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3-on-3 restrictions and PCC typology: a reply to Pancheva and Zubizaretta (2018)*

Amy Rose Deal
UC Berkeley

Abstract

Restrictions on clitic combinations are generally in place when a ditransitive is expressed with both direct object and indirect object clitics. The best-studied such restrictions involve local persons, as in classic person-case constraint (PCC) effects—e.g., in French, banning combinations of local person DO clitics with IO clitics (strong PCC). Many languages also impose restrictions on combinations of 3rd person clitics (*3-on-3). Spanish, for instance, bans combinations of 3rd dative + 3rd accusative, requiring the dative to be replaced by the so-called "spurious *se*" (Perlmutter 1971). These two types of restrictions have typically been attributed to separate grammatical rules, if not entirely separate components of the grammar. However, in recent work, Pancheva and Zubizarreta (2018) have proposed a partial unification of *3-on-3 and classic PCC, treating both as grounded in syntactic licensing principles. This theory predicts a typological interaction: 3-on-3 restrictions will be found only in certain languages that also constrain combinations including local persons. In this paper, I argue that this prediction is false. In Ubykh (NW Caucasian), no restriction is imposed on clitic combinations involving local persons—there is no PCC effect of any type—but 3-on-3 combinations show clitic opacity effects reminiscent of spurious *se*. Capturing this pattern requires grammatical rules for the 3-on-3 context that are not grounded in PCC syntax, thus making a case for the independence of the two types of ditransitive person restrictions more generally.

person-case constraint • *spurious se* • *clitic opacity* • *Ubykh* • *clitic-doubling*

1 Introduction

When both objects of a ditransitive are expressed with clitics or other weak pronominal forms, the resulting structure is typically subject to person restrictions. The most celebrated restrictions of this type involve local persons, as in classic person-case constraint (PCC) effects. In French, for instance, combinations of local person direct object (DO) clitics with indirect object (IO) clitics are banned, (1c);

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similar patterns are found in languages including Greek (Anagnostopoulou 2003), Basque (Bonet 1991), Warlpiri (Hale 1973), and Kiowa (Adger and Harbour 2007). Bonet (1991) dubs this pattern the *Strong PCC*.

(1) French strong PCC: combinations of DO and IO weak pronominals are ruled out unless DO is 3rd person.

a. Marcel le lui présentera.
Marcel 3M.DO 3PL.IO will.introduce
Marcel will introduce him to her.

b. Marcel me le présentera.
Marcel 1S(IO) 3M.DO will.introduce
Marcel will introduce him to me.

c. * Marcel me lui présentera.
Marcel 1S(DO) 3PL.IO will.introduce
Intended: Marcel will introduce me to her.

Crosslinguistic work has revealed the existence of several additional types of PCC effects, which like the Strong PCC are sensitive to the presence of local person weak pronominals. One is the *Weak PCC*, described by Bonet (1991) for certain speakers of Catalan; this pattern forbids combinations of 3rd person IOs with local person DOs (but allows combinations of two local person objects). Another is the *Me-first PCC* (so named by Nevins 2007), found for instance in Romanian and Bulgarian; this pattern forbids combinations of two weak pronominals in which the DO is first person. Still another is the *Ultrastrong PCC*, found for instance in Arabic (Nevins 2007) and Czech (Sturgeon et al. 2011), where the Weak PCC restriction and the Me-first PCC restriction are combined; accordingly, the person of the indirect object must outrank that of the direct object on the hierarchy 1 > 2 > 3. These four patterns have in common a prohibition on first person direct objects in combination with third person indirect objects—as Perlmutter (1971) put it, with special reference to French, **me-lui*. We might think of this prohibition as the *core PCC effect*.

Many languages also impose restrictions on combinations of two 3rd person object weak pronominals.[1] Spanish, for instance, bans combinations of 3rd person dative clitics with 3rd person accusative clitics, as shown in (2c). I refer to this prohibition as **3-on-3*. Prohibitions similar to (2c) are found in numerous Romance languages, including various dialects of Catalan (Bonet 1993, Walkow 2012) and Italian (Manzini and Savoia 2002, Pescarini 2005, Manzini 2014), as well as Arabic (Walkow 2012, 2013), Kambera (Malayo-Polynesian, Indonesia; Klamer 1997, 1998), and Caquinte (Kampa Arawak, Peru; Drummond and O'Hagan 2020). In Spanish, the relevant meaning is expressed by replacing the dative with the so-called "spurious *se*" (Perlmutter 1971), (3).

(2) Spanish *3-on-3: combinations of DO and IO weak pronominals are ruled out when both are 3rd person (Perlmutter 1971)

a. Te lo recomendé.
2SG(DAT) 3SG.M.ACC recommended
I recommended it to you.

[1] In some cases, this restriction holds only for certain such combinations, regulated in a hierarchical fashion by animacy or other types of noun classification/gender. These types of restrictions have been successfully related to the core PCC effect in previous work (e.g. Ormazabal and Romero 2007, Foley and Toosarvandani To appear). I concentrate here on cases where the restriction holds of all 3-on-3 combinations, across the board.

b. Le recomendé ese hotel.
3SG.DAT recommended DEM hotel
I recommended that hotel to him.

c. * Le lo recomendé.
3SG.DAT 3SG.M.ACC recommended
Intended: I recommended it to him.

(3) Se lo recomendé.
3SG.DAT 3SG.M.ACC recommended
I recommended it to him.

