1) or (3). Speakers with the Strong restriction allow the DO clitic to be 1/2P in object clitic clusters, and those with a Weak restriction likewise allow either the IO or DO clitic to be 3P when the other clitic is 1/2P. The person value of the two object clitics only restricts the order in which they appear.

One could view the restriction in question as a kind of positive templatic restriction where clitics are ordered by an extrinsic template, like (13), where each "slot" (represented here by $\boxed{}$) can only be filled by one clitic of the specified kind.[5]

(13) a. $\boxed{\text{1P} \mid \text{2P}} \text{ » } \boxed{\text{3P}} \text{ » } \boxed{\text{3P}}$ Strong template

b. $\boxed{\text{1P} \mid \text{2P}} \text{ » } \boxed{\text{1P} \mid \text{2P}} \text{ » } \boxed{\text{3P}} \text{ » } \boxed{\text{3P}}$ Weak template

This is basically a variant of Perlmutter's (1971) seminal analysis of clitic order and co-occurrence restrictions, which is in itself not explanatory. There is no built-in restriction on the types of features that can be referenced by the slots, so there is no restriction on possible templates. Crucially, the canonical PCC can also be derived by adding case or grammatical role information to the slots. As Perlmutter himself noted, the PCC is only a more restricted version of his "global ordering constraints".

Unlike what templatic approaches would predict, cross-linguistic variation in person restrictions is quite restricted. In his survey of 43 languages (see also Section 6), Albizu (1997b) noted that with syntactic person restrictions the distribution of 3P is never more constrained than that of 1P or 2P, which needs to be explained.

We then have two options: **(i)** to treat the the Slovenian person restriction as distinct from the PCC, which would ignore a number of generalizations, including the fact that they both show the same Strong/Weak split, or **(ii)** to seek a principled unified account for both patterns,[6] which would explain why they are similar in so many ways. The latter is more appealing conceptually, if of course it can be accomplished—I will argue below that it can. In fact, I will argue that this option will enable us to understand why such syntactic person restrictions behave the way they do.

3 The PCC as a syntactic intervention effect

The PCC occurs primarily with clitic clusters, which is why it was traditionally viewed as a representational (Perlmutter 1971) or a morphological constraint (Bonet 1991; 1994) on such clusters, sensitive to their person and case values. We have seen though that in Slovenian case does not play a role in the restriction. Rather, the order of the clitics does. Presumably, the two orders correspond to distinct structural configurations, which lends itself more readily to a purely syntactic approach to the PCC.

[5] One could also translate this into cartographic functional sequences, where slots correspond to specifiers of dedicated person (PersP), number (NumP), or case (KP) projections, and can only be filled by one element. This is essentially the approach adopted by Ciucivara (2009) and Cardinaletti (2008).

[6] Under this approach, *Person-Case Constraint* is a misnomer, but I still use PCC as a cover term for all syntactic person restrictions in this article due to it being so ubiquitous and established in the literature.

The current mainstream approach to the PCC is to treat it as the result of locality restrictions that apply when two arguments must establish a syntactic dependency with a single functional head. Following the seminal proposal by Anagnostopoulou (1999; 2003), which analyzes the PCC as a syntactic intervention effect, similar analyses that follow this general intuition were adopted by, among others, Béjar and Řezáč (2003), Adger and Harbour (2007), Nevins (2007; 2011), and Richards (2008). The primary innovation of this family of approaches is a fully syntactic treatment of the PCC by means of mechanisms introduced independently within the minimalist framework, in particular *Agree* (Chomsky 2000; 2001). The key assumption is that the PCC arises when two goals compete to enter Agree with a single probe—I will use *one-probe/two-goals* as a cover term for such approaches. Most one-probe/two-goal approaches make the extra assumption that PCC contexts involve partial intervention: Agree occurs separately for person ([π]) and number features ([#]) (see also Taraldsen 1995), where in a DOC the IO blocks Agree between the *v* head and DO for [π] but not for [#] features, as shown in (14). The IO is the intervener for Agree in (14) because it asymmetrically c-commands the DO in its base position (IO$\gg$DO).[7]

(14) [$_{vP}$ *v* [$_{VP}$ IO [$_{V'}$ V DO]]]
[π]•—Agree—•[π] ✓ [π] ✗
[#]•————Agree————•[#] ✓

But intervention alone is not sufficient; it must be explained why the lack of Agree with the DO's [π] features matters for whether or not it can be 1/2P. The standard answer is that 3P is actually the realization of the lack of [π] features (see also Kayne 2000),[8] and the presence of [π] on an argument (i.e. 1/2P features) requires special licensing. For ease of exposition, I discuss only one view of what this licensing amounts to, namely Béjar and Řezáč (2003) (henceforth B&R). Crucially, the issues that arise regarding the Slovenian PCC with this approach extend to all analyses that rely on case or other non-structural asymmetries between the IO and DO.

For B&R, the special licensing condition that drives the PCC is the following:

(15) ***Person Licensing Condition* (PLC).** *An interpretable* 1P/2P *feature must be licensed by entering into an Agree relation with a functional category.*
(Béjar and Řezáč 2003:53)

A key assumption of B&R is that all Case is assigned as a reflex of Agree between φ-features.[9] For DOCs in particular, they propose that the DO is assigned ACC Case under Agree with *v* (Chomsky 2000), as shown in (16a), while the IO is assigned DAT Case under Agree with a null preposition (P) selected by the verb, as shown in (16b).

(16) a. [$_{vP}$ *v* [$_{VP}$ V DP:ACC]]
[φ]•—Agree—•[φ]

b. [$_{VP}$ V [$_{PP}$ P DP:DAT]]
[φ]•—Agree—•[φ]

Following standard assumptions, I will refer to Case assigned by *v* or T as *structural Case* and Case assigned by P as *inherent Case* below. Note that B&R follow Chomsky

[7] $\gg$ and » are used respectively to mark asymmetric c-command and linear precedence.

[8] Two notable exceptions are Nevins (2007; 2011) and Adger and Harbour (2007). Both argue for a one-probe/two-goals approach that does not require that 3P corresponds to a lack of [π] features.

[9] Following convention, "Case" stands for abstract syntactic case.

(2000) in assuming that Agree is limited to goals that have not yet been assigned Case. Thus, in (16b), once P assigns DAT to the DP, the DP is longer an *active* goal and no other head can establish an Agree relation with it. As I show in Section 3.1, this is what poses the main problem for B&R's analysis when applied to Slovenian.[10]

Having introduced the necessary mechanisms, we can now look at B&R's derivation of the PCC more closely, using the French examples in (17).

(17) a. Je **le** **leur** ai presenté.
I 3.DO 3PL.DAT have.1 introduced
'I introduced him to them.'

b. *Je **te** **leur** ai presenté.
I 2.DO 3PL.DAT have.1 introduced
'I introduced you to them.'
(French; Béjar and Řezáč 2003:53)

B&R take *v* to be a split probe with uninterpretable [π] and [#] features ([uπ], [u#]), where each must probe for matching interpretable features in their c-command domain. In DOCs like (17a,b), both IO and DO have interpretable [π] and [#] features ([iπ], [i#]), which in relation to the probes on *v* yields a one-probe/two-goals configuration. Furthermore, B&R propose that the IO is always assigned inherent DAT Case as the result of Agree with the φ-features of a null P selected by the ditransitive verb—this crucially takes place before *v* enters the derivation. Once *v* does enter the derivation, its [uπ] feature probes first and matches with the closest goal, which is the [iπ] on IO, as shown in (18a).[11] Because the IO already bears DAT Case, it is not an active goal and *v* cannot Agree with it. However, the IO still intervenes between the probes on *v* and their matching counterparts on DO, as shown in (18b).

(18) a. $[_{vP}$ *v* $[_{VP}\,[_{PP}$ P $\boxed{\text{IO:DAT}}\,]\,[_{V'}$ V $\boxed{\text{DO:\_\_\_}}\,]]]$
[uπ] • ····*Agree···· • [iπ] [iπ]

b. $[_{vP}$ *v* $[_{VP}\,[_{PP}$ P $\boxed{\text{IO:DAT}}\,]\,[_{V'}$ V $\boxed{\text{DO:\_\_\_}}\,]]]$
[uπ] • ···· [iπ] ···· • [iπ]
[u#] • ···· [i#] ···· • [i#]

The intervention in (18b) can be resolved with the cliticization of IO, as illustrated in (19). This leaves behind a trace, and traces do not count as interveners for Agree (Chomsky 2000, Anagnostopoulou 2003, Bošković 2011b). Note also that since [uπ] on *v* is never checked in (18a), B&R assume that it must get a default value. The PCC then arises during the [#]-cycle of Agree, which is also shown in (19).

(19) $[_{vP}$ $\boxed{\text{IO:DAT}}$ *v* $[_{VP}\,[_{PP}$ P $t_{IO}\,]\,[_{V'}$ V $\boxed{\text{DO:ACC}}\,]]]$
[iπ] [~~u~~π] (*[iπ]) $\Leftarrow$ PLC
[i#] [u#] • ——Agree—— • [i#]

As the IO's trace is not an intervener for Agree in (19), the [u#] on *v* can now Agree with the closest matching goal, [i#] on the DO. Agree for [#] features between *v* and the DO is then sufficient to result in structural ACC assignment. However, due to the

[10] Řezáč (2008), who gives an alternative, attributes the inaccessibility of DAT goals to Agree directly to the obligatory presence of a PP dominating them, assuming PP is a phase that makes the goal invisible for Agree. This change does not affect the incorrect predictions regarding the Slovenian facts.

[11] Note that the French surface clitic order in (17) does not reflect their position in (18). It is crucial for B&R (and for my analysis in Section 4) that the configuration is IO$\gg$DO at the stage when *v* probes. See Section 6 for a discussion of the relation between clitic order and the PCC cross-linguistically.

PLC (cf. (15)) the DO must be 3P, or the derivation crashes. Recall that 3P is assumed to correspond to a lack [π] features, while 1/2P requires the presence of [π] features. This means that the [π] features on a 1/2P.DO need to be licensed via Agree due to the PLC, but as Agree is only established for [#] in this cycle, this is not possible. This is why the 3P.DO in (17a) is grammatical and the 2P.DO in (17b) is not.

The question is why can the IO have any person value even though it cannot Agree with *v* in (18a). Recall that the IO gets inherent DAT via Agree with a null P which takes the IO as a complement. Thus, unlike with *v* and the DO, Agree between the P and the IO is always guaranteed, which also guarantees the satisfaction of the PLC.

The gist of this analysis is that the DO can only be 3P when the IO intervenes for ([π]) Agree between the DO and *v*, since then the PLC is not satisfied. B&R thus successfully derive the PCC as an intervention effect, which is important because they do not make use of extrinsic person hierarchies (Rosen 1990) or morphological constraints (Bonet 1991; 1994). But we will see below that this type of analysis cannot be extended to the reverse PCC (which, admittedly, was not known at the time of B&R).

3.1 Implications of the Slovenian PCC pattern

Recall that apart from the canonical PCC, which was the subject of B&R's analysis, Slovenian also exhibits the reverse PCC, where the person restriction applies to the IO clitic. A possible way to extend B&R's analysis to the reverse PCC would be to assume that in Slovenian the DO»IO clitic order, which yields the reverse PCC, corresponds to a structure where the DO asymmetrically c-commands the IO below *v*; so that the DO intervenes for Agree between *v* and the IO. But this is problematic: for B&R, the IO is always the complement of the P that assigns it DAT Case via Agree, which means the IO cannot be person restricted. The outcome is the same if we assume the DO»IO clitic order is the result of DO-over-IO movement below *v*, as in (20a), or if the DO is base generated above the IO inside VP, as in (20b).

(20) a. $[_{vP}\ v\ [_{VP}\ \boxed{\text{DO}}\ [_{PP}\ \text{P}\ \boxed{\text{IO}}\ ]\ [_{V'}\ \text{V}\ \ t_{DO}\ ]]]]$ (DO-over-IO movement)

b. $[_{vP}\ v\ [_{VP}\ \boxed{\text{DO}}\ [_{V'}\ \text{V}\ [_{PP}\ \text{P}\ \boxed{\text{IO}}\ ]]]]$ (base generation)

Although the DO in (20a) and (20b) technically intervenes for Agree between *v* and the IO, the IO is always a complement of P and can thus always Agree with P, which means any [iπ] features on the IO can always be licensed. This then wrongly predicts all person combinations to be possible: [iπ] features on the IO can always be licensed, and with no intervener between *v* and DO, so can any [π] features on the DO.

The only way to derive the reverse PCC and stay narrowly within B&R's framework is to stipulate for Slovenian that *only* with the DO»IO clitic order the DO bears *inherent* ACC assigned by a null P and the IO bears *structural* DAT assigned by *v*. Apart from lacking conceptual appeal, and the fact that B&R explicitly assume that in ditransitives ACC is structural and DAT inherent, this move also makes wrong predictions regarding ditransitive passives, where Slovenian exhibits the cross-linguistically common restriction against DAT arguments becoming subjects of passives.

In Slovenian DOCs, ACC alternates with NOM in passives, but DAT never does; this is generally taken to indicate that the ACC Case is structural and the DAT Case

is inherent (Chomsky 1986, Yip et al. 1987, Freidin and Sprouse 1991). Note that the passive counterparts of (21), which are given in (22), show not only that the DAT on the GOAL never alternates with NOM, but also that the GOAL is never the passive subject. In DOC passives, the GOAL can not bind the reflexive possessive *'svoj'*, which is a subject-oriented anaphor (Szucsich 2008, Fehrmann et al. 2010).[12] The reflexive is always bound by the THEME in DOC passives like (22). Even if the linear order of GOAL and THEME is changed, as in (22b), the facts remain the same: the subject of passives is the ACC object of the active counterpart. Thus, ACC must be structural and DAT is always inherent in Slovenian (see also Stegovec 2016b; in preparation a).

(21) Sestro$_i$ so predstavili { Roku. | svojemu$_i$ bratu. }
sister.F.ACC are.3.PL introduced.M.PL Rok.DAT | self's brother.M.DAT
'They introduced the sister$_i$ to Rok/her$_i$ brother.'

(22) a. Sestra$_i$ je bila predstavljena { Roku. | svojemu$_i$ bratu. }
sister.F.NOM is been.F introduced.F Rok.DAT | self's brother.M.DAT
'The sister$_i$ was introduced to Rok/her$_i$ brother.'

b. Roku je bila$_i$ predstavljena { sestra. | *svoja$_i$ sestra. }
Rok.DAT is been.F introduced.F sister.F.NOM | self's sister.F.NOM
'The sister/His$_i$ sister was introduced to Rok$_i$.'

Even ditransitive verbs like *'expose'* (cf. (23)), which require a DO»IO default object order (Marvin and Stegovec 2012), pattern with the canonical DOC seen above; the THEME is always the subject in (24). So even if the DO»IO clitic order were to correspond to an alternative construction, the status of ACC and DAT case in DOCs is always the same; the former is always structural and the latter is not.[13]

(23) Vodič je Ano izpostavil smradu.
guide.M.NOM is Ana.ACC exposed.M stench.M.DAT
'The guide exposed Ana to the stench.'

(24) a. Ana$_i$ je bila izpostavljena { smradu. | svojim$_i$ strahovom. }
Ana.NOM is been.F exposed.F stench.M.DAT | self's fears.M.DAT
'Ana$_i$ was exposed to the stench/her$_i$ fears.'

b. Psu$_i$ je bila izpostavljena { Ana. | *svoja$_i$ lastnica. }
dog.M.DAT is been.F exposed.F Ana.NOM | self's owner.F.NOM
'Ana/Its owner$_i$ was exposed to the dog$_i$.'

Although it is ultimately B&R's use of inherent DAT assignment as a [π] licenser that is problematic here, similar issues will arise with any analysis relying on an inherent asymmetry between IO and DO (apart from their position) (such as Anagnostopoulou

[12] The availability of specific subjecthood tests varies across Slavic, but the subject-orientation of reflexive possessives is a well-known constant (Perlmutter 1982, Franks 1995, Moore and Perlmutter 2000).

[13] Note that for B&R all DAT arguments (including clitics) are PPs. The analysis to be proposed in Section 4 does not require this assumption. In fact, there is a case to be made that at least DAT clitics cannot be PPs. As Abels (2003a;b) shows, in non-P-stranding languages (like Slovenian or French) clitics cannot be complements in PPs as a result of two conflicting requirements: (i) clitics in PPs must extract to a position outside PP, and (ii) PPs block complement extraction in non-P-stranding languages. This can also explain why in French prepositional ditransitives the IO is never a clitic (Perlmutter 1971, Kayne 1975).

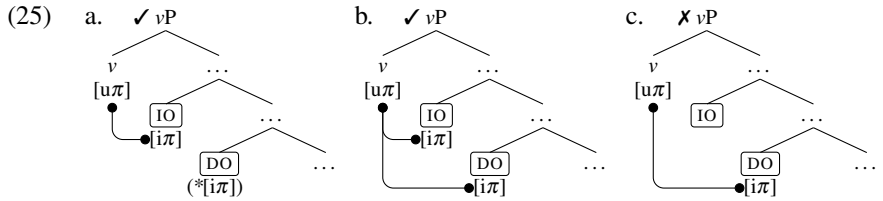
2003; 2005, Adger and Harbour 2007).[14] Remember that the combined PCC pattern in Slovenian is symmetric: the second object clitic is restricted whether that clitic is the IO or DO. Analyses that treat IO and DO asymmetrically will inevitably struggle with this. The usual strategy is to give the IO a special status, making it a trigger for the PCC effect but itself immune to it. If the two clitic orders in Slovenian correspond to different syntactic positions of IO and DO, such analyses will either predict that the PCC should be limited to the IO»DO order (cf. (20)) or that a canonical PCC should occur with both orders (for discussion relevant to these predictions, see Anagnostopoulou 2003:295–307). Despite the issues outlined here, I will argue in Section 4 that a modified syntactic intervention analysis can derive the reverse and canonical PCC as a unified phenomenon. The main idea I will put forth is that it is not an inherent asymmetry between IO and DO that drives the PCC, but the "deficient" status of the pronouns involved. This brings us back to the initial intuitions of Perlmutter (1971) and Bonet (1991), albeit deriving the restriction as a syntactic one.

3.2 Multiple Agree and the Weak PCC

In this section I have so far only discussed the Strong PCC, which is because B&R's analysis can only derive this version of the PCC: the DO can only Agree with *v* in [#] features, so the PLC prevents it from being anything other than 3P. Recall though that there is also the Weak PCC, where 1/2P object pairs are allowed, but *3P.IO≫1/2P.DO is still disallowed (or *3P.IO≫1/2P.DO in the case of the reverse PCC version).

This is addressed by Anagnostopoulou (2005), who proposes a derivation of the Weak PCC in which it results from *Multiple Agree* (MA) (Hiraiwa 2001; 2004), an operation where, unlike with regular Agree, one head may establish Agree with multiple arguments for the same feature. Anagnostopoulou then attributes the Strong vs. Weak PCC split to the existence of a MA parameter. With Strong PCC, Agree for [π] features is established only with the higher object, as seen in (25a), while with the Weak PCC this is also permitted with both objects simultaneously, as seen in (25b).

(25)



The option in (25b) allows both objects to be 1/2P. However, *3P≫1/2P (cf. (25c)) still needs to be excluded. For that, Anagnostopoulou proposes the condition in (26).

(26) ***Condition on MA.*** *Multiple Agree can take place only under non-conflicting feature specifications of the agreeing elements.* (Anagnostopoulou 2005:221)

[14] Anagnostopoulou (2003; 2005) proposes that IO and DO inherently carry different sets of φ-features: IO only has [π], while DO only has [#] if 3P or has both [#] and [π] if 1/2P. Adger and Harbour (2007), similarly, propose that the IO must always have a [participant] feature, even if 3P—in contrast to the DO. In both approaches, the PCC arises due to a Case-checking asymmetry that such differences yield in a DOC. In simplified terms: in the presence of an IO a 3P.DO can check Case while a 1/2P.DO cannot.