The core PCC effect and the *3-on-3 restriction are found in many of the same languages, and they occur in the same general environment—ditransitives with weak pronominal expressions of both DO and IO. In recent work, Pancheva and Zubizarreta (2018) accordingly propose a partial unification of the two types of effects. This proposal is of special interest in view of a tendency in prior literature to treat the two effects separately, as reflective of separate grammatical rules (Perlmutter 1971, Bonet 1991) or even separate components of the grammar. For Nevins (2007), for instance, the core PCC effect reflects operations in the syntactic component (a conclusion shared with Pancheva and Zubizarreta 2018 as well as a large body of recent literature on PCC, e.g. Béjar and Rezac 2003, Anagnostopoulou 2003, 2005, 2008, 2017b, Adger and Harbour 2007, Nevins 2007, 2011, Ormazabal and Romero 2007, Rezac 2008, 2011, Heck and Richards 2010, Walkow 2012, Stegovec 2017, 2020, Deal 2020, Foley and Toosarvandani To appear, Coon and Keine To appear); *3-on-3, on the other hand, reflects a separate, essentially dissimilatory rule based in the morphological component (a conclusion shared with Harris 1995, Grimshaw 1997, Pescarini 2005, Stegovec 2015, and Drummond and O'Hagan 2020). The expectation is thus that the core PCC effect and *3-on-3 effects should be typologically independent of one another. For Pancheva and Zubizarreta, by contrast, both types of ditransitive person restrictions are grounded in the same central syntactic/semantic principles. PCC effects and *3-on-3 restrictions are thus expected to interact with one another typologically. In particular, given the particular ways that *3-on-3 restrictions may arise in Pancheva and Zubizarreta's system, these restrictions are expected only in (certain) languages that also constrain combinations including local persons, giving rise to the core PCC effect.[2]

Empirically assessing this prediction requires evidence from languages in which both arguments of a ditransitive may be expressed as weak pronominals without a core PCC effect. Languages of the NW Caucasian family are of interest here, as Haspelmath (2004) observes. In this paper I discuss Ubykh (Dumézil and Esenç 1975, Charachidzé 1989, Fenwick 2011), a NW Caucasian language in which ditransitives with weak pronominal expression of both DO and IO—henceforth, "doubly weak" ditransitives (Deal 2020)—show no PCC effect. Notably, however, Ubykh does show a *3-on-3 restriction, and this restriction shows several key indications of morphological, rather than syntactic, origin. This pattern is easily handled on a theory such as Nevins', where PCC and *3-on-3 are entirely separate restrictions, but poses challenges for the fully syntactically-grounded view from Pancheva and Zubizarreta. Moreover, as we will see, a potential novel hybrid view that would combine Pancheva and Zubizarreta's syntactic approach to PCC effects with separate morphological restrictions à la Nevins could capture the Ubykh facts, but only in a way that weakens an additional typological prediction from Pancheva and Zubizarreta 2018. I conclude that the extension of syntactic PCC

[2] This holds only for *certain* such languages because, as discussed just below, Pancheva and Zubizarreta predict that languages with a Me-first PCC cannot have *3-on-3.

mechanisms to *3-on-3 effects as envisioned in Pancheva and Zubizarreta 2018 ultimately does not lead to superior empirical coverage for this view as opposed to other recent typologically-oriented views of PCC syntax (e.g. Nevins 2007, Deal 2020, Foley and Toosarvandani To appear, Coon and Keine To appear). This underscores the more general finding that the core PCC effect and *3-on-3 should be treated as typologically independent.

The paper is structured as follows. The next section introduces Pancheva and Zubizarreta's approach to ditransitive person restrictions, including four varieties of PCC and *3-on-3. Section 3 then lays out the precise typological interactions between PCC and *3-on-3 that are predicted. Various languages types predicted by this model do indeed occur, including languages with neither a PCC effect nor a *3-on-3 restriction in doubly weak ditransitives. The distinctive property of the theory, however, is its negative predictions. In contrast to a theory such as Nevins', Pancheva and Zubizarreta distinctively predict the non-existence of two language types: languages with no PCC effect but a *3-on-3 restriction, and languages with a Me-first PCC and a *3-on-3 restriction. Section 4 shows that the first of these predictions is disconfirmed by Ubykh, where doubly weak ditransitives show no core PCC effect but do show a *3-on-3 restriction, together with a "repair" similar to Spanish spurious *se*. This pattern appears highly amenable to an analysis in terms of morphological rules not related to PCC syntax, as section 5 discusses. Section 6 then briefly discusses the remaining unattested language type, namely languages with a Me-first PCC and a *3-on-3 restriction, suggesting that (given the highly areally and genetically confined distribution of Me-first PCC in general) this is plausibly an accidental gap. Section 7 concludes.

2 Pancheva and Zubizarreta (2018): a syntactic grounding for PCC and *3-on-3

Pancheva and Zubizarreta (2018) propose a treatment of PCC effects which connects these effects to the syntax of point of view, in particular, to the establishment of a point of view center for the ApplP projection.[3] They propose that the grammar of ApplP universally requires that the specifier of Appl—the indirect object—serve semantically as a point of view center. To ensure that "the features of the indirect object are semantically fitting to its point-of-view role," the grammar has recourse to a P(erson)-Constraint, essentially a type of syntactic filter, which determines the permissible person values of the direct and indirect objects. This results in PCC effects. While the assignment of a point-of-view-center role to the indirect object is taken as a language universal, the P-Constraint itself is subject to parametric variation across languages. This variation gives rise to the four patterns summarized in (4).[4]

(4) When both the direct and indirect object of a ditransitive are weak pronominals…

a. Strong PCC
The direct object has to be third person.

b. Weak PCC
If there is a third person object, the direct object has to be third person.

[3] The need for a point of view center in ApplP is related to the status of this projection as a phase; they propose that a center must be established for each phrasal projection.

[4] Pancheva and Zubizarreta also discuss a fifth pattern, the so-called "Super-strong PCC" (Haspelmath 2004), which differs from Strong PCC only in imposing a *3-on-3 restriction. Whether this indeed constitutes a "fifth type of PCC" depends exactly on the question of whether PCC mechanisms extend to 3-on-3 combinations. Therefore we return to this pattern below in discussion of mechanisms for regulating 3-on-3.

c. Me-first PCC
   The direct object has to be second or third person.
d. Ultrastrong PCC
   The direct object has to be second or third person, and if there is a third person object then the direct object has to be third person.

In this section I briefly review the way that these four patterns are captured on Pancheva and Zubizarreta's account, before turning to their treatment of *3-on-3.

Pancheva and Zubizarreta propose four parameters regulating variation among PCC patterns.[5] The overall group of settings on these parameters constitutes the P-Constraint for a given language. First, a language may or may not require all DPs in Spec,Appl to bear a certain person feature; the default is that this requirement is imposed.[6] In languages that impose it, this requirement is implemented by means of an interpretable person feature on Appl heads. The interpretable feature enters into a syntactic relationship with the DP in Spec,Appl, thereby constraining its person.[7] Pancheva and Zubizarreta describe this point of variation in the features of Appl as the *Domain of application* of the P-Constraint.

(5) Parameter: P-Constraint domain of application
    Which Appl heads bear an interpretable person feature? (Default: all of them)
    Consequences:
    a. An *all* setting always constrains the possible features of the indirect object.
    b. A setting other than *all* allows for no constraint to be imposed on the indirect object in at least some syntactic environments.

If an Appl head bears an interpretable person feature, there will be a requirement that the DP in Spec,Appl bears a particular person-related feature. The second point of variation, which Pancheva and Zubizarreta describe as *P-Prominence*, concerns the exact nature of this feature; it can be [+AUTHOR], [+PARTICIPANT], or (by default) [+PROXIMATE]. The last of these features, while perhaps the least familiar, plays a central role in the theory. Pancheva and Zubizarreta propose that "*1[st person] and 2[nd person] arguments are inherently proximate, being part of the speech event. 3[rd person] arguments may or may not be proximate, depending on context.* Proximate 3[rd person]s are grammatically marked as having a perspective on the described event. ... *In languages that do not morphologically mark 3[rd person] arguments as proximate or obviative, 3[rd person] arguments are marked [± proximate] only in the presence of another 3[rd person] argument*" (p. 1300; emphasis original). (This last proposal—giving rise to a pattern in which 3rd person IOs are proximate only if the DO is also third person—will play a central role in the derivation of the core PCC effect.)

(6) Parameter: P-Prominence

[5] See Pancheva and Zubizarreta (2018, 1300) for the original wording of the parameters. I have reformulated them here in the form of questions specific to ApplP, in a way that I hope clarifies their intended effects.

[6] The statement of a default here and in the other parameters is part of a larger project in Pancheva and Zubizarreta 2018 of assigning markedness values to parameter settings in such a way as to predict the quantitative typology of PCC. I abstract away from this aspect of the theory here.

[7] Both the interpretability of the feature on the head and the necessary Spec-head relationship suggest that this relationship is perhaps most akin to a syntactic version of theta-assignment, rather than to Agree as understood e.g. in Chomsky (2001); Pancheva and Zubizarreta do not elaborate on this point.

What feature value is required of the DP in Spec,Appl? Options: [+PROXIMATE] (default), [+AUTHOR], [+PARTICIPANT]
Consequences:

a. a [+PROXIMATE] setting requires the IO to be first or second person, or third person if the DO is also third person
b. a [+AUTHOR] setting requires the IO to be first person
c. a [+PARTICIPANT] setting requires the IO to be first or second person

Third, a language may or may not require that the DP in Spec,Appl be the only object matching the feature specified for P-Prominence. Pancheva and Zubizarreta dub this requirement *P-Uniqueness.*

(7) Parameter: P-Uniqueness
Must the feature singled out by the setting of P-Prominence be unique within ApplP (i.e. found on no more than one object within ApplP)? (Default: yes)
Consequences:

a. a *yes* setting requires the DO and IO to have different specifications for the feature specified by P-Prominence (either [+AUTHOR], [+PARTICIPANT], or [+PROXIMATE]).
b. a *no* setting imposes no constraint.

Fourth and finally, a language that does not impose a P-Uniqueness requirement may or may not impose a requirement specific to first person indirect objects; Pancheva and Zubizarreta dub this requirement *P-Primacy*.[8]

(8) Parameter: P-Primacy
If both objects bear the feature singled out by the setting of P-Prominence, does the indirect object need to bear the feature [+AUTHOR]? (Default: no)
Consequences:

a. a *yes* setting requires the IO to be 1st person in some cases.
b. a *no* setting imposes no constraint.

The four varieties of PCC listed in (4) are derived as follows. (See Table 1.) The strong PCC arises when Domain of Application is set to All; P-Prominence is set to [+PROXIMATE]; and P-Uniqueness is set to Yes. (Because P-Uniqueness is set to Yes, P-Primacy is not applicable.) Taken jointly, the first two of these settings require that all IOs are [+PROXIMATE]. Let us schematize IO and DO features with the notation IO>DO. Given the distribution of [±PROXIMATE] features stated above, these settings mean that the IO can be 3rd person only when the DO is also third person; 3>3 is licit, because the 3rd person IO is specified for [±PROXIMATE] in this context, but 3>2 and 3>1 are ruled out. This produces the core PCC effect. The final piece is contributed by the Yes setting of P-Uniqueness, which requires that the IO and DO have different specifications for [±PROXIMATE].

[8] If it cannot be the case that both objects bear the special feature, as a Yes setting on P-Uniqueness requires, then the conditional stated in the P-Primacy constraint cannot be met. Thus it would seem that Yes settings on P-Uniqueness and P-Primacy are incompatible. Pancheva and Zubizarreta, however, state that certain languages have Yes settings for both P-Primacy and P-Uniqueness; in such languages, both objects can bear the special feature, so long as the indirect object is [+AUTHOR]. (That is, P-Primacy "wins".) They write that "P-Primacy...is conditional on P-Uniqueness... In a sense, P-Primacy weakens P-Uniqueness, allowing the two objects in the Appl phase to be the same with respect to the value of the interpretable p-feature on Appl" (1302-1303). I take this overall picture to suggest that P-Primacy and P-Uniqueness should be thought of as related to each other in such a way as for P-Primacy to hold only if P-Uniqueness does not.

	Domain of Application	P-Prominence	P-Uniqueness	P-Primacy
Strong	All ApplPs	[+PROXIMATE]	Yes	n/a
Weak	All ApplPs	[+PROXIMATE]	No	No
Ultrastrong	All ApplPs	[+PROXIMATE]	No	Yes
Me-first	Only ApplPs containing a first person	[+AUTHOR]	n/a	n/a

Table 1: P-constraint settings for Nevins's (2007) four types of PCC effects

Because all 1st and 2nd person arguments are [+PROXIMATE], this means that 1>2 and 2>1 object combinations are ruled out.

Two small changes produce Weak and Ultrastrong PCC grammars. A change to just P-Uniqueness produces weak PCC (Domain of Application set to All; P-Prominence set to [+PROXIMATE]; P-Uniqueness set to No; P-Primacy set to No): 3>1 and 3>2 are still ruled out by P-Prominence (given the central assumption regarding the distribution of [±PROXIMATE] features), but 1>2 and 2>1 are now ruled in. A change to P-Primacy produces ultrastrong PCC (Domain of Application set to All; P-Prominence set to [+PROXIMATE]; P-Uniqueness set to No; P-Primacy set to Yes[9]). The core PCC effect continues to hold as before, enforced by P-Prominence. Cases where both arguments are [+PROXIMATE] (a situation permitted by the No setting of P-Uniqueness) are now regulated by P-Primacy, which requires that the indirect object be [+AUTHOR]. This means that 1>2 combinations are ruled in and 2>1 combinations are ruled out.