By assumption, 3P and 1/2P are conflicting feature specifications, so MA is not possible if the goals have those respective values.[15] In that case, regular Agree must take place and the higher goal acts as an intervener (cf. (25c)), yielding the PCC effect. This also means that the 1/2P≫3P vs. *3P≫1/2P contrast must arise same way as with the Strong PCC: the [u#] probe can skip the IO and Agree with a 3P.DO, but the [uπ] probe cannot skip the IO and Agree with a 1/2P.DO. For B&R this is because [uπ] probes first and IO is not an active goal, and for Anagnostopoulou (2003; 2005) this is because IO lacks [i#] features but has [iπ] features (cf. footnote 14). In both cases, this reintroduces an IO vs. DO asymmetry and with it the associated issues with the Slovenian paradigm. We shall see, however, in Section 4.1.3 that the Weak PCC can be derived without reference to IO vs. DO asymmetries or Multiple Agree.

4 Revisiting the Person-(*Case) Constraint

The Slovenian reverse PCC is actually not the only example of the PCC existing outside the canonical *inherent case* ≫ *structural case* mold. As Ormazabal and Romero (2007) note, Bantu languages may exhibit the PCC with object markers even though the inherent vs. structural case distinction appears to be inactive there. Furthermore, comparable restrictions are sometimes also found with subject-object pairs. One such case is Christian Barwar (Neo-Aramaic) (Kalin and van Urk 2015), where the person restriction applies on the object marker in the presence of a subject marker despite the subject not bearing inherent case. These kind of restrictions also show that PCC-like restrictions exist outside of DOCs, and hence cannot be tied exclusively to the IO≫DO configuration. At the other extreme are Digor and Iron Ossetic, which show PCC effects in constructions where the clitics bear distinct inherent cases (Erschler 2014). In (27), we see an example of this with an *ablative* (ABL) clitic co-occurring with a *superessive* (SUP) clitic; a clitic pair that in Iron Ossetic yields the Strong PCC.

(27) a. ɐmɐ=**myl**=**šɐ** Mɐdinɐ jettɐmɐ ničі ɐwwɐndy. (1.SUP+3.ABL)
and=1.SUP=3PL.ABL Madina besides nobody believes
'No one of them believes me, but Madina.'

b. *ɐmɐ=**jyl**=**nɐ** Mɐdinɐ jettɐmɐ ničі ɐwwɐndy. (*3.SUP+1.ABL)
and=3.SUP=1PL.ABL Madina besides nobody believes
'No one of us believes them, but Madina.' (Iron Ossetic; Erschler 2014:6)

The main reasons why the Slovenian PCC paradigm matters despite these previous observations are: **(i)** the reverse PCC arises in a *structural case* ≫ *inherent case* configuration, the exact opposite of the canonical PCC context, and **(ii)** there is a direct correlation in Slovenian between the person restriction and clitic order. Furthermore,

[15] A similar principle is employed by Nevins (2007; 2011), who proposes that both Strong and Weak PCC arise due to constraints on MA. The idea is that what counts as a conflicting specification, not the option of MA itself, is parameterized. If both goals have non-conflicting [π] values, the probe Agrees with them both, triggering clitic-doubling. However, if the two goals have conflicting [π] values, Agree is impossible with the lower one, yielding the PCC. Crucially, Agree never takes place with 3P goals in his system. This creates an issue though, as clitic-doubling must also take place with 3P objects. Thus, 3P clitics must be assumed to surface even when Agree fails, but this is at odds with Preminger's (2009) insight that failed Agree always results in the lack of clitic-doubling, never in "default" clitic-doubling.

unlike some other cases of the reverse PCC I discuss in Section 6, both clitics are expressed overtly and show DAT/ACC case contrasts across the whole paradigm.

The take away message from the Slovenian PCC paradigm is that (inherent) Case assignment does not guarantee the licensing of 1/2P, not even when the Case assigner and relevant argument are structurally adjacent. Similarly, the PCC cannot be a result of any asymmetry between the IO and DO other than their structural positions.

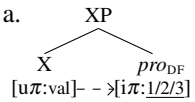
The analysis I develop below therefore does not rely on differences between IO and DO pronouns. It focuses instead on what they have in common: the pronouns sensitive to the PCC are always reduced/deficient. This brings the analysis closer to the intuition of Perlmutter (1971) and Bonet (1991), who saw pronoun type as the key factor in the PCC. More recently, Nevins (2011) also adopted a similar view, limiting the PCC to clitic pronouns. Like his, my analysis follows the logic of the one-probe/two-goals approaches outlined in Section 4, but also differs from them in significant ways. My point of departure is that the PCC results primarily from the φ-feature make-up of the relevant probe and goals, as opposed to a universal condition on Agree with [π] features (B&R, Baker 2008b) or a "fine-tuning" of the Agree operation itself (Nevins 2007; 2011). Lastly, even though my analysis was developed in response to the Slovenian PCC data, we will see that it can be easily extended to the canonical PCC by treating the latter as a subset of the full Slovenian PCC paradigm that arises when the options for object clitic displacement are more limited.

4.1 Deriving the PCC as a failed valuation of interpretable features

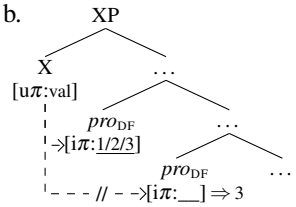
The analysis I propose here is inspired by the treatment of bound pronouns in Kratzer (2009) and jussive clause subjects in Zanuttini et al. (2012). The idea is that these are *minimal pronouns* which enter the derivation without φ-values and only get them during the derivation from a functional head with matching valued features. This implies an approach to valuation in the spirit of Pesetsky and Torrego (2007) and Bošković (2007; 2011a): interpretable features may enter the derivation unvalued and uninterpretable features may enter the derivation valued (contra Chomsky 2000; 2001).

I propose specifically: **(i)** that PCC-sensitive pronouns (henceforth pro_{DF}), which I assume are all deficient pronouns in the sense of Cardinaletti and Starke (1994; 1999) (i.e. clitic/weak pronouns), enter the derivation with *unvalued* [iπ] features, and **(ii)** that only some functional heads, like *v*, enter the derivation with *valued* [uπ] features (Kratzer 2009, Zanuttini et al. 2012). Because of the scarcity of valued [uπ] features, the PCC arises similarly as in other intervention accounts, albeit with a twist: it is the pronouns that must be [π]-valued, not *v*. The basic idea is illustrated in (28).

(28) a.



b.



Given a single pro_{DF} and functional head X hosting a valued [uπ], as in (28a), the pronoun can receive any [π] value from X. In contrast, in a structure with two pro_{DF}, as in (28b), only the higher pro_{DF} can receive a [π] value from X. In doing so, it blocks [π]-valuation of the lower pro_{DF}, which then gets a default value, that is 3P. Here I follow Béjar and Řezáč (2009) and Preminger (2014) in assuming that default 3P is no different from valued 3P (discussed in more detail in Section 4.1.3); 3P is just a [π] feature with no positive speaker or participant specification, not to be confused with the lack of [π] or an unvalued [π] (here I crucially assume that an unvalued [π] has the status of an active probe; see Bošković 2011a). In this view, a [π] that was valued 3P via Agree and a "default" 3P [π] that failed to be valued (which I assume does not cause the derivation to crash; cf. Preminger 2014) are equivalent at the interfaces.

In sum, the PCC arises in configurations like (28b) due to these key assumptions:

(29) a. *A* pro_{DF} *has unvalued* [iπ] *features that must be valued before spell-out;*
b. *An unvalued* [π] *can get a value either:* ***(i)*** *via Agree with a valued* [π]*, or* ***(ii)*** *by getting a default* 3P *value iff valuation via Agree is impossible.*

The result is that the PCC does not arise because a [iπ] fails to be licensed via Agree with a matching [uπ], but rather because an *unvalued* [iπ] fails to be valued by a matching *valued* [uπ]. The limited distribution of 1/2P is then not caused by specific configurations of Case-assigning heads and arguments, but by a mismatch in the number of functional heads with valued [uπ] and pronouns with unvalued [iπ].

There is also independent evidence against treating the PCC exclusively in terms of narrow-syntactic conditions like Case-licensing or B&R's PLC. As Charnavel and Mateu (2015) note, the PCC is voided in French when a 1P clitic is not read *de se*. This also holds for Slovenian. In cases like (30) (brought to my attention by Steven Franks) with two 1P clitics, speakers must interpret the DO as non-*de se* to avoid a Condition B violation. The PCC is then voided in (30) even for Strong PCC speakers.

(30) #Janez **mi** **me** je pojasnil.
Janez 1.DAT 1.ACC is explained.M
'Janez explained me (= what I am) to me.'

If the PCC arises simply because the DO's [iπ] is not being Agreed with, then the interpretation of the DO should not matter. Conversely, under the proposed analysis, the PCC boils down to the possible values the [iπ] itself can receive, opening the door for an explanation here in terms of the DO's [iπ] not being a "true" 1P at LF.[16]

Similarly, the claim I make that PCC-sensitive pronouns are minimal pronouns in the sense of Kratzer (2009) is motivated by their behavior in binding contexts. Bound subject pronouns must be null in many *pro*-drop languages (Montalbetti 1984), and as (31a) shows, this also holds for Slovenian. However, when the bound pronoun is an object, it must be a clitic as opposed to a strong pronoun, as shown in (31b).

(31) a. Nihče$_i$ ne misli, da je { $\langle$ ***pro***$_i\rangle$ | on$_{k,*i}$ } neumen.
no.one not thinks that is 3.M | he stupid.M
'No one$_i$ thinks that he$_{i,k}$ is stupid.'

[16] While I do not provide an analysis of non-*de se* 1P here due to space constraints, my analysis is in principle compatible with approaches to LF/PF feature mismatches like Smith (2015) or Messick (2016), where a non-*de se* 1P pronoun would have *interpretable* 3P features but *uninterpretable* 1P features.

b. Nihče$_i$ ne misli, da { **ga**$_i$ } bo strela udarila { njega$_{k,*i}$ }.
no.one not thinks that 3.M.ACC will.3 lightning strike.F him.ACC
'No one$_i$ thinks that lightning will strike him$_{i,k}$.'

The different behavior of the two pronoun types in (31b) can be explained in terms of Kratzer (2009) by assuming that clitic but not strong pronouns are minimal pronouns. According to Kratzer, binding triggers φ-valuation of the minimal pronoun, resulting in the antecedent and the bound pronoun having the same φ-feature values. Binding itself is mediated by functional heads—either *v* or C, which introduce the valued φ-features that value their counterparts on the bound minimal pronoun. Crucially for her, this *v*/C-mediated binding (and the resulting φ-valuation) is in complementary distribution with Agree for φ-features between *v*/C and pronouns, which is seen as an extension of the *anaphor agreement effect* (Rizzi 1990, Woolford 1999); i.e. anaphors are always in a complementary distribution with agreement controllers.

I take this as a key point in my analysis. The PCC, like binding in (31b), applies only to clitic and not strong pronouns.[17] The parallel behavior follows from the minimal pronoun nature of *pro*$_{\text{DF}}$; a [π] value can be supplied to *pro*$_{\text{DF}}$ either via binding or via Agree with the functional head that otherwise mediates binding, where the two options are in complementary distribution (cf. the anaphor agreement effect).

The crucial assumption regarding the PCC is that in the absence of binding, the relevant functional head (which is *v* here) only bears valued [uπ] features, all remaining φ-features on it being unvalued. Likewise, only the [iπ] features of the *pro*$_{\text{DF}}$ are unvalued. Here I build on Kratzer's (2009) idea that valued φ-features on *v*/C exist to encode speaker or addressee perspectives and link the speech act participants to arguments in a clause. In her system, the fact that a subject antecedent and object anaphor must match in φ-features follows from the unification of the valued φ-features of the subject introduced in Spec*v*P with *v*'s valued φ-features (via her *Predication* mechanism), where *v* in turn values the φ-features of the anaphor (a minimal pronoun). Since the matching must hold for all the φ-features, *v* can bear any kind of valued φ-feature in such configurations. I suggest that outside of binding configurations, *v* bears only those valued φ-features that are minimally required for encoding a speech act participant perspective, which means only valued [π] features.

We will see below why this is crucial for the derivation of the PCC: the proposed analysis will allow the canonical/reverse PCC distinction, the Strong/Weak PCC distinction, and the cases where the two interact, to all fall out exclusively from differences in the position of the IO and DO relative to *v* at the point of [π]-valuation.

4.1.1 A note on the DO»IO clitic order in Slovenian

In Section 3.1, DO-over-IO clitic movement below *v* was entertained as a possible prerequisite for deriving the reverse PCC. While this possibility did not work within B&R's account, we will see later that such short DO-over-IO movement can correctly

[17] There is another link between the PCC and binding, noted by Ormazabal and Romero (2007) (attributing it to Roca 1992): in some languages animate DO clitics cannot be bound in the presence of an IO clitic. Bhatt and Šimík (2009) also note for Slovenian that with the DO»IO clitic order, the binding ban applies to the IO clitic (parallel to the reverse PCC). I take the constraint as additional support for analyzing the PCC in terms of Kratzer (2009) (but see Charnavel and Mateu 2015 for an alternative view).

derive the reverse PCC within the proposed analysis of the PCC. However, it first has to be clarified where the possibility of this kind of clitic movement comes from.

In Slovenian, when both object clitics are 3P, their order is sensitive to information-structure: the DO»IO order is used when the DO clitic is a salient topic established in a previous utterance, as in (32), or when DO»IO parallels the order of full NP objects (which is in principle free; see below) in a previous utterance, as in (33).

(32) a. *Klobuk*? Od kdaj pa **on** nosi **klobuk**?
hat from when TOP he wears hat.ACC
'*A hat*? Since when does he wear *a hat*?'

b. Odkar **ga** **mu** je žena kupila.
ever.since 3.M.ACC 3.M.DAT is wife bought.F
'Ever since his wife bought it for him.'

(33) a. Kdo je pa **klobuk** dal **Davidu**?
who is TOP hat.ACC gave.M David.DAT
'And who gave *a hat* to David?'

b. Jana **ga** **mu** je dala.
Jana 3.M.ACC 3.M.DAT is gave.F
'Jana gave it to him.'

Interestingly, the DO»IO clitic order does not require a special information-structure context to be used with 1/2P.DO»3P.IO clitic sequences, where the DO»IO order is used to yield a licit equivalent of the ungrammatical *3P.IO»1/2P.DO sequence. The absence of the information-structure requirement in cases where the DO»IO order is used to avoid sequences banned by the PCC here parallels the behavior of strong pronouns in clitic pronoun languages (see e.g. Perlmutter 1971, Řezáč 2011): in such languages, the use of strong pronouns is normally restricted with respect to special information-structure requirements, except in the cases where the strong pronouns are used to avoid creating clitic sequences banned by the PCC. In fact, the IO»DO/DO»IO clitic alternation in Slovenian patterns more generally with other "PCC repairs" in that the restrictions that normally apply to the alternation change when the alternation is used to avoid the PCC effect (see Řezáč 2011 for discussion on PCC repairs).

Unlike Slovenian, other South Slavic languages lack the IO»DO/DO»IO order alternation with clitics. However, Slovenian clitics also show other idiosyncrasies not present in closely related languages. As discussed among others by Bošković (2001), Slovenian clitics can be both proclitics and enclitics, and clitic clusters can even be split under special conditions. I take this greater freedom in clitic placement as evidence that Slovenian clitics are internally more complex than clitics in other South Slavic languages (see also Section 4.2; Franks 2016), and suggest that this allows the former to sometimes behave more like full NPs. Specifically, I propose that this is what allows IO/DO clitics to exhibit the IO»DO/DO»IO alternation just like IO/DO NPs do in DOCs in Slovenian and many other languages, including Bosnian/Croatian/Serbian (Stjepanović 1999; for more cases and discussion, see Anagnostopoulou 2003). Another key parallel here is that the NP object alternation is subject to information-structure restrictions similar to those seen in (32,33) with clitic objects.

A question arises here about how the two orders arise—both with NP and clitic objects. Are they base generated or derivationally related? If the latter, what is the

base order? Solving this issue for IO and DO NPs in Slovenian is quite difficult—just as it is more generally in languages with comparable DOCs and apparent free word order—and I will not attempt to provide a solution here (but see Marvin and Stegovec 2012, Stegovec 2016b; in preparation a for discussion). In the case of clitic IOs and DOs, the analysis presented in the following sections is compatible with both base generation and derivational analyses; as long as the two orders are established before *v* enters the derivation, the result will be a canonical/reverse PCC alternation. I will, nonetheless, follow Anagnostopoulou's (2003) proposal that all DOCs universally have a IO≫DO base and attribute the IO»DO/DO»IO alternation to optional DO-over-IO movement below *v*. At this point, this move is motivated mainly by this being an existing analysis of the order alternation with full NP objects, but as will become clear in Section 6, the cross-linguistic distribution of canonical and reverse PCC points towards this being the correct analysis for clitic/weak IOs and DOs.

4.1.2 Deriving the Strong PCC

In my derivation of the PCC, I adopt the view that DOC ditransitives are applicative constructions (Marantz 1993, Pylkkänen 2002; 2008, Anagnostopoulou 2003, Georgala 2011) where the IO is introduced in the specifier of an ApplP projection that dominates the VP containing the DO. As with B&R's derivations in Section 3, this yields a base IO≫DO configuration, with both objects in the probing domain of *v*.

Like Kratzer (2009), I assume that *v* can bear valued uninterpretable φ-features—in contrast to the other argument-introducing heads in *v*P. Recall also that I proposed that not all φ-features have the same status regarding valuation in the absence of binding: [uπ] alone is valued, any other φ-features on *v* distinct from [π] (henceforth [Γ]) enter the derivation unvalued. Similarly, only the [iπ] feature of pro_{DF} is unvalued in such contexts, its remaining [iΓ] features are valued. This split is crucial for the derivation of the PCC in the current system because it encodes the lack of comparable "Number/Gender-Case Constraints", which are unattested.[18]

The derivation of the canonical Strong PCC in the current system is presented in (34) (to be spelled out below). Recall that this is the only person restriction pattern in languages like Greek or French, as well as the pattern observed with an IO»DO clitic order in Slovenian, where the DO clitic must be 3P in the presence of an IO clitic.

(34) [$_{vP}$ *v* [uΓ:__ , uπ:val] [$_{ApplP}$ IO [iΓ:val, iπ:~~1/2/3~~] [Appl [$_{VP}$ V DO [iΓ:val, iπ:__] ⇒ 3]]]]

(value: IO iΓ → *v* uΓ; value: *v* uπ → IO iπ; Agree)

In the approach to Agree adopted here (see also Bošković 2011a), unvalued features act as probes, matching valued features act as their goals, and the probing domain

[18] Number restrictions in DOCs only seem to arise due to language specific morphological factors (Ciucivara and Nevins 2008, Nevins 2011), whereas the PCC arises even with morphologically inert null markers (Albizu 1997b, Ormazabal and Romero 2007) and is insensitive to morphological factors like syncretism (Adger and Harbour 2007). I do not, however, exclude the possibility of PCC-like restrictions being sensitive to animacy and definiteness (see Ormazabal and Romero 2007). If Richards (2008) is correct, these notions are manifestations of [π] features and such restrictions should then also follow from my proposal.

is restricted to the probe's c-command domain. This means that when *v* enters the derivation in (34), its unvalued [uΓ] must probe for the closest available matching goal in its domain, which is the valued [iΓ] on the IO. As the IO is a *pro*$_{\text{DF}}$ in (34), it also has an unvalued [iπ]. This [iπ] feature can be valued as 1/2/3P by the corresponding valued [uπ] on *v*, once Agree is established between *v* and IO. This kind of parasitic valuation results due to the economy condition in (35) (cf. Řezáč 2004:477).

(35) ***Maximize Agree.*** *If Agree holds between heads X and Y for any feature, then all the unvalued features on X and Y must be valued by any matching features on the other element regardless of the direction of valuation.*

Since [π] and [Γ] features are located on the same head with both *v* and the IO in (34), the unvalued [iπ] on the IO can be valued by the c-commanding valued [uπ] as a result of the Agree relation established for [Γ] features.[19] Similar economy conditions have also been invoked for other Agree phenomena, for example in Bošković's (2009) analysis of first and last conjunct agreement, which like the current analysis assumes the option of both valued uninterpretable and unvalued interpretable features.

Returning to the derivation in (34). After the [uΓ] probe on *v* has entered Agree with the IO, the [uΓ] is valued and therefore no longer an active probe. Even if the IO were to subsequently move somewhere above *v*, leaving behind an inactive trace and removing itself as an intervener (as in B&R's analysis), *v* can no longer trigger Agree with the DO (also a *pro*$_{\text{DF}}$) because *v*'s only unvalued feature has been satisfied. Thus, Agree between *v* and IO deactivates *v* as a probe, which bleeds Agree between *v* and DO. And since there is no other way for *v* to value the DO's [iπ] in (34) (the only derivation available for DOCs in canonical Strong PCC languages), its [iπ] has to get a default 3P value as a last resort.[20] In other words, a *pro*$_{\text{DF}}$ DO must be 3P whenever a *pro*$_{\text{DF}}$ IO is present, which is what derives the canonical Strong PCC in this system.

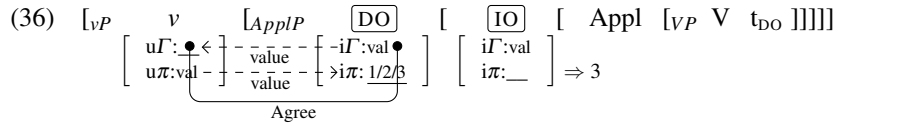
However, the probe-goal configuration in (34) is not the only option found cross-linguistically. In the current system, Weak PCC (see Section 4.1.3) and all reverse PCC patterns arise with alternative structural configurations of *pro*$_{\text{DF}}$ objects in relation to *v*. Let us look first at the reverse Strong PCC, which arises with a DO$\gg$IO configuration below *v*. I propose that the only difference needed to get this configuration from that seen in (34) is the option of DO-over-IO clitic movement below *v*.[21] The reverse PCC is thus possible in Slovenian, but not in canonical PCC languages like Greek or French, because only the former allows the DO$\gg$IO configuration to arise at this point

[19] The difference in the valued/unvalued status between [π] and [Γ] can also be related to the curious absence of PCC effects with reflexive clitics in Bulgarian (Rivero 2004) and Slovenian (Stegovec 2016a). Unlike the reflexive clitics in languages where these do yield PCC effects (Anagnostopoulou 2003; 2005), the reflexive clitics in Bulgarian and Slovenian never show number/gender contrasts—suggesting the lack of [Γ] features, but do pattern morphologically with 1/2P pronouns—suggesting the presence of [π] features. Due to the lack of [iΓ], these clitics are then not eligible goals for the [uΓ] probe on *v*. A reflexive IO then does not block Agree between *v* and a non-reflexive DO, which can then be valued 1/2P parasitically on [Γ], explaining why the PCC is voided in such cases in Bulgarian and Slovenian. In Slovenian, this holds for both Strong and Weak PCC, as well as the reverse PCC with reflexive DOs (Stegovec 2016a).

[20] Note that although DO's unvalued [iπ] is here technically an active probe without a matching goal in its probing domain, the last resort default value allows the derivation to proceed, in line with Preminger (2014). As we will see later, different displacement possibilities for the DO may change this outcome.

[21] As noted in Section 4.1.1, the derivation is also compatible with base generating DO$\gg$IO. But see Section 6 for arguments that DO-movement better fits the cross-linguistic distribution of the reverse PCC.

in the derivation. Importantly, the reverse PCC itself is derivable in the current system because the PCC is seen as independent from Case-assignment and other similar IO/DO asymmetries. The relevant derivation is shown in (36) and discussed below.

(36) 

(36) proceeds just like (34), except that the roles of the IO and DO are reversed. DO moves across IO before *v* is merged, so when *v* enters the derivation, the DO and not the IO is the closest goal for any probe on *v*. Because of this, [uΓ] on *v* now enters Agree with the [iΓ] on DO, not IO. Once Agree is established, the valued [uπ] on *v* also values the unvalued [iπ] on DO as 1/2/3P due to *Maximize Agree*. Following this, the [uΓ] on *v* is no longer a probe, so even if DO were to move above *v*, creating an inactive trace, the [iπ] on IO can no longer be valued via Agree with *v*, which means that it must get a default 3P value, resulting in a Strong restriction on the IO.

The derivations in (34,36) show that both the canonical and reverse Strong PCC can be derived in the proposed system. The PCC arises from a mismatch in the number of pro_{DF} objects and valued [uπ]. Basically, the Appl head introduces another pro_{DF} within *v*P, but not another valued [uπ], which means that *v* ends up being the only source of valued [uπ] for the two pro_{DF} objects, limiting their [π]-valuation possibilities. The availability of both IO≫DO and DO≫IO in Slovenian acts essentially as a PCC repair strategy. Each object configuration yields valuation options complementary to the other, so all person combinations apart from both objects being 1/2P can be derived via the reordering. Without the object clitic reordering as an option, we can only get IO≫DO below *v*, and consequently only the canonical PCC.

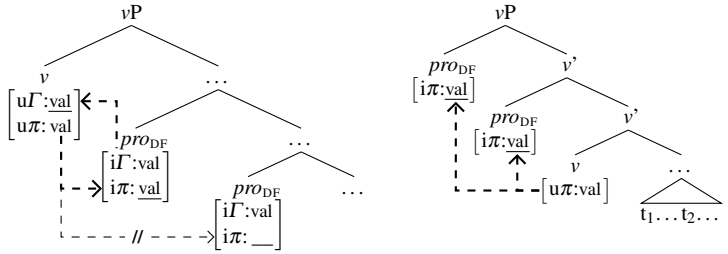
4.1.3 Deriving the Weak PCC

Recall now that there exists another PCC variant, the Weak PCC, which unlike the Strong PCC allows for 1/2P≫2/1P object combinations. In Section 3.2 we saw that Anagnostopoulou (2005) derives the Weak PCC as a consequence of Multiple Agree, which allows both IO and DO to Agree with *v*. But as noted above, the problems that the reverse PCC raises for B&R's system also carry over to her approach.

In the spirit of my general approach to the PCC, I will show that the Strong vs. Weak PCC split can also be derived from the properties of the pronouns themselves, without the need to invoke a special Multiple Agree operation.[22] The gist of the proposal is that due to differences in the internal make-up of pro_{DF}, languages differ in how and where the [iπ] of the pro_{DF} is valued, that is: **(i)** [iπ] is valued by *v* parasitically to [uΓ] when both pro_{DF} are in situ, as shown in (37a) (Strong PCC), or **(ii)** [iπ] is valued by *v* directly in a Spec-Head configuration after both pro_{DF} move to the specifiers of *v*, as shown in (37b) (Weak PCC). This difference will be shown below to be sufficient to capture the difference in the permissible clitic combinations.

[22] I do not argue against Multiple Agree as a possible operation, I simply show that it is not needed to derive the Weak PCC (but see Haegeman and Lohndal 2010 for explicit arguments against its existence).

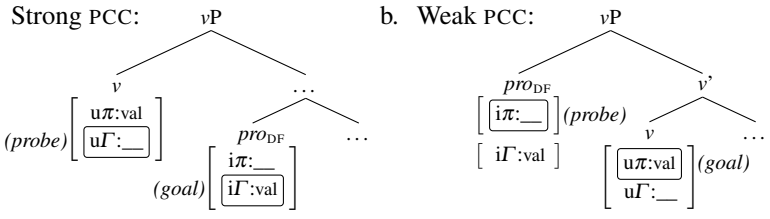
(37) a. Strong PCC: b. Weak PCC:



The two valuation options shown in (37) appear to require two distinct operations: Agree and Spec-Head agreement, which may be problematic in view of recent arguments against the Spec-Head relation as an operation distinct from Agree (Chomsky 2000). But, as I show below, there is actually no need for a distinct Spec-Head operation in the current approach—the variation can be captured while employing Agree in both cases. Note also that despite the absence of Multiple Agree in my analysis, the basic intuition behind it is still that of Anagnostopoulou (2005): unlike Strong PCC, Weak PCC requires Agree in [π] features between v and both objects. The main differences are in the direction of valuation, as part of my general approach to the PCC (see discussion above), and in the locus of parameterization, which I discuss next.

The core idea driving my approach to the parameterization here is that a richer pronoun structure can affect the probe-goal relations that the pronouns are involved in. Specifically, I propose the Weak PCC arises with *pro*$_{\text{DF}}$ that have a richer internal structure (the source of this difference will be discussed below): a branching structure where [iπ] and [iΓ] reside on distinct heads, as opposed to a non-branching structure where they form a bundle. The branching structure prevents the application of *Maximize Agree*, which only applies to features residing on the same head (cf. (35)), and consequently blocks the possibility of [iπ] being valued parasitically to [Γ]. The lack of parasitic valuation means that after v Agrees with the closest *pro*$_{\text{DF}}$ in [Γ] features, the *pro*$_{\text{DF}}$'s [iπ] stays unvalued and therefore an active probe. In order for this [iπ] to be valued, it must c-command a valued [uπ], which in this case is only available on v. I assume here, in line with Bošković's (2007) approach to valuation-driven movement, that the *pro*$_{\text{DF}}$ must then move to Spec$v$P so its [iπ] can be valued (see Bošković 2007; 2011a regarding other cases of such movement; e.g. arguments moving so their unvalued Case feature can probe and be valued). The parameterization of [π] valuation, resulting from the difference in *pro*$_{\text{DF}}$'s internal structure, is summed up in (38). The boxed features in (38) are those which initiate the Agree relation that results in the valuation of [iπ]; in (38a) parasitically to [Γ] and in (38b) directly.

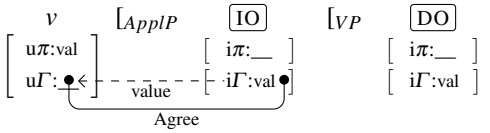
(38) a. Strong PCC: b. Weak PCC:



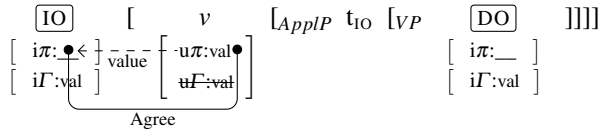
In contrast to Anagnostopoulou (2005), this view does not require a parameterization of the Agree mechanism itself—one of the core computational mechanisms of grammar (Chomsky 2000; 2001). Instead, the parameterization is limited to a difference in lexical items; i.e. a difference in the internal structure speakers attribute to the relevant pronouns. On the conceptual level, the choice between the two approaches relates to Borer's (1984) idea that models where language variation is limited to the idiosyncratic properties of lexical items are preferred over those where variation requires a manipulation of the core mechanisms of grammar (cf. the *Borer-Chomsky Conjecture*; Baker 2008a), which favors the current system over Anagnostopoulou's. There are also at least two empirical advantages of the lexical approach. First, it fits better the idiolectal variation reported for the Weak PCC in a number of languages (Bonet 1991, Ormazabal and Romero 2007, Anagnostopoulou 2008), where Weak PCC alternates with Strong PCC across speakers of the same language or dialect in a fairly unsystematic way (also true of Slovenian; see Section 2). This is not surprising if attributed to minimal lexical differences in pronouns between speakers, but rather unexpected from the perspective of a difference in a core grammatical operation. Second, Anagnostopoulou (2008) notes a striking generalization: languages with weak pronouns and no clitic pronouns only exhibit the Weak PCC. I will argue in Section 4.2 that her observation can be tied to weak pronouns being structurally more complex than clitic ones (Cardinaletti and Starke 1994; 1999); I will propose there that weak pronouns always have the branching internal structure with [iπ] and [iΓ] on separate heads. Pending that, it will suffice to represent the lexical difference in terms of one vs. two feature bundles (corresponding to two heads), as I did in (38).

Having introduced the mechanism driving the Strong vs. Weak PCC split, we can now take a closer look at the derivation of the Weak PCC itself, where I first focus on the derivation of the 1/2P≫2/1P combinations which were excluded with the Strong PCC. This is shown for the canonical Weak PCC pattern in (39) below, where I assume the same DOC structure as in the derivation of the Strong PCC in (34,36).

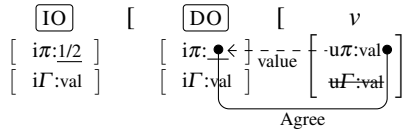
(39) a. [$_{vP}$ v [$_{ApplP}$ IO [$_{VP}$ DO]]]



b. [$_{vP}$ IO [v [$_{ApplP}$ t$_{IO}$ [$_{VP}$ DO]]]]



c. [$_{vP}$ IO [DO [v [$_{ApplP}$ t$_{IO}$ [$_{VP}$ t$_{DO}$]]]]

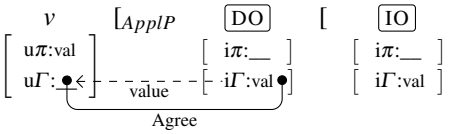


When v enters Agree with the IO in [Γ] features in (39a), v is deactivated as a probe. Due to the non-applicability of *Maximize Agree* (see discussion above), the [iπ] feature on IO can not be valued parasitically to [Γ], which leaves [iπ] an active probe. As IO's unvalued [iπ] does not c-command an eligible matching goal in its base-position, it must move to Spec$v$P, where v hosts a matching valued [uπ]. After that,

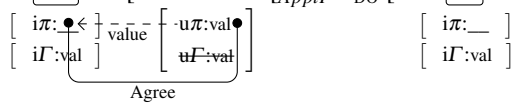
[iπ] probes and Agree is established, so it can be valued 1/2P by the [uπ] on *v*, as shown in (39b). The unvalued [iπ] on DO also does not c-command a matching goal in situ, so it must move to Spec*v*P as well. It does so, as shown in (39c), by *tucking in* (Richards 1997; 2001) below the IO, where it can successfully probe, enter Agree with [uπ] on *v*, and also be valued as 1/2P. The tucking in of the DO here follows from Bošković's (2007) system, where each movement step driven by an unvalued feature on the moving element obeys the *Shortest Move* requirement: movement must target the closest matching valued goal or, when there is no such goal, the phase head (for the moving element to escape being sent to spell-out; this is what makes successive cyclic movement possible in the system). As the closest goal for DO's unvalued [iπ] is on *v*, the DO must move to *v*, which requires tucking in as the inner specifier. In fact, if the DO were to merge above the IO here, the IO would also intervene for Agree between the DO and *v*, due to the locality constraints on Agree.

Notice that, just like the derivation of the Strong PCC discussed above, the derivation of the Weak PCC in this system does not reference Case and the IO and DO have an equal status. This means that all that is needed for the reverse version of the Weak PCC in this system is a DO≫IO configuration at the point *v* enters the derivation (I continue to assume that it arises via short DO-over-IO movement). The derivation of a 1/2P≫2/1P clitic combination with a reverse Weak PCC pattern is given in (40).

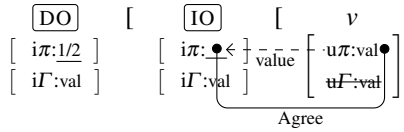
(40) a. [$_{vP}$ *v* [$_{ApplP}$ DO [IO [$_{VP}$ t_{DO}]]]]



b. [$_{vP}$ DO [*v* [$_{ApplP}$ t_{DO} [IO [$_{VP}$ t_{DO}]]]]



c. [$_{vP}$ DO [IO [*v* [$_{ApplP}$ t_{DO} [t_{IO} [$_{VP}$ t_{DO}]]]]]



The only difference here in relation to the canonical Weak PCC derivation in (39) is the flipping of IO and DO at a level below *v*, so the derivation in (40) proceeds just like (39), only the roles of IO and DO are reversed. Agree first occurs between *v* and the DO pro_{DF} in [Γ] features, but leaves the DO's [iπ] feature unvalued (cf. (40a)). The DO must then move to Spec*v*P to get its [iπ] valued as 1/2P via Agree with *v*'s valued [uπ] (cf. (40b)). This is followed by the IO pro_{DF} moving and tucking in under the DO, where IO's unvalued [iπ] also gets a 1/2P value via Agree with *v*'s [uπ] (cf. (40c)).

With (39) and (40) we have successfully derived the possibility of 1/2P≫2/1P clitic combinations while highlighting the valuation-driven movement of pro_{DF} that makes these derivations possible as well as the equal status of IO and DO that the reverse PCC patterns require. We are yet to see though how combinations that are grammatical with both Strong and Weak PCC (3P≫3P, 1/2P≫3P) arise in Weak PCC grammars and, more importantly, how the person restriction itself arises (*3P≫1/2P).

To do this, we must look more closely at the person feature system and explore the status of valued uninterpretable features. As a preview, the gist of the proposed Strong vs. Weak PCC split is that although both arise due to a failure to value the [iπ] of a *pro*$_{\text{DF}}$ object, the failure occurs with the Strong PCC due to a pure intervention effect blocking [π]-valuation, while with the Weak PCC it occurs because of the set order in which the two *pro*$_{\text{DF}}$ move to Spec*v*P, which in turn constrains [π]-valuation.

Recall that I noted in Section 4.1 that I take a default value [π] feature to be non-distinguishable from a 3P-valued [π] feature or an unvalued [π] feature (the latter only being different in that it is an active probe that "wants" a value). This equivalence can be easily derived from a privative approach to [π] features (see e.g. Harley and Ritter 2002, McGinnis 2005, Béjar and Řezáč 2009). In most such approaches, each person value corresponds to a different set of atomic sub-features, as illustrated in Table 2. These sub-features stand in a dependency relation (i.e. the presence of [π] is required for PART, and the presence of PART is required for AUTH), and 3P crucially corresponds to a bare [π] feature, so it is the same if valued or default/unvalued.

Table 2 A privative system for person features

1st person (1P)	2nd person (2P)	3rd person (3P)
$\begin{bmatrix} \pi \\ \text{PART} \\ \text{AUTH} \end{bmatrix}$ = person = participant = author	$\begin{bmatrix} \pi \\ \text{PART} \end{bmatrix}$	$[\ \pi\ ]$

With this feature system, valuation induces the copying of PART and AUTH under Agree from a valued goal to an unvalued probe. If multiple probes establish Agree with the same goal, they must all receive sub-features from the goal. Like in most approaches to Agree, it is assumed crucially that whenever the conditions for valuation are met, valuation (i.e. copying of sub-features) must take place. For example, *v* can either have or not have PART as part of its valued [uπ] feature set, so if two probes stand in an Agree relation with it, *v* cannot share PART with just one of them (making it 1/2P) and withhold it from the other (making it 3P). As a consequence, all *pro*$_{\text{DF}}$ in Spec*v*Ps (and in an Agree relation with *v*) will be valued as 1/2P if the valued [uπ] on *v* is specified for PART, while if the *v*'s [uπ] lacks PART they will all be restricted to 3P. The former option is illustrated in (41), with the impossible valuation options shown in (41b-d), while the latter is illustrated in (42) (I use '$\varnothing$' to mark a default "empty" value). Note that due to the symmetric behavior of IO and DO, the options in (41,42) hold for both the canonical and reverse Weak PCC.