The Me-first PCC grammar requires more radical changes to parameter settings. In particular, it arises from a non-All setting on Domain of Application: some Appl heads do not bear interpretable person features, and thus in some cases IO person is unconstrained. For this type of system, Pancheva and Zubizarreta propose that the interpretable person feature on Appl is present only when there is at least one DP with a [+AUTHOR] feature in ApplP. Meanwhile, P-Prominence is set to [+AUTHOR]. Thus in cases where neither object is first person, object person combinations are unconstrained; both 2>3 and 3>2 combinations are admissible. When a first person DP is present, however, P-Prominence kicks in and requires this DP to be the indirect object. This derives the Me-first pattern.[10]

We now turn to *3-on-3 restrictions, which are taken to arise in two different ways in this theory. A first way involves the manipulation of the same parameters involved in deriving the four patterns just reviewed. Note that, taken jointly, these four grammars cover only two of the three options for the feature value singled out by P-Prominence—[+AUTHOR] plays the central role in the Me-first pattern, whereas [+PROXIMATE] is central in deriving Strong, Weak, and Ultrastrong PCCs. The remaining option, [+PARTICIPANT], derives the pattern that Haspelmath (2004) calls the *Super-strong PCC*, proposed to hold in the Malayo-Polynesian language Kambera.

(9) Super-strong PCC
When both the direct and indirect object of a ditransitive are weak pronominals, the direct object has to be 3rd person, and the indirect object has to be 1st or 2nd person.

Crucially, the Super-strong pattern differs from the Strong PCC only insofar as 3>3 configurations are concerned: the Strong pattern permits them, and the Super-strong pattern rules them out. Pancheva

[9] This formulation differs from Pancheva and Zubizarreta's, which takes P-Uniqueness to be set to Yes here. See footnote 8.

[10] P-Primacy and P-Uniqueness play no role in this setting, as there are presumably independent reasons related to reflexivization that prohibit two objects with [+AUTHOR] features.

and Zubizarreta propose to capture the Super-strong pattern by an All setting of Domain of Application; a [+PARTICIPANT] setting of P-Prominence; and a Yes setting of P-Uniqueness. (Like for the strong pattern, Yes on P-Uniqueness makes P-Primacy inapplicable.) The [+PARTICIPANT] setting of P-Prominence requires IOs to be 1st or 2nd person. This imposes the core PCC effect as well as a *3-on-3 restriction. (Meanwhile, as for the strong PCC, the Yes setting of P-Uniqueness rules out 1>2 and 2>1 combinations.)

The second path to *3-on-3 effects, situated at the syntax-morphology interface, is proposed for Spanish spurious *se*. Different Spanish varieties (or even idiolects) impose Strong, Weak, or Ultrastrong PCC restrictions; spurious *se* holds in all three cases. In common to the grammar of Strong, Weak, and Ultrastrong PCC is the [+PROXIMATE] setting of P-Prominence. Pancheva and Zubizarreta propose that a "morphological and language particular" incompatibility holds between [+PROXIMATE] and [-PARTICIPANT] (i.e. 3rd person) in Spanish. Because the syntax forces the IO to bear [+PROXIMATE], the [-PARTICIPANT] feature on the IO must be deleted. This creates the context for the insertion of *se*, "a clitic that does not formally have a 3[rd person] specification" (1311).

3 Predictions for PCC typology

While this treatment of spurious *se* does not follow directly from the P-constraint (differing in this respect from the treatment of the Super-strong pattern), the role played by the P-Prominence parameter is nevertheless crucial: a language with a different setting of P-Prominence could not have a morphological restriction akin to spurious *se*. Pancheva and Zubizarreta note this prediction in particular for the Me-first pattern. Here, P-Prominence is set not to [+PROXIMATE] but to [+AUTHOR], and thus 3rd person IOs are not required to bear any additional feature beyond [-PARTICIPANT]. Since neither parameter settings nor a Spanish-type morphological rule is available to rule out *3-on-3 in this grammar, they conclude that the combination of a Me-first PCC with a *3-on-3 restriction is not possible (p. 1316).

The same reasoning applies to rule out languages with a *3-on-3 restriction but no core PCC effect. While Pancheva and Zubizarreta do not elaborate on this possibility, their system would seem to permit languages where the core PCC effect is absent: this follows if Domain of Application is not set to All, and indeed the Appl head *never* bears an interpretable person feature. In this situation, other parameter settings become moot, as they depend on the special feature of Appl. IO person will not be restricted, and combinations of a 3rd person IO with a first person DO will be freely permitted.[11] This same parametrization will also allow a 3rd person IO with a 3rd person DO, meaning the parameters themselves do not exclude 3-on-3; in addition, like for Me-first, no special feature is forced on 3rd person IOs, meaning a rule of the spurious *se* type is likewise unavailable. If, as Pancheva and Zubizarreta suggest in their discussion of Me-first PCC, these are the only two mechanisms available to enforce a *3-on-3 restriction, then languages with no PCC effect but a *3-on-3 restriction should be impossible.

These interactions between PCC effects and *3-on-3 restrictions give rise to the overall expected typology of ditransitive person restrictions shown in Table 2. Eight types of systems are predicted to occur, five allowing 3-on-3 combinations (left column) and three disallowing them (right column); two logically possible additions (Me-first + *3-on-3, no PCC + *3-on-3) are predicted not to occur.

The eight predicted language types are indeed attested. In reviewing the relevant data here, I aim

[11] In particular, given that the P-constraint parameters generally constrain doubly weak combinations, this person combination (and all others) should be permitted even when both objects are weak pronominals.