(41) a. ✓ $[_{vP}\ pro_{\text{DF1}}\ \begin{bmatrix} \text{i}\pi \\ \underline{\text{PART}} \end{bmatrix}\ [_{v'}\ pro_{\text{DF2}}\ \begin{bmatrix} \text{i}\pi \\ \underline{\text{PART}} \end{bmatrix}\ [_{v'}\ v\ \begin{bmatrix} \text{u}\pi \\ \text{PART} \end{bmatrix}\ [_{ApplP}\ \ldots\ ]]]]$ 1/2P≫2/1P

b. ✗ $[_{vP}\ pro_{\text{DF1}}\ \begin{bmatrix} \text{i}\pi \\ \underline{\text{PART}} \end{bmatrix}\ [_{v'}\ pro_{\text{DF2}}\ \begin{bmatrix} \text{i}\pi \\ \underline{\varnothing} \end{bmatrix}\ [_{v'}\ v\ \begin{bmatrix} \text{u}\pi \\ \text{PART} \end{bmatrix}\ [_{ApplP}\ \ldots\ ]]]]$ 1/2P≫3P

c. ✗ $[_{vP}\ pro_{\text{DF1}}\ \begin{bmatrix} \text{i}\pi \\ \underline{\varnothing} \end{bmatrix}\ [_{v'}\ pro_{\text{DF2}}\ \begin{bmatrix} \text{i}\pi \\ \underline{\text{PART}} \end{bmatrix}\ [_{v'}\ v\ \begin{bmatrix} \text{u}\pi \\ \text{PART} \end{bmatrix}\ [_{ApplP}\ \ldots\ ]]]]$ 3P≫1/2P

(42)

d. ✗ $[_{vP}$ $pro_{\text{DF}1}$ $\begin{bmatrix} \text{i}\pi \\ \varnothing \end{bmatrix}$ $[_{v'}$ $pro_{\text{DF}2}$ $\begin{bmatrix} \text{i}\pi \\ \varnothing \end{bmatrix}$ $[_{v'}$ v $\begin{bmatrix} \text{u}\pi \\ \text{PART} \end{bmatrix}$ $[_{ApplP}$ …]]]] 3P≫3P

✓ $[_{vP}$ $pro_{\text{DF}1}$ $\begin{bmatrix} \text{i}\pi \\ \varnothing \end{bmatrix}$ $[_{v'}$ $pro_{\text{DF}2}$ $\begin{bmatrix} \text{i}\pi \\ \varnothing \end{bmatrix}$ $[_{v'}$ v $[\ \text{u}\pi\ ]$ $[_{ApplP}$ …]]]] 3P≫3P

The PCC is at its core a restriction on the distribution of 1/2P pronouns—those with a PART sub-feature. AUTH, which is required to express 1P vs. 2P distinctions (see Table 2), is dependent on PART; that is, AUTH cannot occur in the absence of PART. Thus, if a pro_{DF} lacks PART on [iπ], it also cannot be valued for AUTH. Consequently, limiting the discussion to the distribution of PART will suffice for the issue at hand.

The question is then how do 1/2P≫3P combinations arise? Recall that 1/2P≫2/1P combinations arise when both pronouns Agree with *v*. In such cases, the first pro_{DF} to Agree with *v* does not deactivate the valued [uπ] feature for the next pro_{DF}. This falls in line with independent proposals that Agree or checking does not always deactivate or delete the formal features driving the relevant operation, leaving the features accessible for later computation.[23] I argue here, though, that derivations where Agree causes the deactivation of uninterpretable features are still the default case, and yield 1/2P≫3P combinations in the current system. This contrasts with the Weak PCC derivations so far, which are special cases where the deactivation does not occur.

The issue here is what happens to uninterpretable features when they enter Agree or get checked (cf. Chomsky 1995; 2000; 2001).[24] Although generally uninterpretable features are assumed to be deleted right after checking, Bošković (1999) notes that some of them must remain accessible even after checking (i.e. they are not deleted right after; consider in this respect the relevant feature on interrogative C in multiple wh-fronting languages like Bulgarian). In relation to the current analysis, I propose that valued uninterpretable features (like [uπ] on *v*), in particular, are special with respect to Agree and deletion: they *can* be, but *need not* be, deleted right after Agree (see also Bošković 2011a regarding the special status of valued uninterpretable features in this respect). The latter option, where they remain accessible for further Agree operations, is what we saw in (39,40) and (41a) with 1/2P≫2/1P clitic combinations, where the PART-specified [uπ] must be accessible to both pro_{DF}. In contrast, the former option, when they are deleted, is what derives 1/2P≫3P clitic combinations.

The derivation of 1/2P≫3P is given in (43). After $pro_{\text{DF}1}$ moves to Spec*v*P and is valued by *v*'s [uπ] via Agree, the [uπ] is deleted (cf. (43a)). This means that when $pro_{\text{DF}2}$ also moves to Spec*v*P to be valued, *v* no longer hosts a matching valued [uπ], and $pro_{\text{DF}2}$ can therefore only get a default 3P value (as last resort; cf. (43b)).

(43) a. $[_{vP}$ $pro_{\text{DF}1}$ $\begin{bmatrix} \text{i}\pi \\ \underline{\text{PART}} \end{bmatrix}$ $[_{v'}$ v $\overset{\text{value}}{\leftarrow}$ $\begin{bmatrix} \sout{\text{u}\pi} \\ \sout{\text{PART}} \end{bmatrix}$ $[_{ApplP}$ … t_1 … $pro_{\text{DF}2}$ $\begin{bmatrix} \text{i}\pi \\ \underline{\quad} \end{bmatrix}$ …]]]]

[23] In this respect, see e.g. Demuth and Gruber (1995) on multiple instances of subject agreement in Bantu, Bobaljik (1995) on verb movement in Germanic, Bošković (1999) on multiple wh-movement languages, as well as Collins (1995), Ura (1996), Hiraiwa (2001; 2004) for discussion of related ideas.

[24] Although the checking operation predates Agree, they can be equated for present purposes. What is important is that they are both operations that occur between matching feature sets; the issue of what happens to uninterpretable features after taking part in a checking or Agree operation arises with both.

b. $[_{vP}\ pro_{\text{DF}1}\ \begin{bmatrix} i\pi \\ \underline{\text{PART}} \end{bmatrix}\ [_{v'}\ pro_{\text{DF}2}\ \begin{bmatrix} i\pi \\ \underline{\varnothing} \end{bmatrix}\ [_{v'}\ v\ [_{ApplP}\ \ldots\ t_1\ \ldots\ t_2\ \ldots\ ]]]]$ 1/2P≫3P

Note that the movement of both *pro*$_{\text{DF}}$ is driven by [π]-valuation regardless of whether *v* can actually value them. From the perspective of *pro*$_{\text{DF}}$ in situ, movement to Spec*v*P is blind with respect to whether there is a valued [uπ] on *v*; there is no lookahead with valuation-driven movement of this kind (see Bošković 2007). Recall that an element X with an unvalued feature that cannot be valued in situ must move to the closest available position where X can c-command a matching valued goal, which is here Spec*v*P. In the absence of a matching valued goal, X moves to the phase edge, which is also Spec*v*P. In the latter case, the *pro*$_{\text{DF}}$ can get a default 3P value as a last resort.

Turning to the person restriction itself, the unattested *3P≫1/2P combinations cannot be derived precisely because receiving a default 3P value is allowed only as a last resort, and because the movement of multiple *pro*$_{\text{DF}}$ to Spec*v*P occurs in a set order: *pro*$_{\text{DF}1}$ always moves first, followed by *pro*$_{\text{DF}2}$. If *v*'s [uπ] is specified for PART, at least the first *pro*$_{\text{DF}}$ that moves to Spec*v*P (*pro*$_{\text{DF}1}$) will have to be 1/2P, since *v* cannot withhold PART from *pro*$_{\text{DF}1}$ whenever its [uπ] enters the derivation with it. Therefore, a 3P *pro*$_{\text{DF}1}$ is only possible if *v*'s [uπ] lacks PART from the start. In that case, *pro*$_{\text{DF}2}$ will always have to be 3P as well, hence *3P≫1/2P cannot be derived.[25]

To reiterate, the full Weak PCC pattern arises due to the limited options available for the [π]-valuation of two *pro*$_{\text{DF}}$ in Spec*v*P: **(i)** 1/2P≫2/1P arises when *v*'s [uπ] has PART and [uπ] is not deleted after valuing *pro*$_{\text{DF}1}$, as in (41a), **(ii)** 3P≫3P arises when *v*'s [uπ] lacks PART, as in (42),[26] and finally **(iii)** 1/2P≫3P arises when *v*'s [uπ] has PART and [uπ] is deleted after valuing *pro*$_{\text{DF}1}$, as in (43). Crucially, *pro*$_{\text{DF}1}$ can only be 3P when *v*'s [uπ] lacks PART, in which case *pro*$_{\text{DF}2}$ must also be 3P, as it has no other source of valued [uπ] in *v*P, which captures the Weak PCC pattern.

This subsection has shown that both the canonical and the corresponding reverse Weak PCC can be derived within the current approach to the PCC. Again, Case plays no role in the derivation, which is a prerequisite for deriving the reverse PCC, as discussed above. Also, the Strong vs. Weak PCC split was derived lexically, by treating the *pro*$_{\text{DF}}$ in Weak PCC systems as a (minimally) different lexical entry.

4.1.4 A note on 1P *vs.* 2P *asymmetries in Slovenian*

The analysis I just presented predicts the canonical and reverse Weak PCC to be symmetric. But the person restriction is not entirely symmetric for Slovenian Weak PCC

[25] A reviewer asks what prevents *pro*$_{\text{DF}2}$ in Strong PCC derivations in Slovenian (cf. (34,36)) from moving across *pro*$_{\text{DF}1}$ to Spec*v*P and be [π]-valued there. Recall that object reordering can occur in Slovenian before *v* enters the derivation, so either IO or DO can be closest to *v* and be [π]-valued without having to move to Spec*v*P. It is possible that the option of early object reordering (below *v*) blocks any derivations with late object reordering—like the one suggested by the reviewer. Another possibility is that with the Strong PCC, where *Maximize Agree* forces [π] to be valued parasitically to [Γ], the immediate valuation of all unvalued features on both *v* and *pro*$_{\text{DF}1}$ always enforces the immediate deletion of [uπ] on *v* (cf. (43)), thus leaving the *pro*$_{\text{DF}2}$ without a source of valued [π] even if it moved to Spec*v*P. As it does not matter for the present discussion which of the options is correct, I leave teasing them apart for future work.

[26] Due to the optionality of [uπ] deletion, there are really two derivations that yield 3P≫3P: one parallel to **(i)**—where [uπ] is not deleted after Agree with *pro*$_{\text{DF}1}$, and one parallel to **(iii)**—where it is deleted. Since valued and default 3P are equivalent in the [π] system I adopt, both come out the same.

speakers (see footnote 4), for whom 2P.DO»1P.IO clitic sequences are possible but *1P.DO»2P.IO are not (the rest conforms to the predictions of (39,40); see Table 3).

Table 3 The full Weak PCC pattern in Slovenian (impossible combinations in bold)

Weak canonical:	3.IO»3.DO	1/2.IO»3.DO	***3.IO»1/2.DO**	1.IO»2.DO	2.IO»1.DO
Weak reverse:	3.DO»3.IO	1/2.DO»3.IO	***3.DO»1/2.IO**	***1.DO»2.IO**	2.DO»1.IO

I argue that this 1P vs. 2P asymmetry operating on top of the Weak PCC is in fact independent from the PCC, as it displays a sensitivity to perspective shifts that the PCC does not. Based on this, I will suggest that the asymmetry results from restrictions on logophoric licensing (see Kuno 1987, Charnavel and Mateu 2015).

More fine-grained person restrictions are often found either alongside or independently of the PCC. Consider Bosnian/Croatian/Serbian (BCS), which exhibits neither the Strong nor the Weak PCC (Migdalski 2006), and has a rigid IO»DO clitic order. As shown in (44), BCS speakers allow any IO»DO clitic combination, as long as the DO is not 1P.[27] Thus, although BCS clitic pairs conform to neither the Strong PCC nor the Weak PCC pattern, they do display an asymmetry between 1P and 2/3P clitics.

(44) a. Toplo **mi** **te** preporučuje. 1.IO+2.DO
warmly 1.DAT 2.ACC recommend.3
'He warmly recommends you to me.'

b. ??(*)Toplo **ti** **me** preporučuje. *2.IO+1.DO
warmly 2.DAT 1.ACC recommend.3
'He warmly recommends me to you.'

c. Toplo **mu** **te** preporučujem. 3.IO+2.DO
warmly 3.M.DAT 2.ACC recommend.1
'I warmly recommend you to him.'

d. ??(*)Toplo **mu** **me** preporučuje. *3.IO+1.DO
warmly 3.M.DAT 1.ACC recommend.3
'He warmly recommends me to him.' (BCS; Runić 2013)

I take the clitic restriction we see in BCS to indicate that other kinds of person restrictions can exist independently from the Strong or Weak PCC.

Regarding the particular case of the Slovenian 1P vs. 2P asymmetry, there is also independent evidence that the clitic restriction is completely independent from the PCC (i.e. that it is not a PCC effect): the person restriction pattern changes with the shift in perspective associated with questions. The change is illustrated with the examples in (45) and (46); compare here the pattern with the one in Table 3.

(45) a. **Ti** **me** je pokazal?
2.DAT 1.ACC is shown.M

b. *__Me__ **ti** je pokazal?
1.ACC 2.DAT is shown.M
'Has he shown me to you?'

(46) a. *__Mi__ **te** je pokazal?
1.DAT 2.ACC is shown.M

b. **Te** **mi** je pokazal?
2.ACC 1.DAT is shown.M
'Has he shown you to me?'

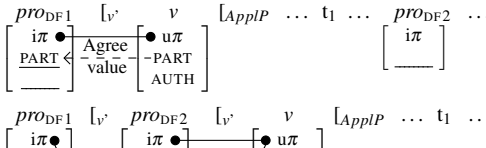
[27] Interestingly, some speakers I consulted actually judge DO»IO clitic orders as slightly improved when the IO»DO clitic order would result in a banned combination such as *2P.IO»1P.DO.

In questions, 1/2P clitic pairs must conform to a 2P»1P pattern across both IO»DO (cf. (45a,46a)) and DO»IO orders (cf. (45b,46b)). Recall that in declaratives, this restriction was only active with the DO»IO order. What is important here is that the baseline PCC effect in Slovenian remains completely unchanged in questions; to the best of my knowledge this in fact holds for all languages with the PCC. In contrast, declarative vs. interrogative contrasts are the hallmark of perspective shift phenomena; e.g. the restrictions on empathy-marking verbs in Japanese (Kuno 1987; see also below) and *conjunct-disjunct marking* (Pearson 2012, Wechsler 2017), where a special verb form is used with 1P subjects in declaratives and 2P subjects in questions. Based on this, I conclude that the particular 1P vs. 2P asymmetry found in Slovenian is more in line with these types of phenomena and in fact independent from the PCC.

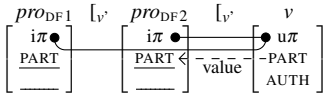
A full analysis of the asymmetry is beyond the scope of this paper; I will only provide a tentative sketch of it below in terms of logophoric licensing. Before that, I return to the Weak PCC in relation to AUTH-valuation. The purpose of this is to show why the Weak PCC derivation does not yield the 1P vs. 2P asymmetry in question.

Recall that within a [π] feature set, AUTH cannot occur in the absence of PART due to the former being in a dependency relation with the later (cf. Table 2), which I argue also has an effect on Agree/valuation (see also Béjar and Řezáč 2009, Preminger 2014 on privative [π] feature geometries interacting with Agree/valuation). Specifically, I propose that PART must be valued before AUTH. Thus, when multiple probes Agree with one goal, as is the case in Weak PCC derivations, *all* the probes must be valued for PART before they can be valued for AUTH. This process is illustrated in (47,48).

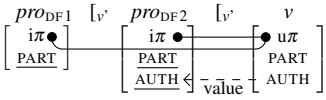
(47) a. $[_{vP}$ $pro_{\text{DF}1}$ $[_{v'}$ v $[_{ApplP}$ … t_1 … $pro_{\text{DF}2}$ …]]]]



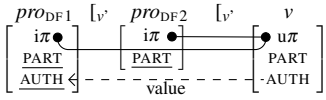
b. $[_{vP}$ $pro_{\text{DF}1}$ $[_{v'}$ $pro_{\text{DF}2}$ $[_{v'}$ v $[_{ApplP}$ … t_1 … t_2 …]]]]



(48) a. $[_{vP}$ $pro_{\text{DF}1}$ $[_{v'}$ $pro_{\text{DF}2}$ $[_{v'}$ v $[_{ApplP}$ … t_1 … t_2 …]]]] 2P≫1P



a′. $[_{vP}$ $pro_{\text{DF}1}$ $[_{v'}$ $pro_{\text{DF}2}$ $[_{v'}$ v $[_{ApplP}$ … t_1 … t_2 …]]]] 1P≫2P



Each pro_{DF} moves to Spec$v$Ps, enters Agree with the valued [uπ], and receives PART independently, as shown in (47): $pro_{\text{DF}1}$ moves first, then $pro_{\text{DF}2}$ tucks in under it. AUTH may then be copied from [uπ] either to $pro_{\text{DF}1}$, as in (48a), or to $pro_{\text{DF}2}$, as in (48a′). Both options are possible because both pronouns already stand in an Agree relation with the [uπ] of v; the option of both getting AUTH is presumably blocked to avoid a Condition B violation (cf. also (30) above). I want to suggest that this type of derivation is the only option for AUTH-valuation with the Weak PCC.[28]

[28] I do not, however, exclude the possibility that differences in the timing or locus of AUTH-valuation could potentially arise due to language-specific factors and give rise to more fine-grained person restric-

Returning to the 1P vs. 2P asymmetry in Slovenian, I suggest it relates to the constraints on empathy-marking verbs in Japanese (Kuno 1987), where the IO-empathy form of 'give', *'kure-ru'* (as opposed to the subject-empathy *'yar-u'*), must be used with a 1P.IO—mirroring the requirement that IO be 1P in DO»IO clitic sequences in Slovenian. According to Kuno (1987), the enforced use of *'kure-ru'* with a 1P.IO is due to 1P being ranked highest in the *empathy hierarchy*. Related to this, Charnavel and Mateu (2015) independently argue that *clitic empathy loci* (IO clitics) and *discourse participant clitics* (1/2P clitics) must be licensed via a local relation with a *logophoric operator* in the left periphery, which means two 1/2P clitics cannot both be licensed by it.[29] I will argue that *1P.DO»2P.IO clitic sequences are ungrammatical for Weak PCC speakers of Slovenian due to a failure in logophoric licensing.

As we saw, two 1/2P clitics can co-occur with the Weak PCC, which means Charnavel and Mateu's licensing condition is too strong. Thus, I suggest that in Weak PCC languages a backup licensing strategy can be employed. Namely, if both clitics are 1/2P: **(i)** only the IO (the empathy locus) must be local to the logophoric operator (satisfied with IO≫DO), and **(ii)** if the fist condition is not satisfied, the IO must be 1P, due to 1P being highest on the empathy hierarchy. Note that **(i)** and **(ii)** correctly exclude only *1P.DO»2P.IO sequences, where DO intervenes between IO and the logophoric operator, but also IO is not 1P. Consider also that **(ii)** would not be required if not for the option of two clitic orders in Slovenian, which may be why this particular 1P vs. 2P asymmetry is so rare. The remaining issue is how logophoric licensing changes in questions, where the 2P»1P order is enforced for all 1/2P clitic pairs (cf. (45,46)). The change could be due to a different logophoric operator which only requires that 2P clitics be local to it. The need for a different operator here might be due to questions being speech acts that prioritize the perspective of the addressee rather than the speaker (see Speas and Tenny 2003). This is, however, clearly an issue that requires further examination which is beyond the scope of the present discussion.

4.2 More on pronoun types and how they interact with the PCC

One of the most common PCC repair strategies involves realizing at least one of the two objects of a banned combination as a strong pronoun (see Perlmutter 1971, Kayne 1975, Řezáč 2011), as seen with the contrast between the two Slovenian examples in (49). B&R argue that the repair is due to the obligatory presence of an additional projection on top of strong pronouns which licenses their [iπ] feature by Agreeing with them; the extra projection is assumed to be either a focus projection or a PP.[30]

tions like the one we saw with BCS above (see also Nevins 2007 for more similar restrictions). This is something I leave as a possibility to explore in future work; but see Franks (2016) for an analysis of the BCS person restriction based on an earlier version of the analysis of the PCC presented here.

[29] Charnavel and Mateu (2015) in fact argue that the PCC itself should be reduced to this restriction—the IO clitic intervenes between the operator and the 1/2P clitic. But this excludes both the Weak PCC and the reverse PCC—the patterns which show that the PCC should not simply be reduced to logophoric licensing.

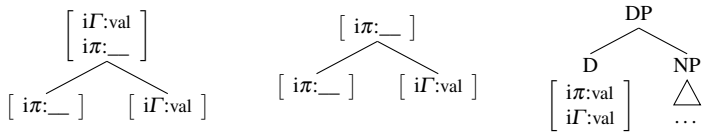
[30] Anagnostopoulou (2003; 2005) alternatively argues that in these cases strong pronouns simply do not check their φ-features against *v*, as they do not enter into a Move/Agree relation with *v*. This means that Case-checking must not be a requirement for strong pronouns (Anagnostopoulou 2003:316–321). While

(49) a. *Peter **mu** **te** bo priporočil. *3.IO(clitic)+2.DO(clitic)
Peter 3.M.DAT 2.ACC will.3 recommend.M
b. Peter **mu** bo priporočil **tebe**. 3.IO(clitic)+2.DO(strong)
Peter 3.M.DAT will.3 recommend.M you.ACC
'Peter will recommend you to him.

The focus projection option predicts all strong pronouns should bear focus, but this does not hold (see Cardinaletti and Starke 1994; 1999). Conversely, the PP option means that in cases like the Slovenian (49b), with no overt PP dominating the strong DO pronoun, one must assume a null P that exists solely to Agree with the DO and license its [iπ] feature. But as we saw in Section 3.1, the DO in Slovenian ditransitives always bears structural ACC, which is incompatible with a null P Case-assigner.

I will argue instead that the difference in sensitivity to the PCC is due to pronoun-internal differences in the structure, roughly along the lines of Cardinaletti and Starke (1994; 1999), who note a number of syntactic, semantic, and prosodic properties associated with different types of pronouns, requiring a three-way split into: **(i)** clitic pronouns, **(ii)** weak pronouns, and **(iii)** strong pronouns. Generally, the PCC occurs only with clitic and weak pronouns,[31] which Cardinaletti and Starke take to be structurally deficient; i.e. lacking a projection that strong pronouns have (which according to them makes only strong pronouns able to surface in A-positions, be coordinated, have their own semantic range, and resist phonological reduction). I focus here mainly on the semantic differences, e.g.: strong pronouns may be referential without being associated with a discourse-prominent antecedent while deficient pronouns either require such antecedents or are completely expletive (i.e. non-referential). I will consider here the latter a form of referential deficiency that I will link to unvalued [iπ] features—their value either depends on an external element or they lack one. In contrast, I assume strong pronouns are DPs whose D head has valued [iπ] features (along with other valued features) that make them fully referential. Like Cardinaletti and Starke, I propose a three-way typology, albeit with some differences in the implementation. The proposal is illustrated in (50), and elaborated on below.

(50) a. clitic pronoun: b. weak pronoun: c. strong pronoun:



Both (50a) and (50b) lack D, but differ from each other in terms of internal structure. I assume here that outside of D, individual φ-features enter the derivation as heads, and that merging two heads presents an issue for the *Labeling Algorithm* (LA) of Chomsky (2013): if X^0 and YP merge, X^0 projects (determines the label of the

this does capture the facts, it is difficult to see why strong pronouns should be exempt from Case-checking, especially with cases like Slovenian where clitic and strong forms both express the same case contrasts.

[31] One potential exception to this generalization is Icelandic, where strong NOM object pronouns are restricted to 3P in the presence of a DAT subject (Taraldsen 1995). However, as Schütze (2003) argues, there is evidence that this actually results from the ineffability of the agreement marker itself. I discuss the relevance of the difference between the PCC and this Icelandic person restriction in Stegovec (2016a).

new syntactic object), but if X^0 and Y^0 merge, none can project. In Chomsky (2015), the latter is assumed to only occur when *roots* merge with category defining heads like *v*, in which case roots are too weak to project and *v* projects. But it has been proposed, based on cross-linguistic patterns of suppletion (Moskal 2015), that pronouns lack both roots and category defining heads. This means that determining the label of pronouns composed of multiple heads would require a non-trivial LA resolution. Based on this, I propose that the difference between clitic (50a) and weak pronouns (50b) lies in the strategy used to resolve the LA conflict caused by the merging of the heads corresponding to the [iπ] and [iΓ] feature sets.[32] In (50a), [iπ] and [iΓ] project together, yielding a feature bundle (cf. *feature sharing* as proposed by Chomsky 2013).[33] Consequently, clitics are not regular heads, which fits Chomsky's (1995) idea that clitics are ambiguous XP/X^0 elements (see also Section 5). In (50b), the same LA conflict is resolved differently: [iπ] alone determines the label of the complex head in weak pronouns (the difference could be tied to the *strong* vs. *weak head* idea of Chomsky 2015, Saito 2016). Strong pronouns are unlike both deficient pronouns, as they are DPs with their own *valued* [iπ], as seen in (50c). This is why strong pronouns do not show PCC effects; they do not require external valuation of [iπ]. I suggest that the valued status of [iπ] is a consequence of the referential status of D. Referentiality is inherently incompatible with underspecification of [π], as having a specific referent requires reference to a specific [π] value.

The structures in (50) also derive the lexical split I proposed above as the source of the Strong vs. Weak PCC variation. *Maximize Agree* (cf. (35); pg. 18) ensures that Agree between unvalued [uΓ] on *v* (which also hosts valued [uπ]) and a head with both valued [iΓ] and unvalued [iπ] will result in [iπ] being valued in the same Agree relation as [uΓ], yielding Strong PCC. This in fact follows from the pronoun structure in (50a), where [iπ] and [iΓ] are bundled into a single head. Compare now (50a) to (50b). In (50b), Agree between [uΓ] on *v* and [iΓ] on a pro_{DF} cannot result in the parasitic valuation of [iπ], as [iπ] and [iΓ] are not bundled in (50b). The unvalued [iπ] on the pronoun must then function as a probe, resulting in the movement of the pronoun to Spec*v*P, a position from where it c-commands the [uπ] of *v*, so it can be valued, which results in the derivation of the Weak PCC proposed in Section 4.1.3.

This approach to pronouns can also be used to derive Anagnostopoulou's (2008)'s generalization: languages with only weak pronouns can only have the Weak PCC.[34] The structure for weak pronouns in (50b) can in fact only give rise to the Weak PCC, which predicts that *all* languages which reportedly conform to Weak PCC with clitics actually lack true clitics and only have weak pronouns instead. Languages where speakers are transitioning from a clitic to an exclusively weak pronoun system might then be expected to display the reported inter-speaker variation regarding

[32] The following, however, does not fully conform to Chomsky's (2013, 2015) conception of the LA.

[33] The resulting object is not unlike what was assumed about INFL prior to Pollock (1989), namely that it was a bundle of T and AGR. See also Bobaljik and Thráinsson (1998) regarding the parameterization of the INFL split, which is similar to what I am proposing regarding the clitic/weak pronoun split.

[34] A reviewer suggests English as a potential counterexample, as it appears to have the Strong PCC (Richards 2008). But it is not entirely clear that English deficient pronouns are not clitics. As Bošković (2004a) points out, at least pronouns that license quantifier float cannot be coordinated and must be unstressed (*'*Mary hates you, him, and her all'*; *'*Mary hates THEM all'* vs. *'Mary hates them all'*), which are properties associated with clitics (see also Lasnik 1999 regarding clitic pronouns in English).

Strong and Weak PCC (see Section 4.1.3). Such inter-speaker variation also exists in Slovenian, and, as seen above, Slovenian clitics display properties not found in other South Slavic clitic systems. Bošković (2001) observes that Slovenian clitics are among other things: **(i)** losing the rigid 2nd position requirement in some environments, **(ii)** clitic clusters can be split by non-clitic material, **(iii)** can under certain conditions attach both to the right (enclisis) or the left edge (proclisis) of the same host, and **(iv)** even occur completely stranded. This relaxation of otherwise cross-linguistically very consistent requirements, which used to hold with Slovenian clitics, may indicate that Slovenian clitics are being reanalyzed by some speakers as weak pronouns (see also Franks 2016), bringing along the Weak PCC pattern. However, a closer examination of how much these idiosyncratic clitic-placement properties correlate with the presence of Weak PCC must be left for future work.

The proposed pronoun typology predicts that pronoun type correlates not only to whether the PCC is active or not (deficient vs. strong pronouns), but also to the type of the PCC ('clitic pro_{DF}s' yield the Strong PCC, while 'weak pro_{DF}s' yield the Weak PCC). What this typology leaves out are languages with "true" object agreement, which have also been reported to show PCC effects. In this regard, I adopt Nevins's (2011) view that the purported PCC-sensitive agreement markers are in fact all clitic pronouns—although it must be noted that the status of the markers in question can only truly be established via careful examination on a language by language basis.

4.3 Interim summary

I have proposed an analysis of the PCC which divorces it from Case and other inherent IO vs. DO asymmetries, and instead ties it to the pronoun type. This move was necessary due to the existence of the reverse PCC. In this approach the PCC arises because the relevant pronouns are minimal pronouns without a $[\pi]$ value, which they must receive externally via Agree from a functional head with matching valued $[\pi]$ features (v), or they get a default 3P value as a last resort. As locality restrictions on Agree make the structurally lower object clitic inaccessible for valuation, this clitic must always be 3P, resulting in Strong PCC. The analysis also captures the Strong vs. Weak PCC split, which is attributed to a minimal lexical variation in PCC-sensitive pronouns. I argued that the relevant pronouns in Strong PCC languages act as goals for Agree, while (due to differences in their internal structure) deficient pronouns in Weak PCC languages act as probes, hence need to move to Spec$v$P to be $[\pi]$-valued. Because multiple pronouns can move to Spec$v$P, the additional clitic combinations allowed with Weak PCC can then be derived. I have also proposed that the reverse PCC is possible in Slovenian simply because of optional short DO-over-IO clitic movement.

This general approach to the PCC will be extended in the following sections to other cases where the PCC interacts with clitic reordering. Specifically, I will first discuss a PCC repair strategy that arises with imperatives in Slovenian and how it relates to a another type of clitic reordering coexisting with the IO»DO/DO»IO clitic order alternation we discussed so far (Section 5), moving then to a note on the cross-linguistic typology of PCC interactions with clitic order (Section 6).

5 Not all clitic reordering is equal: another PCC repair in Slovenian

In addition to the IO»DO/DO»IO clitic alternation that makes extra person combinations available, Slovenian also has a construction where person restrictions seem to disappear regardless of the clitic order. Namely, the PCC is absent in imperatives. Slovenian clitics appear post-verbally in imperatives to satisfy the 2nd position requirement.[35] Interestingly, the order of clitics is then insensitive to person values, as (51,52) show;[36] note also that because 2P object clitics must be replaced by reflexives in imperatives, only combinations of 1P and 3P object clitics are attested.

(51) a. Predstavi **mu** **me**!
introduce.IMP 3.M.DAT 1.ACC
b. Predstavi **me** **mu**!
introduce.IMP 1.ACC 3.M.DAT
'Introduce me to him!'

(52) a. Predstavi **mi** **ga**!
introduce.IMP 1.DAT 3.M.ACC
b. Predstavi **ga** **mi**!
introduce.IMP 3.M.ACC 1.DAT
'Introduce him to me!'

There is also an additional complication. Slovenian allows imperatives in reported speech, in which case clitics are pre-verbal; embedded imperatives are introduced by the standard subordinating complementizer, which occupies the 1st clausal position in C, so clitics must surface pre-verbally. Curiously, as seen in (53,54), this configuration shows the same PCC effects we see in declaratives; in contrast to (51,52).[37]

(53) a. *?Rekla je, da **mu** **me** predstavi. *3.IO»1.DO
said is that 3.M.DAT 1.ACC introduce.IMP
b. Rekla je, da **me** **mu** predstavi. 1.DO»3.IO
said is that 1.ACC 3.M.DAT introduce.IMP
'She said that you should introduce me to him!'

(54) a. Rekla je, da **mi** **ga** predstavi. 1.IO»3.DO
said is that 1.DAT 3.M.ACC introduce.IMP
b. *?Rekla je, da **ga** **mi** predstavi. *3.DO»1.IO
said is that 3.M.ACC 1.DAT introduce.IMP
'She told you that you should introduce him to me!'

Note that the reappearance of the PCC is not limited to embedded imperatives. It holds for any imperative where the clitics are pre-verbal in order to conform to the 2nd position requirement; e.g. when a sentence initial adverb is added, as in (55,56).

[35] See Sheppard and Golden (2002) regarding clitic placement in Slovenian imperatives. I noted above that Slovenian is loosing a rigid 2nd position requirement, occasionally allowing clitics in the 1st position, but as Sheppard and Golden observe, this is not true of imperatives, which never allow 1st position clitics.

[36] The editor asks if the lack of PCC effects in imperatives could be tied to the perspective shift effects discussed briefly in Section 4.1.4. This is an attractive idea, given that imperatives have been argued to shift the perspective to the addressee, just like questions (Speas and Tenny 2003), and we saw in Section 4.1.4 that Slovenian questions differ from declaratives in terms of possible clitic combinations. However, imperatives and questions behave differently here: recall that the order of 1P and 2P clitics is more constrained in questions than outside of them and that the PCC effect is actually observed in questions. Furthermore, there is independent evidence that imperatives actually pattern with declaratives, not questions, in terms of perspective encoding. I discuss the relevant semantic and syntactic facts in Stegovec (2017a; 2018).

[37] The PCC effect is perceived as weaker than in declaratives here, although it is stronger again with 3P.F clitics—it is unclear why this is so. A similar weakening of the PCC is also observed in Greek imperatives with the DO»IO clitic order (see (59b) below and Bonet 1991, Mavrogiorgos 2010 for discussion).

(55) a. *?Takoj **mu** **me** predstavi! *3.IO»1.DO
immediately 3.M.DAT 1.ACC introduce.IMP
b. Takoj **me** **mu** predstavi! 1.DO»3.IO
immediately 1.ACC 3.M.DAT introduce.IMP
'Introduce me to him immediately!'

(56) a. Takoj **mi** **ga** predstavi! 1.IO»3.DO
immediately 1.DAT 3.M.ACC introduce.IMP
b. *?Takoj **ga** **mi** predstavi! *3.DO»1.IO
immediately 3.M.ACC 1.DAT introduce.IMP
'Introduce him to me immediately!'

Interestingly, imperatives are not special only in Slovenian in relation to object clitic behavior, and by extension the PCC. Alternating object clitic orders are restricted in some languages to specific constructions. A famous example is found in Greek, where IO»DO and DO»IO clitic orders are possible post-verbally in imperatives (cf. (57)), but not in finite clauses, where clitic order is restricted to IO»DO (cf. (58)) (Warburton 1977, Joseph and Philippaki-Warburton 1987, Terzi 1999, Bošković 2004b).

(57) a. Diavase **mou** **to**!
read.IMP 1.DAT 3.N.ACC
b. Diavase **to** **mou**!
read.IMP 3.N.ACC 1.DAT
'Read it to me!'

(58) a. **Mou** **to** diavase.
1.DAT 3.N.ACC read.3
b. *__To__ **mou** diavase.
3.N.ACC 1.DAT read.3
'S/he is reading it to me.'
(Greek; Bošković 2004b:291–293)

Recall that Greek also exhibits a canonical Strong PCC effect with object clitics in finite clauses (see Section 1; (2)). But unlike in Slovenian, the PCC does not disappear with imperatives in Greek, as (59) shows, regardless of the clitic reordering.

(59) a. *Danise **tu** **me**!
lend.IMP 3.M.DAT 1.ACC
'Lend me to him!'
b. ??Danise **me** **tu**!
lend.IMP 1.ACC 3.M.DAT
'Lend me to him!'
(Greek; Mavrogiorgos 2010:262)

These examples show an important point regarding clitic order and the PCC: not all optional IO»DO/DO»IO clitic order alternations yield a canonical/reverse PCC alternation. Nonetheless, I will argue that the Greek *clitic switch* in (59) and the lack of the PCC in Slovenian imperatives have a common source. Namely, with both, a clitic reordering occurs *after* $[\pi]$-valuation. In Greek this prevents the clitic switch from affecting the PCC pattern, but in Slovenian the clitic switch exists on top of the canonical/reverse PCC alternation. Recall that the combined canonical/reverse PCC pattern in Slovenian results in a clitic order governed by person value: e.g. 1.2P clitics always precede 3P clitics. However, since this order restriction is enforced within *v*P, any subsequent reordering of the clitics—like the clitic switch—will reverse the previously established order, thus undoing the PCC-induced order restriction.

For the clitic switch in Greek, and by extension the behavior of clitics in Slovenian imperatives, I will adopt and expand the analysis of Bošković (2004b), which assumes that clitics can move successive cyclically, leaving behind copies which allow

for the possibility of *lower copy pronunciation* (LCP) (see Bošković 2001 regarding this approach to clitics, and Bošković and Nunes 2007 for an overview of arguments for LCP). The clitic switch is observed when LCP occurs with the IO and DO clitics and the next set of available IO and DO copies has a reversed order (cf. (60c)) compared to their default order in the absence of LCP (cf. (60b)). As the switch takes place in PF, it does not directly interact with [π]-valuation in the syntax.

(60) a. syntax: [IO [DO [… [DO [IO [… [IO [DO […]]]]]]]]

b. PF (default): [[IO] [[DO] [… [~~DO~~ [~~IO~~ [… [~~IO~~ [~~DO~~ […]]]]]]]]

c. PF (switch): [~~IO~~ [~~DO~~ [… [[DO] [[IO] [… [~~IO~~ [~~DO~~ […]]]]]]]]

5.1 The clitic switch as lower copy pronunciation

The key assumptions that drive Bošković's (2004b) analysis are: **(i)** LCP of the object clitics is forced by an adjacency requirement that holds between V and an imperative head, and **(ii)** object clitics can move to their final landing site in two different ways, resulting in different series of intermediate movement steps. Assumption **(i)** builds on Miyoshi's (2002) analysis of the ban on negative imperatives in Greek as parallel to *Do-Support* with negation in English—shown in (61); a finite main verb cannot occur with negation, so an infinitive verb with the auxiliary *'do'* is used instead.

(61) a. *John not laughed. b. John did not laugh.

Both with imperative verbs in Greek and finite main verbs in English we are dealing with the ban on a particular verb form co-occurring with negation. Miyoshi's insight was to treat (61) and the ban on negative imperatives as the same phenomenon. In both, negation blocks *affix hopping/PF merger*.[38] The ban on negative imperatives occurs because the imperative head (IMP)[39] requires affixation to the verb under PF adjacency (cf. the *Stranded Affix Filter*; Lasnik 1981; 1995) and the presence of negation blocks the PF merger of IMP, resulting in ungrammaticality, as illustrated in (62). Just like in the English case, the ban can be voided with an alternative form which does not require PF merger—for example, an infinitive verb form, as in (63).

(62) a. *Den/mi diavase!
NEG read.IMP
'Don't read!'

b. ✗ [$\text{IMP}_{\text{affix}}$= [NEG [=V]]]

(63) a. Den/mi diavázo!
NEG read.INF
'Don't read!'

b. ✓ [NEG [V.INF]]

(Greek; Bošković 2004b:288)

This analysis can be extended to clitic-positioning in Greek, allowing for a uniform syntactic treatment of declarative pre-verbal and imperative post-verbal clitics. In both cases, the head of the chain formed by clitic movement (CL_2) is in the same

[38] The account of the English ban is essentially Chomsky's (1957) analysis in terms of affix hopping. The analysis has been revived more recently, in particular by Halle and Marantz (1993), Bobaljik (1995).

[39] For Miyoshi (2002) the IMP head is an imperative C. But as embedded imperatives do occur cross-linguistically with both overt C and imperative morphology (also in Slovenian), it seems more likely the head corresponds to a modal operator positioned somewhere above V and below C (Kaufmann 2012).

position syntactically (cf. (64a)), and is the copy pronounced at PF in declaratives (cf. (64b)). However, the highest copy remains unpronounced when IMP forces LCP (i.e. the spell-out of the CL_1 copy) due to the Stranded Affix Filter (cf. (64c)). The algorithm for copy pronunciation used here is the one argued for by Bobaljik (1995), Franks (1998/2010), Bošković (2001), where the highest copy of a moved element is pronounced unless pronouncing it would induce a PF violation (as it would in (64c)), in which case the next highest available copy of the moved element is pronounced.

(64) a. [CL_2 [V [CL_1 …]]] *copy/internal merge* (syntax)
b. [$\boxed{CL_2}$ [V [~~CL_T~~ …]]] ⇒ *pre-verbal* (PF)
c. [IMP= [~~CL_2~~ [=V [$\boxed{CL_1}$ …]]]] LCP ⇒ *post-verbal* (PF)

The other component of Bošković's (2004b) analysis are the two clitic movement options—crucial for deriving the optionality of the switch. For Bošković, clitics adjoin via head-movement to heads that c-command them as soon as possible. However, he suggests that IO clitics may forego adjunction to the previously formed {DO V} complex head, when the latter moves through a position c-commanding them, as in (65a), and adjoin directly to their final landing site. Alternatively, the derivation involves an extra step where the IO does adjoin to {DO V} early, as in (65b).