	3>3	*3>3
1>2 2>1 1>3 2>3 *3>1 *3>2	(Sambaa: weak PCC)	Spanish A: weak PCC + spurious *se*
*1>2 *2>1 1>3 2>3 *3>1 *3>2	French: strong PCC	Spanish B: strong PCC + spurious *se* Kambera: superstrong PCC
1>2 *2>1 1>3 2>3 *3>1 *3>2	(Czech: ultrastrong PCC)	Spanish C: ultrastrong PCC + spurious *se*
1>2 *2>1 1>3 2>3 *3>1 3>2	Bulgarian: me-first PCC	
1>2 2>1 1>3 2>3 3>1 3>2	(Moro: no PCC)	

Table 2: Predicted typology of PCC and *3-on-3 effects, given Pancheva and Zubizarreta (2018). Shaded cells are predicted impossible. Parenthesized cells contain languages not discussed by Pancheva and Zubizarreta in connection with *3-on-3.

to augment the discussion in Pancheva and Zubizarreta 2018 by concentrating on the languages listed in parentheses in Table 2. These are the cases which are not discussed in that paper in connection with *3-on-3.

In the first row is the Weak PCC with and without a *3-on-3 restriction. The version with a *3-on-3 restriction is found for some Spanish varieties; I refer to this grammar as Spanish A. The version without a *3-on-3 restriction is found in Sambaa (Bantu, Tanzania; Riedel 2009), where weak pronominal object markers index both the direct and indirect objects. The Weak PCC effect may be seen in the contrast between (10a) [2>1] and (10b) [*3>1]; the absence of a *3-on-3 restriction is seen in (10c).[12]

(10) Sambaa

a. A-za-ni-ku-onyesha.
SM.CLASS1-PERF.DJ-OM.1SG-OM.2SG-show
He pointed me out to you. (Riedel 2009, 140)

b. * A-za-ni-mu-onyesha.
SM.CLASS1-PERF.DJ-OM.1SG-OM.CLASS1-show
Intended: He pointed me out to her. (Riedel 2009, 140)

[12] In (10), OM=object marker, SM=subject markers, and DJ=disjoint. Note that, like in other Bantu languages, 3rd person weak pronominals in Sambaa reflect not only a person value but also a gender/noun class. In (10c), for instance *ng'wana* 'child' is indexed on the verb with class 1 object marker *m*; *kitabu* 'book' is indicated with class 7 marker *chi*.

c. N-za-chi-m-nka ng'wana kitabu.
SM.1SG-PERF.DJ-OM.CLASS7-OM.CLASS1-give 1.child 7.book
I gave the child a book. (Riedel 2009, 106)

In the second row is, first, the classic Strong PCC pattern as attested by French; here there is no *3-on-3 restriction. In the *3-on-3 column are languages of two types. First is another variety of Spanish, here called Spanish B, which combines a French-style Strong PCC grammar with the spurious *se* *3-on-3 restriction. Second is Kambera, claimed to have the Super-strong PCC grammar that rules out 3-on-3 as a matter of syntactic parametrization. (For Kambera data and discussion, see Pancheva and Zubizarreta 2018, 1312-1313.)

In the third row is the Ultrastrong PCC with and without a *3-on-3 restriction. The version with *3-on-3 is attested by a third and final Spanish variety, Spanish C. The version without a *3-on-3 restriction is attested by Czech. The basic Ultrastrong effect is seen in (11a,b), showing 1>2, *2>1, and *3>2; the absence of a *3-on-3 effect is seen in (11c).

(11) Czech

a. Představil { mi tě / *ti mě } včera v Hradci Králové.
introduced { 1SG.DAT 2SG.ACC / 2SG.DAT 1SG.ACC } yesterday in H K
He introduced you to me/*me to you yesterday in Hradec Králové. (Sturgeon et al. 2011, (2b))

b. * Marie mu tě doporučí.
Marie 3SG.M.DAT 2SG.ACC recommend
Intended: Mary will recommend you to him. (Bhatt and Šimík 2009, (26))

c. Marie stále ještě věří, že Karel doufá, že mu ji
Marie still believes that Karel hopes that 3SG.M.DAT 3SG.F.ACC
doporučíš.
recommend.2SG
Mary still believes that Charles hopes that you will recommend her to him. (Bhatt and Šimík 2009, (28))

In the fourth and fifth rows are two language types expected to lack *3-on-3 restrictions. This includes Me-first PCC languages such as Bulgarian, as well as languages that lack PCC effects entirely. The existence of this latter type of language has been controversial. In her influential discussion of PCC effects across languages, Bonet (1991) contends that the PCC effect is universal: if both the direct object and the indirect object are phonologically weak, then 3>1 combinations are ruled out.[13] Notably, despite several decades of intensive research, the list of languages counterexemplifying this claim has remained quite short. Haspelmath (2004) discusses several languages (including NW Caucasian language Kabardian) in which 3>2 combinations are attested. Given the data that Haspelmath provides, these languages might indeed lack the core PCC effect, constituting true counterexamples to the universality claim. However, they might alternatively show the Me-first PCC pattern also found

[13] In distinguishing first from second person, this formulation (focusing on what I have called the *core PCC effect*) is somewhat different from Bonet's (1991); see Bonet (1991, 182) for the original version. I adopt the more narrow statement of the constraint because, in treating first and second person alike, Bonet's version does not allow for the Me-first PCC effect.

in Bulgarian, permitting 3>2 but nevertheless excluding 3>1.[14] Against this backdrop, Moro (Kordofanian, Sudan; Jenks and Rose 2015) is of special interest; in this language, both objects of a ditransitive are marked with object markers on the verb, but no combinations of persons is restricted. Example (12a) shows the absence of a core PCC effect in 3>1; (12b) shows the absence of a *3-on-3 restriction.[15]

(12) Moro

a. g-a-natʃ-ə́-ɲə́-ŋo
SM.CL-RTC-give-PFV-1SG.OM-3SG.OM
S/he gave me to her/him. (Jenks and Rose 2015)

b. g-a-natʃ-ə́-ŋə́-ŋo
SM.CL-RTC-give-PFV-3SG.OM-3SG.OM
S/he gave her/him to her/him. (Peter Jenks p.c.)

On Pancheva and Zubizarreta's theory, given (12a), (12b) is no accident; in the absence of any PCC restriction, a *3-on-3 restriction cannot be derived. Similarly, given the Me-first grammar of Bulgarian, a *3-on-3 restriction cannot be added here either.