(65) a. [IMP= [{~~IO~~+{~~DO~~ =V}} [{$\boxed{\text{DO}}$ ~~V~~} [$\boxed{\text{IO}}$ [… [$_{VP}$ {~~DO+V~~} ~~DO~~]]]]]]
b. [IMP= [{~~IO~~{~~DO~~ =V}} [{$\boxed{\text{IO}}$+{$\boxed{\text{DO}}$ ~~V~~}} [~~IO~~ [… [$_{VP}$ {~~DO+V~~} ~~DO~~]]]]]]

This results in two different clitic orders when LCP is forced by IMP and the next available set of IO and DO copies is pronounced: (a) the clitic switch is observed in (65a), where the head-adjunction of IO to {DO V} is delayed, and (b) the clitic order is preserved in (65b), where IO head-adjoins to {DO V} early. As the two derivations are equally available, the IO»DO/DO»IO alternation is correctly predicted to be optional.

5.2 The clitic switch meets the reverse PCC

Bošković (2004b) suggests that the IO may resist early head-adjunction due to "dative sickness": the cross-linguistic tendency of DAT-marked arguments to not tolerate feature checking with T. However, linking the clitic switch to Case sensitivity runs into a similar problem with Slovenian as the Case sensitive analyses of the PCC. If the clitic switch is to apply on top of the IO≫DO/DO≫IO alternation within *v*P, it needs to work the same way with both object configurations. If only the IO could head-adjoin late, we would get the opposite predictions for the DO≫IO configuration. As shown in (66), a late-adjoining IO would then yield a IO»DO order as the default one without LCP (undoing the previous syntactic reordering) and a DO»IO order with LCP—in other words, a clitic switch outside imperatives and no clitic switch in imperatives.[40]

(66) [IMP= [{~~IO~~+{~~DO~~ =V}} [{$\boxed{\text{DO}}$+~~V~~} [~~DO~~ [$\boxed{\text{IO}}$ [$_{VP}$ V ~~DO~~]]]]]

[40] Notice that in order for DO-over-IO movement to even occur, it cannot be preceded by head-adjunction of the DO clitic to V. Because of this I assume here and below that in such cases head-adjoining "as soon as possible" means head-adjoining as soon as possible after DO-over-IO movement has taken place.

In line with my general approach to the PCC, I propose instead that the two head-adjunction options are in fact linked to the properties of the pronouns involved.

I adopt Chomsky's (1995) proposal that clitics are ambiguous XP/X^0 elements and take this to imply that clitics should be able to both XP-move and head-move. Clitics that head-adjoin may only undergo further movement as part of the resulting complex head, but as XP/X^0 ambiguous elements they can also XP-move successive cyclically before head-adjoining in their final landing site (which I assumed in my derivations so far). I propose that the former type of head-adjunction must take place *as soon as possible*, and the latter takes place *as late as possible* (the clitic moves successive-cyclically as an XP as far as possible). In a DOC, the former option means that a DO clitic can head-adjoin to the verb as soon as possible, as in (67a), moving further only as part of the verbal complex. But a DO clitic can also XP-move, using Spec*v*P as an escape hatch on its way to its final landing site (Chomsky 2000; 2001) (I ignore for now the two head-adjunction options for the IO for ease of exposition).

(67) a. [$_{vP}$ IO {{DO V}Appl}*v*} [$_{ApplP}$ IO {{DO V}∘Appl} [$_{VP}$ {DO∘V} DO]]]

b. [$_{vP}$ IO [$_{v'}$ DO {{V Appl}*v*} [$_{ApplP}$ IO {V∘Appl} [$_{VP}$ V DO]]]]

Crucially the variability of clitic-movement inside of *v*P does not affect anything in the previous discussion regarding the PCC: both options still result in DO having to leave *v*P without being valued, hence spelling-out with a default 3P value. This is because clitic-adjunction does not change the intervention configuration—the IO here still asymmetrically c-commands the DO at the point when *v* probes.

As the derivations progress, (67a) continues as shown in (68a), with the DO head-moving cyclically to T as part of the verbal complex,[41] while the IO head-adjoins to T directly from Spec*v*P (I assume T to be the final landing site for both clitics). (67b) continues as shown in (68b), with the cyclic head movement of the verbal complex all the way to T, and the head-adjunction of both IO and DO directly to T.

(68) a. [$_{TP}$ {IO{{DO V … *v*}T}} [$_{AspP}$ {{DO V …}∘Asp} [$_{vP}$ IO {DO V …}} …]]]

b. [$_{TP}$ {IO{DO{{V … *v*}T}}} [$_{AspP}$ {{V …}∘Asp} [$_{vP}$ IO [$_{v'}$ DO {V …}} …]]]]

Normally, (68a) and (68b) yield the same surface order: IO»DO. They diverge only in imperatives, where the IMP affix forces LCP. The configuration of the next highest IO and DO copies in (68a) leads to a clitic switch in PF, as seen in (69a), while the copy configuration in (68b) results in the same clitic order in PF, as seen in (69b).

(69) a. [IMP= [$_{TP}$ {~~IO~~ ~~DO~~ =V} [$_{AspP}$ {DO ~~V~~} [$_{vP}$ IO {~~DO~~ ~~V~~} […]]]]]

b. [IMP= [$_{TP}$ {~~IO~~ ~~DO~~ =V} [$_{AspP}$ {~~V~~} [$_{vP}$ IO DO {~~V~~} […]]]]

Consider now that in Slovenian we also have the option of either a IO≫DO or DO≫IO clitic configuration within *v*P. So together with the two clitic movement options that

[41] Nothing hinges on the identity of the head(s) between *v* and T here, but there are many arguments in the literature for projections between *v*P and TP; e.g.: from verb movement (Belletti 1990, Cinque 1999, Stjepanović 1999), subject positions (Bobaljik and Jonas 1996), and quantifier float (Bošković 2004a).

yield the clitic switch in (69) we predict *four* distinct copy configurations for IO and DO. Based on this, the surface clitic orders resulting from LCP are given in (70) for an underlying IO≫DO structure and in (71) for an underlying DO≫IO structure.

(70) a. [IMP=[$_{TP}${~~1.IO~~ ~~3.DO~~ =V}] [$_{AspP}${3.DO ~~V~~}] [$_{vP}$ 1.IO {~~3.DO~~ ~~V~~}] [. . .]]]]] [=(69a)]

b. [IMP=[$_{TP}${~~1.IO~~ ~~3.DO~~ =V}] [$_{AspP}${~~V~~}] [$_{vP}$ 1.IO 3.DO {~~V~~}] [. . .]]]]] [=(69b)]

(71) a. [IMP=[$_{TP}${~~1.DO~~ ~~3.IO~~ =V}] [$_{AspP}${3.IO ~~V~~}] [$_{vP}$ 1.DO {~~3.IO~~ ~~V~~}] [~~1.DO~~ ~~3.IO~~ [~~V~~ ~~1.DO~~]]]]]]

b. [IMP=[$_{TP}${~~1.DO~~ ~~3.IO~~ =V}] [$_{AspP}${~~V~~}] [$_{vP}$ 1.DO 3.IO {~~V~~}] [~~1.DO~~ ~~3.IO~~ [~~V~~ ~~1.DO~~]]]]]]

Recall that the PCC effect arises within *v*P (where 1P.IO≫3P.DO and 1P.DO≫3P.IO can be derived, but not *3P.IO≫1P.DO and *3P.DO≫1P.IO), which outside of imperatives results in a restriction on the surface order of clitics based on their person value. Note though that in (70,71), all four surface orders are derived through LCP from the two underlying grammatical combinations (1P.IO≫3P.DO and 1P.DO≫3P.IO), producing all the logically possible surface combinations of 1P and 3P object clitics, in effect giving the appearance of the PCC being inactive. In other words, the clitic switch can undo the ordering restriction that the PCC imposes within *v*P, which is why the person-based clitic order restriction is absent in Slovenian imperatives.

But remember also that the PCC is only absent in imperatives with post-verbal object clitics. In embedded imperatives and imperatives preceded by another phrase, clitics are pre-verbal due to the 2nd position requirement, and the PCC is observed. The present account can explain this as well by assuming that additional clitic movement across IMP occurs in such cases to satisfy the 2nd position requirement (see Franks 1998/2010, Bošković 2001). This is shown in (72) for an embedded imperative. Nothing goes wrong if the highest copies of the clitics are pronounced in (72), so they must be pronounced. In other words, there is no the need for LCP here.

(72) a. [$_{CP}$C [1.IO 3.DO IMP=[$_{TP}${~~1.IO~~ ~~3.DO~~ =V}] [$_{AspP}${~~3.DO~~ ~~V~~}] [$_{vP}$ ~~1.IO~~ {~~3.DO~~ ~~V~~}] [. . .]]]]]

b. *[$_{CP}$C [3.IO 1.DO IMP=[$_{TP}${~~3.IO~~ ~~1.DO~~ =V}] [$_{AspP}${~~V~~}] [$_{vP}$ **~~3.IO~~** **~~1.DO~~** {~~V~~}] [. . .]]]]]

As discussed below, when the clitics move across IMP, this movement cannot alter the order of their highest copies, maintaining the order they had in *v*P. Then, a PCC-compliant order at PF will correspond to a PCC-compliant order in the syntax, as in (72a). Likewise, a PCC-violating order at PF will correspond to a PCC-violating order in the syntax, as in (72b). This analysis straightforwardly predicts the presence of the PCC in imperatives with pre-verbal clitics without positing any syntactic differences other than the independently required movement to the 2nd clausal position.

It is crucial for the current analysis of the clitic switch that the option for clitics to either head-adjoin early or late does not discriminate between IO and DO. However, to derive the attested pattern, clitic movement must obey the generalization in (73).

(73) *If two clitics, CL_1 and CL_2, XP-move and head-move respectively, it is always the XP-moving CL_1 that asymmetrically c-commands the head-moving CL_2.*

The derivations in (74) show all the combinations for clitic movement from *v*P to T, assuming clitics can either head-move or XP-move as long as a clitic head-adjoins either: **(i)** as early as possible, or **(ii)** as late as possible (as proposed above).

(74) a. $[_{TP}\{CL_1\{CL_2\{\{v \ldots\}T\}\}\} \ldots [_{vP}\, CL_1\, [_{v'}\, CL_2\{v \ldots\}\, [\ldots]]]]$

b. $[_{TP}\{CL_1\{\{CL_2\{v \ldots\}\}T\}\} \ldots [_{vP}\, CL_1\{CL_2\{v \ldots\}\}\, [\ldots]]]$

c. $[_{TP}\{\{CL_1\{CL_2\{v \ldots\}\}\}T\} \ldots [_{vP}\{CL_1\{CL_2\{v \ldots\}\}\}\, [\ldots]]]$

d. $*[_{TP}\{\underline{CL_2}\{\{CL_1\{v \ldots\}\}T\}\} \ldots [_{vP}\{CL_1\{v \ldots\}\}\, [\,\underline{CL_2}\, \ldots]]]$

In (74a) both clitics head-adjoin to the verb late (i.e. after the verb moves to T), in (74b) only CL_2 head-adjoins to the verb early (i.e. before the verb moves to T),[42] in (74c) both head-adjoin to the verb early, while in (74d), which is the only option that violates (73), only CL_1 adjoins to the verb early. Note that only the mixed movement in (74b) can yield the clitic switch; (74a) and (74c) yield order preservation under LCP, while the derivation in (74d) yields the unattested order reversal with the topmost copies. The latter is actually independently excluded by Fox and Pesetsky's (2005) approach to linearization. For them, linearization is determined at the phase level: a linearization established within a phase cannot contradict a pre-existing one. Consequently, a linearization established at the *v*P phase cannot be contradicted at the CP phase. This is exactly what we see in (74d),[43] where the order of clitics at the CP level is CL_2»CL_1, which conflicts with the CL_1»CL_2 order at the *v*P level.[44]Thus, in the approach to the clitic switch I argued for, the only unattested clitic movement possibility is ruled out independently by Fox and Pesetsky's system.

What is most important about the analysis presented here is that the clitic switch occurs in PF and thus after the $[\pi]$-valuation of pro_{DF} pronouns. This means that in Greek, where the IO≫DO configuration is the only option in the syntax, the clitic switch does not interact with the PCC. But in Slovenian, where both IO≫DO and DO≫IO configurations are possible, the clitic switch effectively undoes the syntactic clitic order restriction that results from combining the canonical and reverse PCC.

6 On the PCC and clitic order cross-linguistically

When it comes to the PCC and its relation to the surface order of clitics, it is generally assumed that the two are largely independent from each other. This is not surprising, given that much of the evidence for the PCC being a syntactic phenomenon comes from examples where the grammatical roles associated with the clitics, not the order in which the clitics surface, is what the PCC is sensitive to (see Albizu 1997a, Řezáč 2011). However, the existence of the Slovenian canonical/reverse PCC alternation shows this is not always true—the PCC can be sensitive to clitic order alternations. In

[42] Tucking in is only relevant when both elements are head-moving or XP-moving: as a SpecKP target always precedes an K^0 target, if one element head-moves to K^0 and the other element XP-moves to SpecKP, the latter will always precede the head-moved element regardless of the order in which they move.

[43] If CL_2 were to move to Spec*v*P here and cross CL_1 within *v*P the problem would not arise. This kind of derivation fits some of the cases I discuss in Section 6, with DO-over-IO movement after *v* enters the derivation, in contrast to Slovenian, where DO-over-IO movement occurs below *v* (see Section 4.1.1).

[44] The editor asks why a clitic may sometimes cross another one outside *v*P (e.g. in (68a)) without contradicting a previous linearization. In all such cases (but not in (74d)) the clitic order established within *v*P is always reestablished with the final positions of the clitics in CP. I therefore assume that linearization only cares about the topmost copies of moving elements within a phase, which can be seen as a natural result of combining the approach to copy pronunciation assumed above with phase-based derivations.

this section I review the cross-linguistically attested possibilities of clitic order/PCC interaction, showing that they can all be derived in the proposed analysis of the PCC by adopting only two parameters of variation: **(i)** the presence of both IO≫DO and DO≫IO clitic configurations below *v* (I use *clitic* in this section as a cover term for all deficient pronouns and pronominal markers), and **(ii)** the possibility of clitic reordering after the clitics are [π]-valued by *v* (see e.g. Section 5). I will also argue that **(i)** is always tied to the possibility of optional DO-over-IO movement below *v*; it cannot be attributed to two unrelated base generated structures. This will be established based on a restriction on the cross-linguistic distribution of the reverse PCC.

The frequent assumption that the PCC is always independent from the surface order of object clitics is largely based on cases like French. In French, the order of object clitics in DOCs can vary: the clitic order is DO»IO when the IO is 3P, as in (75a), and IO»DO when the IO is 1/2P, as in (75b). Recall that French crucially only exhibits the canonical Strong PCC: the DO clitic can never be 1/2P in the presence of an IO clitic, and the two possible clitic orders have no bearing on that.[45]

(75) a. Paul **la** **lui** présentera. 3.DO»3.IO
Paul 3.F.DO 3.DAT introduce.FUT.3
'Paul will introduce her to him.' (French; Kayne 1975:173)

b. Il { **me** | **te** } **l'** envoya. 1/2.IO»3.DO
he 1.IO | 2.IO 3.M.DO sent.3
'He sent him to me/you.' (French; Nicol 2005:142–143)

Such cases, where the canonical PCC is insensitive to clitic order, fall out straightforwardly from an intervention analysis of the PCC, like the one proposed in Section 4, if the clitic configuration is always IO≫DO when *v* enters the derivation (i.e. when the PCC may in principle arise); the person restriction will then always apply to the DO clitic. The fact that, in French, floating quantifiers floated by an IO clitic have to precede those floated by a DO clitic (Kayne 1975, Cinque 1999, Bošković 2004a), even when the quantifiers follow participles, can in fact be interpreted as indicating that IO≫DO is the only option below *v*. The surface DO»IO clitic order must then be established later, either via syntactic movement of the DO clitic above *v* or by some other means (see also Anagnostopoulou 2003, Béjar and Řezáč 2003, Řezáč 2011).

Abstractly, this relationship between clitic order and the PCC is similar to what we saw for Greek imperatives in Section 5. Recall that in Greek the clitic switch also did not affect the canonical PCC, which I have attributed to the clitic switch occurring in PF, and therefore after the [π]-valuation of the clitics has already taken place.

The relationship between clitic order and the PCC we see in French or in Greek imperatives, however, contrasts with what we have seen for Slovenian (outside imperatives). Importantly, direct interactions between clitic order and the PCC are not only a Slovenian quirk; similar PCC patterns are also found in Czech (Sturgeon et al. 2012) and Zürich German (Werner 1999). In both languages IO»DO and DO»IO clitic orders are available, but constrained based on the person of the objects in the same way as in Slovenian. We can see this in the Zürich German example in (76): 1P.IO

[45] This pattern is not infrequent in Romance, although individual languages may vary regarding which object clitic combinations surface with which order (see Perlmutter 1971, Nicol 2005, Walkow 2012).

and 3P.DO clitics can co-occur with a IO»DO clitic order, but cannot co-occur with a DO»IO order. The flipped pattern is seen in (77): 3P.IO and 1P.DO clitics can co-occur with a DO»IO order, but cannot co-occur with an IO»DO order.[46]

(76) a. … das d' **mer en** halt morn bringsch. 1.IO»3.DO
that 2.NOM 1.DAT 3.M.ACC just tomorrow bring.2
b. *… das d' **en mer** halt morn bringsch. *3.DO»1.IO
that 2.NOM 3.M.ACC 1.DAT just tomorrow bring.2
'… that you just bring him to me tomorrow then.'

(77) a. De Max hät **mi em** voorgschtellt. 1.DO»3.IO
the Max has 1.ACC 3.M.DAT introduced.3
b. ??De Max hät **em mi** voorgschtellt. *3.IO»1.DO
the Max has 3.M.DAT 1.ACC introduced.3
'Max has introduced me to him.' (Zürich German; Werner 1999:81)

Zürich German and Czech differ from Slovenian only with two 3P clitics, where they do not exhibit the order alternation. That aside, they show a canonical PCC with the IO»DO order (cf. (76a,77b)) and a reverse PCC with the DO»IO order (cf. (76b,77a)).[47]

The canonical/reverse PCC alternation is not limited to cases like the above, with a presumed default IO»DO clitic order. A different picture emerges when we compare the PCC patterns of the Bantu languages Sambaa (Riedel 2009) and Haya (Duranti 1979). In the former, the canonical Weak PCC occurs with a DO»IO clitic order—the PCC effect is shown in (78): if the IO is 3P, the DO must also be 3P.

(78) a. A- za- **m-** { **ni-** | **ku-** | **mu-** } onyesha 3.DO»IO
3.SBJ PRF 3.DO 1.IO | 2.IO | 3.IO show
'He pointed her out to me/you/her.'
b. A- za- { **ni-** | **ku-** } { **ku-** | **ni-** } onyesha 2/1.DO»1/2.IO
3.SBJ PRF 1.DO | 2.DO 2.IO | 1.IO show
'He pointed me/you out to you/me.'
c. *A- za- { **ni-** | **ku-** } **mu-** onyesha *1/2.DO»3.IO
3.SBJ PRF 1.DO | 2.DO 3.IO show
'He pointed me/you out to her.' (Sambaa; Riedel 2009:76,140)

Haya also has a default DO»IO clitic order. However, in Haya the IO»DO clitic order is also possible, specifically when the IO is 3P and the DO is 1/2P or when both objects are 1/2P.[48,49] This effect is illustrated in (79): when 1P and 3P object clitics co-occur, the 1P clitic must follow the 3P clitic regardless of which one is the IO and which one the DO; note that this is basically a mirror image of the Slovenian PCC pattern.

[46] As far as I could gather, Werner (1999) uses '??' to mark unacceptability in (77b) because the speakers he consulted tend to replace the weak pronoun forms with strong ones to ameliorate the construction.

[47] From the data provided by Werner (1999) it is impossible to discern whether the restriction is Strong or Weak or some other type of PCC. Czech conforms to Weak PCC with an additional 1P»2P restriction.