As Pancheva and Zubizarreta note (p. 1316), these predictions (corresponding to the two shaded cells in Table 2) differentiate their view from a theory in which the *3-on-3 restriction is entirely independent of PCC. For Nevins (2007), for instance, the *3-on-3 restriction in Spanish arises from a morphological rule that in no way references the syntactic factors underlying PCC (which, on Nevins' theory, reflects the parametrization of Multiple Agree). It instead references the linear order of 3rd person clitics in the morphology:

(13) Spanish spurious *se* rule (Nevins 2007)
Delete/alter the features corresponding to 3rd person on a dative [clitic] when it precedes another 3rd person.

Because this type of rule is independent of PCC, there is nothing to rule out its combination with any PCC pattern or with the absence of PCC effects entirely. The Nevins 2007 theory thus predicts that the two shaded cells in Table 2 should indeed correspond to possible languages.

The remainder of this paper is devoted to assessing these contrasting predictions. First, in the next section, I provide evidence that a language may indeed have a *3-on-3 restriction without a PCC effect (in contrast to Moro, (12)), showing in particular that Ubykh is a language of this type. This language thus fills in the lower shaded cell in Table 2, posing a challenge to the Pancheva and Zubizarreta theory. I then return, in light of the Ubykh data, to the question of how *3-on-3 restrictions relate to the Me-first PCC (corresponding to the higher shaded cell), in section 6.

[14] Me-first PCC appears to be extremely constrained areally (and genetically), as discussed below. It would thus be quite interesting if languages outside of the Balkan linguistic area, and ideally outside of the Indoeuropean family, could be shown to make use of this PCC type. There is thus much to be gained from further investigation of the 3>2 cases discussed by Haspelmath (2004). (Note that in the particular case of Kabardian, Peter Arkadiev (p.c.) confirms that it indeed lacks a PCC effect of any type, including Me-first.)

[15] Note that first person and third person object markers are distinguished by the place of articulation of the nasal (palatal for the first person [ɲ], velar for the third person [ŋ]). Like local person clitics in various Romance languages, the order of object markers in Moro is determined templatically, rather than with reference to case or grammatical function. Thus (12a) is in fact ambiguous, meaning either 'she gave me to her' or 'she gave her to me'. This shows that Moro also lacks a "reverse PCC" (cp. Stegovec 2020).

4 Person marking in Ubykh ditransitives

Ubykh is a NW Caucasian language originally spoken in the vicinity of the modern city of Sochi, Russia.[16] While the last known fully competent speaker of the language, Tevfik Esenç, died in 1992, the language is relatively well-documented, most recently in a thorough grammar by Fenwick (2011). In what follows, I draw on this work as well as Charachidzé's (1989) grammar sketch and the extensive discussion of verbal morphology in Dumézil and Esenç (1975). For consistency, I present all Ubykh examples, regardless of their source, in the orthography developed by Fenwick (2011).[17]

Like other languages in the NW Caucasian family, Ubykh shows extensive verbal person marking and an ergative-aligned case system. Independent DPs appear either in the absolutive case (i.e., unmarked) or in a case form that Fenwick (2011) calls *relational*. The relational case form is used for possessors, subjects of transitives and ditransitives, and goals and other indirect objects. Here I assume that the morphological category of relational case reflects a syncretism between genitive, ergative, and dative syntactic cases; though not crucial for what follows, this assumption will be useful in simplifying the discussion of verbal person marking.[18] In a ditransitive, agents are marked with the ergative case (morphologically "relational"), themes the absolutive case, and goals the dative case (morphologically "relational"). The overt case forms of direct and indirect objects can be seen in (14).

(14) ɐ-ʨʼɨ́ɕi-nɜ m$^{\text{ʕ}}$ɜ zɜ-d$^{\text{w}}$ɜ́ ɐ́-s-t$^{\text{w}}$-qʼɜ.
the-children-DAT.PL apple one-each 3.ABS+3P.DAT-1S.ERG-give-PAST
'I gave the children an apple each' (Fenwick 2011, §2.4.2.3)

All three arguments of a ditransitive are indexed on the verb in person and number.[19] (Ubykh does not grammatically distinguish gender (Charachidzé 1989, 369).) The order of markers corresponds to the abstract case of the DP arguments, with absolutive arguments indexed first, followed by datives, followed by ergatives.

(15) a. ɐ-wɨ́-s-t$^{\text{w}}$ɨ-n
3.ABS-2S.DAT-1S.ERG-give-PRES
I give him to you.
b. ɐ-sɨ́-w-t$^{\text{w}}$ɨ-n
3.ABS-1S.DAT-2S.ERG-give-PRES
You give him to me.
c. wɨ-sɨ́-n-t^{w}ɨ-n
2S.ABS-1S.DAT-3S.ERG-give-PRES
He gives you to me.
(Fenwick 2011, §2.6.1.1.2.4)

In the rest of this section, I first discuss the syntactic representation of these prefixes, which I will henceforth (roughly following Dumézil and Esenç 1975) call *person markers*; in particular, I suggest that they should be considered clitic pronominals. I then discuss the absence of a PCC effect of any type in Ubykh ditransitives, followed by the presence of a *3-on-3 effect.

[16] For a broader view of the NW Caucasian family, see Hewitt (2005), Arkadiev and Lander (2021).

[17] Ubykh has been transcribed in numerous ways in various documentary works (a fact that becomes especially unsurprising in light of its inventory of over eighty consonants). A helpful comparative table of orthographic conventions is given in Appendix 3 of Fenwick (2011).

[18] See however Ershova (2019), who provides a unified dependent-case treatment of the corresponding case category in related language West Circassian (a.k.a. Adyghe).

[19] The combined marking of the absolutive and dative in (14) is discussed in §4.3 in connection with 3-on-3 combinations.

4.1 Ubykh person markers are syntactic clitics

While diagnosing the syntactic status of person markers is necessarily a somewhat complex affair (see e.g. Arregi and Nevins 2008, 2012, Preminger 2009, Nevins 2011, Kramer 2014, Harizanov 2014, Anagnostopoulou 2016, 2017a, Baker and Kramer 2018, Yuan To appear), there are several indications that person markers in Ubykh should be considered syntactic clitics, standing in a clitic-doubling relationship with full DPs, rather than mere agreement markers.[20] This finding is notable from the perspective of theories that strongly connect PCC effects to cliticization and clitic doubling (e.g. Nevins 2007, Arregi and Nevins 2012) or, alternatively, seek to connect the particular subtype of weak element found in a language with its variety of PCC effect (e.g. Bonet 1994, Anagnostopoulou 2017b, Foley and Toosarvandani To appear). As we will see in the next section, Ubykh is different from various other languages with clitic doubling for both IO and DO in that it lacks all types of PCC effects.