[48] The pattern is simplified here for ease of exposition: 1P clitics must follow 2P ones regardless of their IO/DO status (similar to what we find in Catalan and Spanish; see Perlmutter 1971, Walkow 2012).

[49] A similar case is found in (standard) German, where the Weak PCC arises with weak object pronoun pairs in the Wackernagel position of embedded clauses. Anagnostopoulou (2008:29) notes that while the base order there is generally DO»IO, speakers may resort to an IO»DO order to void the PCC effect. Also, when the IO and DO are both 1/2P person, both DO»IO and IO»DO orders are possible.

(79) a. A- ka- **mu-** **n**deetela.
3.SBJ PST 3.OBJ 1.OBJ.bring.APPL
'He brought him to me.'
%'He brought me to him.'

b. *A- ka- **n-** **mu-** leetela.
3.SBJ PST 1.OBJ 3.OBJ bring.APPL
int.: 'He brought him to me.'
or.: 'He brought me to him.'
(Haya; Duranti 1979:40)

It is tempting to treat the Haya pattern as just a surface clitic order restriction (e.g. 1/2P clitics must follow 3P clitics), but this would basically leave unexplained why closely related languages can differ only in terms of having a "clitic order restriction" as opposed to the canonical PCC. In contrast, if we adopt the syntactic analysis presented in Section 4.1.2 for Slovenian, we can boil down the difference to: Sambaa only has an IO≫DO clitic configuration below *v*, while Haya permits both IO≫DO and DO≫IO clitic configurations below *v*. The surface clitic orders can then be attributed to Sambaa and Haya always realizing the highest object clitic as the one linearly closest to the verb: in Sambaa this always yields a DO»IO order (from IO≫DO), while in Haya this yields a DO»IO order from the canonical PCC configuration (IO≫DO) and an IO»DO order from the reverse PCC configuration (DO≫IO).

There are also examples of the canonical/reverse PCC alternation that superficially look much less like the Slovenian pattern; in particular because they occur despite the absence of overt object clitic pairs. I will argue that such cases should also be analyzed in terms of the possibility of two object clitic configurations below *v*. It is cross-linguistically quite common to only see IO clitics expressed in DOCs; when the PCC occurs in such languages it is a canonical PCC with the person restriction on the DO. This is the case, for example, in Swahili (Bantu; Riedel 2009), Blackfoot (Algonquian; Bliss 2013), and Tzotzil (Mayan; Aissen 1987). However, even with such minimal object marking systems we do find instances of the canonical/reverse PCC alternation. For example, the alternation exists in Maasai (Eastern Nilotic; Lamoureaux 2004), where object marking in DOCs is severely impoverished: if both objects are 3P neither is marked on the verb, and if either object is 1/2P its presence is only registered by inverse markers (INV). This is illustrated with a 2P object in (80); note that the example is ambiguous between a 2P.IO and a 2P.DO interpretation.

(80) **kí-** ishɔ(r) ɔl-payíán 2.IO+3.DO / 2.DO+3.IO
INV(3>2.SG) give M-man.ACC
'They will give you$_{sg}$ to the man.'
'They will give the man to you$_{sg}$.' (Maasai; Lamoureaux 2004:20)

In such cases, the object that remains unregistered is restricted to 3P. In other words, we get a Strong PCC with a canonical/reverse alternation: when the IO is registered, the DO must be 3P (canonical PCC), while when the DO is registered, the IO must be 3P (reverse PCC). A similar PCC pattern is found in Chukchi (Chukotkan; Comrie 1979, Mel'čuk 1988), where only one object can be registered on the verb in DOCs: when the IO is registered, the DO must be 3P (canonical PCC), while when the DO is registered, the IO must be 3P (reverse PCC). Consider that, since in both these cases there are no overt object clitic pairs, the canonical/reverse PCC alternation really cannot be seen as a surface ordering restriction. Still, the analysis from Section 4.1.2 can capture the pattern with the assumption that in Maasai and Chukchi both IO≫DO

and DO≫IO clitic configurations are possible below *v*. With this analysis, the difference between languages like Maasai/Chukchi and languages like Slovenian or Haya, where both object clitics are always expressed in DOCs, can be reduced to language particular differences in how the PCC-sensitive pronouns are overtly realized.

So far we have seen two cross-linguistic possibilities with respect to object clitic order in relation to the PCC: **(i)** clitic order changes that instantiate a canonical/reverse PCC alternation, and **(ii)** clitic order changes that do not affect the PCC pattern. If, as I have suggested, **(i)** corresponds to two possible configurations of object clitics below *v*, and **(ii)** corresponds to order changes occuring after *v* has [π]-valued the clitics, then nothing in principle prevents both from coexisting in the same language; e.g. if an object clitic reordering after [π]-valuation can apply freely on top of an underlying canonical/reverse PCC alternation, we predict patterns where IO»DO and DO»IO clitic orders can alternate without any person restrictions. Recall that we have already seen this pattern with Slovenian imperatives (see Section 5), so the prediction is borne out. What about cases where the reordering after [π]-valuation is more restricted? Those are attested as well. Apart from the Zürich German PCC pattern we saw above there is also another pattern reported for Swiss German that I call the *mixed PCC*: a canonical PCC effect is observed with IO»DO clitic orders, seen with (81a) vs. (81d), but there is no PCC effect with DO»IO clitic orders, seen with (81b) vs. (81c).[50]

(81) a. D' Maria zeigt **mir** **en**.
the Maria shows 1.DAT 3.M.ACC
b. D' Maria zeigt **en** **mir**.
the Maria shows 3.M.ACC 1.DAT
'Maria shows him to me.'
c. D' Maria zeigt **mi** **em**.
the Maria shows 1.ACC 3.M.DAT
d. *D' Maria zeigt **em** **mich**.
the Maria shows 3.M.DAT 1.ACC
'Maria shows me to him.'
(Swiss German; Bonet 1991:188, ftn. 12)

In the current system, the pattern in (81) can be derived by assuming that the DO»IO clitic order can arise in two ways: **(i)** from a IO≫DO configuration below *v* and a subsequent reordering yielding DO»IO (cf. (81b)), or **(ii)** from a DO≫IO configuration below *v* surfacing as DO»IO (cf. (81c)). The logic here is similar to the analysis of the PCC in Slovenian imperatives in Section 5.2, the difference is that in (81), the IO»DO order must always be transparent realization of a IO≫DO configuration below *v*.

Despite the vast cross-linguistic variation in clitic order/PCC interactions (illustrated by the representative patterns above), one option crucially remains unattested: a language or construction where the reverse PCC occurs without a canonical PCC counterpart. The descriptive generalization behind this gap is given in (82).[51]

(82) ***The reverse PCC generalization.*** *The reverse PCC is possible in a language iff the language also has a canonical PCC counterpart.*

Consider the implications of (82) for the proposed analysis of the PCC. If, as I have argued, the canonical PCC always arises with a IO≫DO clitic configuration below

[50] A small number of the consulted Slovenian speakers also had judgments similar to (81).

[51] I have identified the typological gap as part of an ongoing broad cross-linguistic survey of PCC effects spanning so far 101 languages from 24 families and 3 isolates (Stegovec in preparation b). The survey also reveals the reverse PCC to be quite rare in general; I was able to identify it only in the languages discussed above and a few others. The preliminary findings of the survey, based on a smaller number of languages, were presented in Stegovec (2017b).

v, and the reverse PCC always arises with a DO≫IO clitic configuration below *v*, the non-existence of languages with only the reverse PCC means DO≫IO below *v* is unavailable unless the language also allows DO≫IO below *v*. If the two object configurations were two distinct base generated constructions, we could not explain in a principled way why DO≫IO is dependent on IO≫DO. Conversely, if the former is always derived from the latter, the dependency between them falls out straightforwardly. I therefore propose that the reverse PCC can only arise via optional DO-over-IO ('scrambling-like') syntactic clitic movement below *v*; in the absence of such movement only the canonical PCC can arise, which follows from DOCs universally having a IO≫DO base. This does not mean that DO≫IO bases never arise in ditransitives, but it does suggest that this option is reserved for prepositional ditransitives, which never give rise to PCC effects (see Řezáč 2011).[52]

All the attested patterns of clitic order/PCC interaction can then be derived, as illustrated in Table 4, with only two parameters of variation: **(i)** presence of optional DO-over-IO clitic movement below *v* and hence before [π]-valuation ($\xrightarrow{\pi}$), and **(ii)** presence of clitic reordering after [π]-valuation—this type of reordering does not feed the PCC and can be either obligatory or optional, syntactic (e.g. movement of DO above *v*) or post-syntactic (e.g. due to lower copy pronunciation; see Section 5).

Table 4 Possible options for clitic order/PCC interactions

reordering before $\xrightarrow{\pi}$	reordering after $\xrightarrow{\pi}$	predicted PCC pattern	example languages
no	no	canonical	Greek
no	optional	canonical	Greek (imperatives)
no	obligatory	canonical	Sambaa, French (with 3P.IOs)
optional	no	canonical+reverse	Slovenian, Czech, Z. German, Chukchi, Maasai
optional	optional	mixed / no PCC	Sw. German / Slovenian (imperatives)
optional	obligatory	canonical+reverse	Haya, German (standard; see ftn. 49)
*obligatory	no	reverse	**unattested**
*obligatory	optional	reverse	**unattested**
*obligatory	obligatory	reverse	**unattested**

I will now illustrate how the attested types are derived; for ease of exposition, I depict all reordering after [π]-valuation as movement across *v*. First, recall that with no clitic movement below *v* we will always get the canonical PCC, so the PCC pattern will be identical for two languages if they only differ in the presence of clitic reordering after [π]-valuation; cf. (83a) vs. (83b) ('∗' marks the person-restricted clitic).

(83) a. [$v \xrightarrow{\pi}$ [$\boxed{\text{IO}}$ [$\boxed{*\text{DO}}$]]] b. [$\boxed{*\text{DO}}$ [$v \xrightarrow{\pi}$ [$\boxed{\text{IO}}$ [$*\cancel{\text{DO}}$]]]]

If this kind of reordering is obligatory, we get a language like Sambaa with a canonical PCC and surface DO»IO clitic order. With more fine grained restrictions on the reordering (e.g. like we saw with French), a language will have a canonical PCC and either an IO»DO or DO»IO clitic surface order depending on the clitics involved.

[52] The lack of PCC effects here could be due to IOs always being strong pronouns in PPs and thus in prepositional ditransitives (see footnote 13), or because Ps may, just like *v*, bear valued [π] features.

Finally, if the reordering is fully optional, we get a pattern like the one in Greek imperatives, with a canonical PCC and a free IO»DO/DO»IO clitic order alternation.

In contrast, the optional reordering before [π]-valuation produces the two configurations in (84a) and (84b), which by virtue of being able to affect the [π]-valuation of the pronouns yields the by now familiar canonical/reverse PCC alternation.

(84) a. [$v^{\pi}\!\rightarrow$ [$\boxed{\text{IO}}$ [$\boxed{*\text{DO}}$]]] b. [$v^{\pi}\!\rightarrow$ [$\boxed{\text{DO}}$ [$\boxed{*\text{IO}}$ [~~DO~~]]]]

In the absence of any further reordering operations after [π]-valuation, this yields a language like Slovenian, Czech or Zürich German. And if some or all of the pronouns are null and or expressed via alternative morphological means, we get a pattern like Maasai or Chukchi, where the reordering is not visible on the surface.

The two reordering options can also coexist; e.g. *optional* reordering before [π]-valuation and *obligatory* reordering after [π]-valuation, which yields a canonical PCC with the DO»IO order, as in (85a), and a reverse PCC with the IO»DO order, as in (85b). Recall that this is the PCC pattern in Haya (and Standard German; footnote 49).

(85) a. [$\boxed{*\text{DO}}$ [$v^{\pi}\!\rightarrow$ [$\boxed{\text{IO}}$ [$*$~~DO~~]]]] b. [$\boxed{*\text{IO}}$ [$v^{\pi}\!\rightarrow$ [$\boxed{\text{DO}}$ [$*$~~IO~~ [~~DO~~]]]]]

Crucially, the two reordering options can also both be optional, together yielding the four configurations given in (86). Notice that between the four configurations, IO and DO can be unrestricted as either the linearly first (cf. (86a,b)) or linearly second clitic (cf. (86c,d)), so the person value of the clitics cannot constrain their surface order.

(86) a. [$v^{\pi}\!\rightarrow$ [$\boxed{\text{IO}}$ [$\boxed{*\text{DO}}$]]] *no reordering*
b. [$v^{\pi}\!\rightarrow$ [$\boxed{\text{DO}}$ [$\boxed{*\text{IO}}$ [~~DO~~]]]] *reordering before* $\pi\!\rightarrow$
c. [$\boxed{*\text{DO}}$ [$v^{\pi}\!\rightarrow$ [$\boxed{\text{IO}}$ [$*$~~DO~~]]]] *reordering after* $\pi\!\rightarrow$
d. [$\boxed{*\text{IO}}$ [$v^{\pi}\!\rightarrow$ [$\boxed{\text{DO}}$ [$*$~~IO~~ [~~DO~~]]]]] *reordering before & after* $\pi\!\rightarrow$

This gives us the PCC pattern in Slovenian imperatives: any person combination of object pronouns is possible with any surface order. To get the mixed PCC pattern of Swiss German, with no person restrictions only with DO»IO, we need to exclude (86d); e.g. by restricting the reordering instances of DO-movement (cf. (86b,c)).

Although determining what motivates all the different kinds of clitic reordering is beyond the scope of this paper, I have shown that all the cross-linguistic variation in clitic order/PCC interactions can be derived within the proposed analysis of the PCC with only two parameters of variation. Importantly, the analysis also derives the cross-linguistic distribution of the reverse PCC from the assumption that DO$\gg$IO clitic configurations below *v* only arise via optional DO-over-IO movement. What remains to be determined is why this movement is not universally available.

7 Conclusion

I have proposed a new analysis of the PCC that divorces it from case-based or similar asymmetries between IO and DO pronouns (contra Béjar and Řezáč 2003, Anagnostopoulou 2003). With special focus on Slovenian, I showed that this is necessary due to the existence of PCC patterns which alternate between the canonical and reverse

PCC, where the person restriction crucially applies to the IO, not the DO, as it does with the canonical PCC. This pattern is not predicted by standard approaches.

I proposed that the PCC arises because the pronouns involved are inherently without a person value and must receive it externally from a functional head via Agree (cf. Kratzer 2009). When two such pronouns co-occur in the domain of one such functional head, the structurally higher pronoun prevents the structurally lower one from receiving a person value, giving rise to the PCC. The difference between the Slovenian and the canonical PCC pattern is then due solely to the presence of optional syntactic DO-over-IO movement in Slovenian prior to person valuation.

Lastly, I discussed the implications of this approach for cross-linguistic variation in the PCC, such as the Strong vs. Weak PCC split. Perhaps the most interesting are the implications concerning the reverse PCC, which is also found outside of Slovenian, but it occurs only under very specific conditions: the reverse PCC can only exist alongside a parallel canonical PCC pattern. I suggested that this restriction can be explained if the DO-over-IO clitic movement that yields the reverse PCC is always optional and double object constructions universally have the same base.

Acknowledgements I thank Amy Rose Deal, Jonathan Bobaljik, Željko Bošković, Paula Fenger, Steven Franks, Laura Kalin, Ivona Kučerova, Troy Messick, Andrew Nevins, Jairo Nunes, Roumyana Pancheva, Omer Preminger, Mamoru Saito, Koji Shimamura, Susi Wurmbrand, and Michelle Yuan for their comments, suggestions, and valuable discussion. I would also like to thank for their feedback the audiences at the UConn LingLunch (October 2014), NELS 45 (MIT), WCCFL 33 (SFU), FASL 24 (NYU), ECO-5 (Harvard), Agreement Across Borders (University of Zadar), and the University of Nova Gorica (January 2015). Special thanks go to the speakers who took part in my survey on the PCC in Slovenian. This paper improved greatly thanks to comments from four anonymous NLLT reviewers, as well as the editor Julie Legate. Finally, I would like to again thank Jonathan, Susi, and especially Željko, for reading and commenting on my drafts and for their guidance. The remaining errors are my own.

References

Abels, Klaus. 2003a. *[P clitic]!—Why? In *Proceedings of FDSL4, Potsdam 2001*, eds. P. Kosta, J. Blaszczak, J. Frasek, L. Geist, and M. Zygis, 443–460. Linguistik International, Peter Lang, Frankfurt am Main.

Abels, Klaus. 2003b. Successive cyclicity, anti-locality, and adposition stranding. PhD diss, UConn.

Adger, David, and Daniel Harbour. 2007. Syntax and syncretism of the Person Case Constraint. *Syntax* 10: 2–37. doi:10.1111/j.1467-9612.2007.00095.x.

Aissen, Judith L. 1987. *Tzotzil clause structure*. Dordrecht: D. Riedel.

Albizu, Pablo. 1997a. Generalized person-case constraint: A case for a syntax driven inflectional morphology. In *Theoretical issues on the morphology-syntax interface*, eds. Myriam Utribe-Extebarria and Amaya Mendikoetxea, 1–33. Donostia: UPV/EHU.

Albizu, Pablo. 1997b. The syntax of person agreement. PhD thesis (draft), USC, Los Angeles.

Anagnostopoulou, Elena. 1999. Person Restrictions. Paper presented at the 21st GLOW Colloquium, ZAS-Berlin, March 29, 1999. [*Glow Newsletter* 42: 12-13].

Anagnostopoulou, Elena. 2003. *The syntax of ditransitives: Evidence from clitics*. *Studies in generative grammar*. Berlin: De Gruyter.

Anagnostopoulou, Elena. 2005. Strong and weak person restrictions: A feature checking analysis. In *Clitic and affix combinations*, eds. L. Heggie and F. Ordóñez, 199–235. Amsterdam: John Benjamins. doi:10.1075/la.74.08ana.

Anagnostopoulou, Elena. 2008. Notes on the Person-Case Constraint in Germanic. In *Agreement restrictions*, eds. R. D'Alessandro, S. Fischer, and G. H. Hrafnbjargarson, 15–47. Berlin: De Gruyter. doi:10.1515/9783110207835.15.

Baker, Mark C. 2008a. The macroparameter in a microparametric world. In *The limits of variation*, ed. Theresa Biberauer. Amsterdam: John Benjamins. doi:10.1075/la.132.16bak.

Baker, Mark C. 2008b. *The syntax of agreement and concord*. Cambridge, UK: Cambridge University Press.

Béjar, Susana, and Milan Řezáč. 2003. Person licensing and the derivation of PCC effects. In *Romance linguistics: Theory and acquisition*, eds. A. T. Perez-Leroux and Y. Roberge, 49–62. Amsterdam: John Benjamins. doi:10.1075/cilt.244.07bej.

Béjar, Susana, and Milan Řezáč. 2009. Cyclic Agree. *Linguistic Inquiry* 40: 35–73. doi:10.1162/ling.2009.40.1.35.

Belletti, Adriana. 1990. *Generalized verb movement*, Vol. Turin. Rosenberg and Sellier.

Bhatt, Rajesh, and Radek Šimík. 2009. Variable binding and the Person-Case Constraint. Talk given at *IATL 25*. Ben Gurion, University of the Negev.

Bliss, Heather. 2013. The blackfoot configurationality conspiracy. PhD diss, University of British Columbia.

Bobaljik, Jonathan. 1995. Morphosyntax: The syntax of verbal inflection. PhD diss, MIT.

Bobaljik, Jonathan, and Dianne Jonas. 1996. Subject positions and the roles of TP. *Linguistic Inquiry* 27: 195–236.

Bobaljik, Jonathan, and Höskuldur Thráinsson. 1998. Two heads aren't always better than one. *Syntax* 1 (1): 37–71. doi:10.1111/1467-9612.00003.

Bonet, Eulalia. 1991. Morphology after syntax: Pronominal clitics in Romance languages. PhD diss, MIT.

Bonet, Eulalia. 1994. The Person-Case Constraint: A morphological approach. *MIT Working papers in Linguistics* 22: The Morphology-Syntax Connection: 33–52.

Borer, Hagit. 1984. *Parametric syntax: Case studies in Semitic and Romance languages*. Dordrecht: Foris.