First, person markers are straightforwardly morphologically related to free pronouns. The free pronouns consist of the corresponding person marker affixed to the root morpheme ʁʷʒ́ (which in turn may bear plural suffix ɬɜ). We see this pattern below for the local person verbal markers and free pronouns. (We return to person markers for 3rd person in (19) below.)

(16) Ubykh free pronouns (Fenwick 2011, §2.3.1)[21]

	SG	PL
1	sə(ı)ʁʷʒ́	ʃıʁʷʒ́ɬɜ
2	wə(ı)ʁʷʒ́	ɕʷıʁʷʒ́ɬɜ
3	ɐʁʷʒ́	ɐʁʷʒ́ɬɜ

(17) Ubykh verbal person markers, local persons (Fenwick 2011, §2.6.1.1.1)[22]

	SG	PL
1	sə(ı)-	ʃı-
2	wə(ı)-	ɕʷı-

The local person markers in (17) are used in the same form when indexing an absolutive object and a dative one.[23]Accordingly, in (18), differences of meaning are conveyed by variation in the order, but not the form, that person markers take. This insensitivity to case for local persons recalls patterns of clitic morphology in many Romance languages, e.g. French.[24]

[20] It should be emphasized that the question here concerns syntactic representation rather than morphophonology, esp. in the sense of the clitic/affix distinction of Zwicky and Pullum (1983); Peter Arkadiev (p.c.) points out that person markers in NW Caucasian are best treated as affixes in morphophonological terms. For recent and concise discussion of the syntactic options at stake in this section, see for instance Kramer (2014) and Yuan (To appear). For an application of syntactic clitic-doubling diagnostics elsewhere in the NW Caucasian family, see Driemel et al. (2020a,b).

[21] Fenwick notes a number of complexities related to pronoun form in the extant corpus of Ubykh, including reduced forms in rapid speech, a "jocular" 2nd person singular form, and forms attested only in the production of a single speaker. I simplify here, presenting only the unreduced, least controversial forms.

[22] See Fenwick (2011) for discussion of the factors that condition the syllabic versus merely consonantal forms, as well as an alternation in voicing for [s/ʃ/ɕ] (not represented here).

[23] Ergative subject person markers are also largely the same, with the exception of voicing for [s/ʃ/ɕ] . It may be that this phonological difference is conditioned prosodically in some way.

[24] For Adger and Harbour (2007), the lack of a morphological distinction between direct and indirect object forms for local persons ("case syncretism") is closely connected to the appearance of a (strong) PCC effect. While they note the existence of languages with a PCC effect but no case syncretism (e.g. Modern Greek), they do not discuss languages with case syncretism but no PCC effect; Ubykh is a language of this type. (So is Moro, discussed above.)

(18) a. sɨ-wɨ́-n-t^{w}ɨ-n
1S.ABS-2S.DAT-3S.ERG-give-PRES
She gives me to you.

b. wɨ-sɨ́-n-t^{w}ɨ-n
2S.ABS-1S.DAT-3S.ERG-give-PRES
She gives you to me.
(Fenwick 2011, §2.6.1.1.2.4)

Turning to third person, we see again a clear morphological relationship between person markers and free pronouns, though the system is somewhat more articulated than for local persons. In particular, like in French, insensitivity to case does not extend to 3rd person markers; instead, the form of person markers is in part determined by the syntactic case of the corresponding DP argument. (We return below to the distribution of the 3rd person ergative singular forms.)

(19) Ubykh verbal person markers, 3rd person (Fenwick 2011, §2.6.1.1.1)

	SG	PL
3abs	ɐ-	ɐ-
3dat	∅-	ɐ-
3erg	n(ɨ)-, ∅-	ɐ-, nɐ-

Overall, these morphological parallels between person markers and free pronouns correspond to a pattern cited by Preminger (2014, 58) as "perhaps the strongest support for clitic doubling" as the source of verbal person marking in K'ichean (Mayan). While the pattern is clearest in the local person portions of the paradigm, owing to the increased complexity of the 3rd person paradigm, additional support for an analysis featuring syntactic clitics specifically in the 3rd person comes from the fact that the 3rd person morpheme ɐ- is morphologically identical to the definite determiner (see Fenwick 2011, §2.2.1.2)—a type of pattern with substantial attestation in the clitic systems of Romance languages (Anagnostopoulou 2017a). As Kramer (2014) notes, clitic pronouns but not agreement heads in the clausal spine are syntactically Ds, making this type of morphological overlap unsurprising on a clitic analysis.

A second source of support for a clitic analysis comes from the pattern that Nevins (2011) refers to as *tense invariance*. Nevins notes that the exponence of agreement features on T is typically sensitive to non-agreement-related features borne by the T head, in particular tense; clitics attached to T, on the other hand, are invariant. This is a clear respect in which Ubykh person markers pattern with clitics: person marking in Ubykh is invariant not only for tense, but also for aspect and even finiteness. Indeed Dumézil and Esenç (1975, 85) note, "the pre-radical complex [consisting largely of person markers] remains unchanged in all tenses and modes (except in certain imperative forms)."[25] The following examples show the insensitivity of person markers to a selection of tense/aspect manipulations.

(20) a. wɨ-z-bjʒ́-n
2S.ABS-1S.ERG-see-PRES
I see you.

b. wɨ-z-bjɜ-q'ʒ́
2S.ABS-1S.ERG-see-PAST
I saw you.

[25] Strikingly, the exception carved out for imperatives in this passage concerns only marking for ergative subjects, rather than objects; object marking remains unchanged in imperatives. See Fenwick (2011, §2.6.7.2).

c. wɨ-z-bjɜ-nɜjtʼ
2S.ABS-1S.ERG-see-IMPERF
I was seeing you.

d. wɨ-z-bjɜ-qʼɜ́jtʼ
2S.ABS-1S.ERG-see-PLUP
I had seen you.