Bošković, Željko. 1999. On multiple feature checking: Multiple *Wh*-fronting and multiple head movement. In *Working minimalism*, eds. Samuel David Epstein and Norbert Hornstein, 159–187. Cambridge, MA: MIT Press. Chap. 7.

Bošković, Željko. 2001. *On the nature of the syntax-phonology interface: Cliticization and related phenomena*. Amsterdam: Elsevier.

Bošković, Željko. 2004a. Be careful where you float your quentifiers. *Natural Language & Linguistic Theory* 22 (4): 681–742. doi:10.1007/s11049-004-2541-z.

Bošković, Željko. 2004b. On the clitic switch in Greek imperatives. In *Balkan syntax and semantics*, ed. O. M. Tomić, 269–291. Amsterdam: John Benjamins. doi:10.1075/la.67.14bos.

Bošković, Željko. 2007. On the locality and motivation of Move and Agree: An even more minimal theory. *Linguistic Inquiry* 38 (4): 589–644. doi:10.1162/ling.2007.38.4.589.

Bošković, Željko. 2009. Unifying first and last conjunct agreement. *Natural Language & Linguistic Theory* 27: 455–496. doi:10.1007/s11049-009-9072-6.

Bošković, Željko. 2011a. On unvalued uninterpretable features. In *Proceedings of NELS 39*, eds. S. Lima, K. Mullin, and B. Smith, 109–120. Amherst, MA: GLSA.

Bošković, Željko. 2011b. Rescue by PF deletion, traces as (non)interveners, and the *That*-trace effect. *Linguistic Inquiry* 42: 1–44. doi:10.1162/LING_a_00027.

Bošković, Željko, and Jairo Nunes. 2007. The copy theory of movement: A view from PF. In *The copy theory of movement*, eds. N. Corver and J. Nunes, 13–74. John Benjamins. doi:10.1075/la.107.03bos.

Cardinaletti, Anna. 2008. On different types of clitic clusters. In *The Bantu–Romance connection*, eds. C. De Cat and K. Demuth, 41–82. Amsterdam: John Benjamins. doi:10.1075/la.131.06car.

Cardinaletti, Anna, and Michal Starke. 1994. The typology of structural deficiency: On the three grammatical classes. *Working Papers in Linguistics* 4 (2): 41–109. University of Venice.

Cardinaletti, Anna, and Michal Starke. 1999. The typology of structural deficiency: A case study of the three classes of pronouns. In *Clitics in the languages of europe*, 145–233. New York: Mouton de Gruyter. doi:10.1017/s0022226703282293.

Charnavel, Isabelle, and Victoria Mateu. 2015. The clitic binding restriction revisited: Evidence for antilogophoricity. *The Linguistic Review* 32 (4): 671–701. doi:10.1515/tlr-2015-0007.

Chomsky, Noam. 1957. *Syntactic structures*. The Hague: Mouton.

Chomsky, Noam. 1986. *Knowledge of language, its nature, origin, and use*. New York: Praeger.

Chomsky, Noam. 1995. *The minimalist program*. Cambridge: MIT Press.

Chomsky, Noam. 2000. Minimalist inquiries: The framework. In *Step by step: Essays on minimalism in honor of Howard Lasnik*, eds. R. Martin, D. Michaels, and J. Uriagereka, 89–155. Cambridge: MIT Press.

Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A life in language*, ed. M. Kenstowicz, 1–52. Cambridge: MIT Press.

Chomsky, Noam. 2013. Problems of projection. *Lingua* 130 (0): 33–49. doi:10.1016/j.lingua.2012.12.003.

Chomsky, Noam. 2015. Problems of projection: Extensions. In *Structures, strategies and beyond: Studies in honor of Adriana Belletti*, eds. Elisa Di Domenico, Cornelia Hamann, and Simona Matteini, 1–16. Amsterdam: John Benjamins. doi:10.1075/la.223.01cho.

Cinque, Guglielmo. 1999. *Adverbs and functional heads: A cross-linguistic perspective*. Oxford Studies in Comparative Syntax.

Ciucivara, Oana Săvescu. 2009. A syntactic analysis of pronominal clitic clusters in Romance: The view from Romanian. PhD diss, NYU.

Ciucivara, Oana Săvescu, and Andrew Nevins. 2008. An apparent Number Case Constraint in Romanian: The role of syncretism. In *Proceedings of the 38th LSRL*, eds. K. Arregi, Z. Fagyal, and S. Montrul, 185–203. John Benjamins.

doi:10.1075/cilt.313.17nev.
Collins, Chris. 1995. Toward a theory of optimal derivation. *MIT Working papers in Linguistics* 27: 65–104.
Comrie, Bernard. 1979. The animacy hierarchy in Chukchee. In *The elements: A parasession on linguistic units and levels*, eds. P. R. Clyne, W. F. Hanks, and C. L. Hofbauer, 322–329. Chicago: Chicago Linguistic Society.
Demuth, Katherine, and Jeffrey Gruber. 1995. Constraining XP-sequences. *Niger-Congo Syntax & Semantics* 6: 3–30.
Duranti, Alessandro. 1979. Object clitic pronouns and the topicality hierarchy. *Studies in African Linguistics* 10: 31–45.
Erschler, David. 2014. Person Case Constraints beyond the Dative and Accusative: Evidence from Ossetic. Ms. Max Planck Institut/Tübinger Zentrum für Linguistik.
Fehrmann, Dorothee, Uwe Junghanns, and Denisa Lenertová. 2010. Two reflexive markers in Slavic. *Russian Linguistics* 34 (3): 203–238. doi:10.1007/s11185-010-9062-7.
Fox, Danny, and David Pesetsky. 2005. Cyclic linearization of syntactic structure. *Theoretical Linguistics* 31: 235–262. doi:10.1515/thli.2005.31.1-2.1.
Franks, Steven. 1995. *Parameters of Slavic morphosyntax*. New York: OUP.
Franks, Steven. 1998/2010. Clitics in Slavic. Paper presented at the Comparative Slavic Morphosyntax Workshop, Spencer, Indiana. [Updated version published online in *Glossos 10: Contemporary Issues in Slavic Linguistics*].
Franks, Steven. 2016. Clitics are/become minimal(ist). In *Formal studies in Slovenian syntax. In honor of Janez Orešnik*, eds. Lanko Marušič and Rok Žaucer, 91–128. Amsterdam: John Benjamins. doi:10.1075/la.236.05fra.
Freidin, Robert, and Rex A. Sprouse. 1991. Lexical case phenomena. In *Principles and parameters in comparative grammar*, ed. Robert Freidin, 392–416. Cambridge, MA: MIT Press.
Georgala, Effi. 2011. Applicatives in their structural and thematic function: A minimalist account of multitransitivity. PhD diss, Cornell Unversity.
Haegeman, Liliane, and Terje Lohndal. 2010. Negative concord and (Multiple) Agree: A case study of West Flemish. *Linguistic Inquiry* 41 (2): 181–211. doi:10.1162/ling.2010.41.2.181.
Halle, Morris, and Alec Marantz. 1993. Distributed morphology and the pieces of inflection. In *The view from Building 20*, eds. K. Hale and S. J. Keyser, 111–176. Cambridge: MIT Press.
Harley, Heidi, and Elizabeth Ritter. 2002. Person and number in pronouns: A feature-geometric analysis. *Language* 78 (3): 482–526. doi:10.1353/lan.2002.0158.
Hiraiwa, Ken. 2001. Multiple Agree and the defective intervention constraint in Japanese. *MIT working papers in linguistics* 40 (40): 67–80.
Hiraiwa, Ken. 2004. Dimensions of symmetry in syntax: Agreement and causal architecture. PhD diss, MIT.
Joseph, Brian D., and Irene Philippaki-Warburton. 1987. *Modern Greek*. London: Croom Helm.
Kalin, Laura, and Coppe van Urk. 2015. Aspect splits without ergativity: Agreement asymmetries in Neo-Aramaic. *Natural Language & Linguistic Theory* 33 (2): 659–702. doi:10.1007/s11049-014-9262-8.

Kaufmann, Magdalena. 2012. *Interpreting imperatives*. Berlin: Springer.
Kayne, Richard S. 1975. *French syntax*. Cambridge: MIT Press.
Kayne, Richard S. 2000. *Parameter and universals*. Oxford: Oxford University Press.
Kratzer, Angelika. 2009. Making a pronoun: Fake indexicals as windows into the properties of pronouns. *Linguistic Inquiry* 40 (2): 187–237. doi:10.1162/ling.2009.40.2.187.
Kuno, Susumu. 1987. *Functional syntax. anaphora, discourse and empathy*. Chicago: University of Chicago Press.
Lamoureaux, Siri van Dorn. 2004. Applicative Constructions in Maasai. MA thesis, University of Oregon.
Lasnik, Howard. 1981. Restricting the theory of transformations: A case study. In *Explanations in linguistics*, eds. N. Hornstein and D. Lightfoot, 152–173. London: Longman.
Lasnik, Howard. 1995. Verbal morphology: syntactic structures meets the minimalist program. In *Evolution and revolution in linguistic theory: Essays in honor of carlos otero*, eds. H. Campos and P. Kempchinsky, 251–275. Washington, DC: Georgetown University Press.
Lasnik, Howard. 1999. Chains of arguments. In *Working minimalism*, eds. S. Epstein and N. Hornstein, 189–215. Cambridge, MA: MIT Press.
Marantz, Alec. 1993. Implications of asymmetries in double object constructions. In *Theoretical aspects of Bantu grammar 1*, ed. Sam A. Mchombo, 113–151. Stanford, CA: CSLI Publications.
Marvin, Tatjana, and Adrian Stegovec. 2012. On the syntax of ditransitive sentences in Slovenian. *Acta Linguistica Hungarica* 59 (1–2): 177–203. doi:10.1556/ALing.59.2012.1-2.8.
Mavrogiorgos, Marios. 2010. *Clitics in Greek: A minimalist account of proclisis and enclisis*. Amsterdam: John Benjamins.
McGinnis, Martha Jo. 2005. On markedness asymmetries in person and number. *Language* 81 (3): 699–718. doi:10.1353/lan.2005.0141.
Mel'čuk, Igor. 1988. *Dependency syntax: Theory and practice*. Albany, NY: SUNY Press.
Messick, Troy. 2016. The morphosyntax of self-ascription: A cross-linguistic study. PhD diss, University of Connecticut.
Migdalski, Krzysztof. 2006. The syntax of compound tenses in Slavic. PhD diss, Tilburg University.
Miyoshi, Nobuhiro. 2002. Negative Imperatives and PF merger. Ms. UConn, Storrs.
Montalbetti, Mario. 1984. After binding: On the interpretation of pronouns. PhD diss, MIT.
Moore, John, and David M. Perlmutter. 2000. What does it take to be a dative subject. *Natural Language & Linguistic Theory* 18 (2): 373–416. doi:10.1023/A:1006451714195.
Moskal, Beata. 2015. Domains at the border: between morphology and phonology. PhD diss, UConn.
Nevins, Andrew. 2007. The representation of third person and its consequences for person-case effects. *Natural Language & Linguistic Theory* 25 (2): 273–313.

doi:10.1007/s11049-006-9017-2.
Nevins, Andrew. 2011. Multiple Agree with clitics: person complementarity vs. omnivorous number. *Natural Language & Linguistic Theory* 29 (4): 939–971. doi:10.1007/s11049-011-9150-4.
Nicol, Fabrice. 2005. Romance clitic clusters: On diachronic changes and cross-linguistic contrasts. In *Clitic and affix combinations*, eds. L. Heggie and F. Ordóñez, 141–199. Amsterdam: John Benjamins. doi:10.1075/la.74.07nic.
Ormazabal, Javier, and Juan Romero. 2007. The object agreement constraint. *Natural Language & Linguistic Theory* 25: 315–347. doi:10.1007/s11049-006-9010-9.
Pearson, Hazel. 2012. The sense of self: Topics in the semantics of *De Se* expressions. PhD diss, Harvard.
Perlmutter, David. 1971. *Deep and surface structure constraints in syntax*. *Transatlantic series in linguistics*. New York: Holt, Rinehart and Winston.
Perlmutter, David M. 1982. The nature of syntactic representation, eds. Pauline Jacobson and Geoffrey K. Pullum, 283–340. Dordrecht: Springer. doi:10.1007/978-94-009-7707-5_8.
Pesetsky, David, and Esther Torrego. 2007. The syntax of valuation and the interpretability of features. In *Phrasal and clausal architecture: Syntactic derivation and interpretation. In honor of Joseph E. Emonds.*, eds. S. Karimi, V. Samiian, and W. K. Wilkins, 262–294. Amsterdam: John Benjamins. doi:10.1075/la.101.14pes.
Pollock, Jean-Yves. 1989. Verb movement, universal grammar and the structure of IP. *Linguistic Inquiry* 20 (3): 365–424.
Preminger, Omer. 2009. Breaking agreement: Distinguishing agreement and clitic doubling by their failures. *Linguistic Inquiry* 40 (4): 619–666. doi:10.1162/ling.2009.40.4.619.
Preminger, Omer. 2014. *Agreement and its failures*. Cambridge: MIT Press.
Pylkkänen, Liina. 2002. Introducing arguments. PhD diss, MIT.
Pylkkänen, Liina. 2008. *Introducing arguments*. Cambridge: MIT Press.
Richards, Marc. 2008. Defective Agree, case alternations, and the prominence of person. In *Scales*, eds. M. Richards and A. Malchukov, 137–161. Universität Leipzig.
Richards, Norvin. 1997. What moves where when in which language? PhD diss, MIT.
Richards, Norvin. 2001. *Movement in language: interactions and architectures*. Oxford: Oxford University Press.
Riedel, Kristina. 2009. The syntax of object marking in Sambaa: A comparative Bantu perspective. PhD diss, Universiteit Leiden.
Rivero, María Luisa. 2004. Spanish quirky subjects, person restrictions, and the Person-Case Constraint. *Linguistic Inquiry* 35 (3). doi:10.1162/ling.2004.35.3.494.
Rizzi, Luigi. 1990. On the anaphor-agreement effect. *Rivista di Linguistica* 2: 27–42.
Roca, Francesc. 1992. On the licensing of pronominal clitics. The properties of object clitics in Spanish and Catalan. Master's thesis, Universitat Autónoma de Barcelona.
Rosen, Carol. 1990. Rethinking Southern Tiwa: The geometry of a triple-agreement language. *Language* 66 (4): 669–713.
Runić, Jelena. 2013. The Person-Case Constraint: A Morphological Consensus.

Poster presented at the 87th Meeting of the Linguistic Society of America (LSA).
Saito, Mamoru. 2016. (A) Case for labeling: labeling in languages without ϕ-feature agreement. *The Linguistic Review* 33 (1). doi:10.1515/tlr-2015-0017.
Schütze, Carson T. 2003. Syncretism and double agreement with Icelandic nominative objects. In *Grammar in focus: Festschrift for Christer Platzack*, eds. L. O. Delsing, C. Falk, G. Josefsson, and H. Á. Sigurðsson, Vol. 2, 295–303. Lund: Department of Scandinavian Languages.
Sheppard, Milena Milojević, and Marija Golden. 2002. (Negative) Imperatives in Slovene. In *Modality and its interaction with the verbal system*, eds. S. Barbiers, F. Beukema, and W. van der Wurff, 245–260. Amsterdam: John Benjamins. doi:10.1075/la.47.12mil.
Smith, Peter W. 2015. Feature mismatches: Consequences for syntax, morphology and semantics. PhD diss, UConn.
Speas, Peggy, and Carol Tenny. 2003. Configurational properties of point of view roles. In *Asymmetry in grammar*, ed. Anna Maria Di Sciulo, 315–343. Amsterdam: John Benjamins. doi:10.1075/la.57.15spe.
Stegovec, Adrian. 2016a. Not two sides of one coin: Clitic person restrictions and Icelandic quirky agreement. In *Formal studies in Slovenian syntax. In honor of Janez Orešnik*, eds. L. Marušič and R. Žaucer, 283–312. Amsterdam: John Benjamins. doi:10.1075/la.236.12ste.
Stegovec, Adrian. 2016b. What we aren't given: The influence of selection on ditransitive passives in Slovenian. Talk given at FASL 25, Cornell (May 13th 2016).
Stegovec, Adrian. 2017a. !? (Where's the ban on imperative questions?). In *Proceedings of SALT 27*, eds. D. Burgdorf, J. Collard, S. Maspong, and B. Stefánsdóttir, 153–172. Ithaca, NY: Cornell. doi:10.3765/salt.v27i0.4140.
Stegovec, Adrian. 2017b. Between you and me: Two crosslinguistic generalizations on person restrictions. In *Proceedings of the 34th west coast conference on formal linguistics*, eds. Aaron Kaplan, Abby Kaplan, Miranda K. McCarvel, and Edward J. Rubin, 498–508. Somerville, MA: Cascadilla Press.
Stegovec, Adrian. 2018. Obviā et Imperā! A case for 'perspectival control' in directive clauses. Ms. UConn (submitted/under revision).
Stegovec, Adrian. in preparation a. Ditransitives spill the beans: Insights from Slovenian ditransitive passives and idioms.
Stegovec, Adrian. in preparation b. Why only π? the exceptionality of person in syntax and its interfaces. PhD diss, University of Connecticut.
Stjepanović, Sandra. 1999. What do second-position cliticization, scrambling and multiple wh-fronting have in common? PhD diss, UConn.
Sturgeon, Anne, Boris Harizanov, Maria Polinsky, Ekaterina Kravtchenko, Carlos Gómez Gallo, Lucie Medová, and Václav Koula. 2012. Revisiting the Person Case Constraint in Czech. In *Proceedings of FASL 19*, eds. J. Bailyn, E. Dunbar, Y. Kronrod, and C. LaTerza, 116–130. Ann Arbor, MI: Michigan Slavic Publications.
Szucsich, Luka. 2008. Evidenz für syntaktische Nullen im Burgenland-Kroatischen, Polnischen, Russischen und Slovenischen. Merkmalsausstattung, Merkmalshierarchien und morphologische Defaults. *Zeitschrift für Slavistic* 53 (2): 160–177. doi:10.1524/slaw.2008.0012.
Taraldsen, Tarald. 1995. On agreement and nominative objects in Icelandic. In *Studies*

in comparative Germanic syntax, eds. H. Haider, S. Olsen, and S. Vikner, 307–327. Dordrecht: Kluwer Academic.

Terzi, Arhonto. 1999. Clitic combinations, their hosts and their ordering. *Natural Language & Linguistic Theory* 17: 85–121. doi:10.1023/A:1006075626603.

Ura, Hiroyuki. 1996. Multiple feature checking: A theory of grammatical function splitting. PhD diss, MIT.

Řezáč, Milan. 2008. Phi-Agree and Theta-related Case. In *Phi theory*, eds. Daniel Harbour, David Adger, and Susana Béjar, 83–129. Oxford: Oxford University Press.

Řezáč, Milan. 2011. *Phi-features and the modular architecture of language*. Dordrecht: Springer.

Řezáč, Milan. 2004. The EPP in Breton: An uninterpretable categorial feature. In *Triggers*, eds. H. v. Riemsdijk and A. Breitbarth, 451–492. Berlin: De Gruyter.

Walkow, Martin. 2012. Goals, big and small. PhD diss, UMass.

Warburton, Irene. 1977. Modern Greek clitic pronouns and the 'surface structure constraint' hypothesis. *Journal of Linguistics* 13: 259–181.

Wechsler, Stephen. 2017. Self-ascription in conjunct-disjunct systems. In *Egophoricity*, eds. S. Floyd, E. Norcliffe, and L. San Roque, 471–492. Amsterdam: John Benjamins. doi:10.1075/tsl.118.15wec.

Werner, Ingegerd. 1999. *Die Personalpronomen im Zürichdeutschen*. Stockholm: Almqvist & Wiksell.

Woolford, Ellen. 1999. More on the anaphor agreement effect. *Linguistic Inquiry* 30 (2): 257–287. doi:10.1162/002438999554057.

Yip, Moira, Joan Maling, and Ray Jackendoff. 1987. Case in tiers. *Language* 63: 217–250.

Zanuttini, Rafaela, Miok Pak, and Paul Portner. 2012. A syntactic analysis of interpretive restrictions on imperative, promissive, and exhortative subjects. *Natural Language & Linguistic Theory* 30: 1231–1274. doi:10.1007/s11049-012-9176-2.