(Dumézil and Esenç 1975, 145)

A third, albeit somewhat more tentative argument in favor of a syntactic clitic analysis comes from optionality in the marking of 3rd person absolutives; on optionality as a characteristic behavior of clitic doubling, in opposition to the obligatoriness of canonical agreement, see e.g. Kramer (2014), Anagnostopoulou (2016). According to Dumézil and Esenç (1975, 76), 3rd person absolutive markers are optionally dropped when an overt absolutive DP immediately precedes the verb. The pairs they provide in support of this characterization might be taken to suggest that what ultimately matters is the choice between a full overt DP and a null pronoun object, rather than word order *per se*:

(21) a. ɐ-z-bjɜ-qʼɜ́.
3SG.ABS-1SG.ERG-see-PAST
I saw it.

b. wɨ́-wˤɜ z-bjɜ-qʼɜ.
2SG-dog 1SG.ERG-see-PAST
I saw your dog.

(Dumézil and Esenç 1975, 76)

But there is also some evidence that absolutive clitics can go missing when the 3rd person absolutive DP is not a pronoun and does not immediately precede the verb, as for instance in (22):

(22) a. ɐ-ʁʷɨndʷɨ ɐ-ʁʷɨn-ʂɜ́-n Ø-ʂɨ́qʷʼɐ-tʷʼɜs-qʼɜ.
the-bird the-tree-head-DAT 3S.DAT-PVB-sit-PAST
The bird sat up on top of the tree. (Dumézil and Esenç 1975, 122, Fenwick 2011, §2.2.1.1.1.1)

b. qɐ́hwɜ ʈʂʼɜ́-nɨ z-bjɜ́-n
coffee good-ADV 1SG.ERG-see-PRES
I like coffee. (Rhona Fenwick, p.c.)

Thus Charachidzé (1989) advances a generalization somewhat weaker than Dumézil and Esenç's (1975), writing that 3rd person absolutive markers are "particularly fragile, and very willingly omitted, especially if their referent immediately precedes them; but this varies a great deal between speakers, [Ubykh consultant] Tevfik Esenç having a notable preference for the null form [i.e. omission of the person marker]" (pp 394-5). Overall, while much remains unclear regarding the precise conditioning of person marking for 3rd person absolutives, the general pattern here is nevertheless familiar from the literature on clitic-doubling, which may be obligatory for local person arguments but optional for 3rd persons (typically being determined there by animacy, specificity, pronominality, or related factors; see discussion in Anagnostopoulou 2017a).[26]

[26] Note that this conclusion regarding absolutives is the opposite of one reached in unpublished work by Fell (2012), who proposes that dative and ergative person markers in Ubykh involve clitic-doubling but absolutives involve pure ϕ-Agree.

Seen as a whole, this set of facts might aptly be described in the exact terms used by Kramer (2014, 605-606) in summarizing the results of the application of these and other diagnostics to a quite different case (viz. object marking in Amharic): "although individual members of this set of facts may be explained away as exceptional, their collective force is telling. They are all predicted if the [person marker] is a doubled clitic." For much the same reason, I conclude that person markers on the Ubykh verb have the syntactic status of clitic pronominals.

4.2 Absence of PCC effects

Like the Moro facts discussed in section 3, the Ubykh facts reported by Dumézil and Esenç (1975) and Fenwick (2011) are notable in relation to the purported universality of PCC restrictions (Bonet 1991), as they show with particular clarity that Ubykh not only lacks a restriction on second person direct objects, but indeed lacks any manifestation of the core PCC effect at all. Examples (23) show that first person direct objects, expressed as per normal by the clitic *s(i)*, freely co-occur with third person indirect object clitics; this is especially clear in (23b), given that there is no overt clitic for 3rd person singular datives.[27] Examples (24) show the same behavior for second person direct objects, expressed as per normal by the clitic *w(i)*.

(23) a. sí-∅-n-t^{w}i-n
1S.ABS-3S.DAT-3S.ERG-give-PRES
She gives me to him. (3>1)

b. s-é-n-t^{w}i-n
1S.ABS-3P.DAT-3S.ERG-give-PRES
She gives me to them. (3>1)

(24) a. wí-∅-n-t^{w}i-n
2S.ABS-3S.DAT-3S.ERG-give-PRES
She gives you to him. (3>2)

b. w-é-n-t^{w}i-n
2S.ABS-3P.DAT-3S.ERG-give-PRES
She gives you to them. (3>2)

(Fenwick 2011, §2.6.1.1.2.4)

In recent work on NW Caucasian language Shapsug Adyghe, Driemel et al. (2020a,b) show that a classic core PCC effect is absent in that language as well: first person direct object markers and third person indirect object markers may freely combine.[28] However, they describe a type of person restriction that Stegovec (2017, 2020) has dubbed as a "reverse PCC" effect: first person *indirect* object markers cannot combine with third person *direct* object markers (modulo the appearance of

His position is largely based on two constructions which he analyzes as involving long-distance agreement. I suggest that the data in question might alternatively be analyzed as prolepsis (in knowledge reports) and restructuring (in causatives), in which case there is no true long-distance agreement. See Polinsky and Potsdam (2001), Wurmbrand (2001), Deal (2017), Dawson and Deal (2019) for discussion of some relevant structural questions related to these analytical choices.

[27] See the paradigm in (19). This pattern is in no way specific to cases where a local person DO is present.

[28] Indeed this basic state of affairs appears to hold broadly in NW Caucasian. Peter Arkadiev (p.c.) notes that "there are no restrictions on the combinations of cross-referencing pronominal prefixes in Adyghe (and in those varieties of Kabardian I have worked with), and likewise in Abkhaz and Abaza. . . 3>1 combinations with ditransitives are not only allowed in elicitation, but also found in natural texts as well." See also discussion of Abaza ditransitives in Arkadiev (2020). Note that Shapsug Adyghe belongs to the family of dialects also known as West Circassian.

additional special morphology on the verb). This *1>3 pattern, as they show, can be taken to follow from the same central syntactic machinery as a classic "forward" PCC effect, given certain properties of the underlying syntactic representation. Notably, the reverse PCC does not obtain in Ubykh any more than the forward PCC does. Reversing the relative person specifications of IO and DO continues to result in straightforward clitic concatenation:[29]

(25) a. ɐ-sə́-n-t^{w}ə-n
3.ABS-1S.DAT-3S.ERG-give-PRES
She gives him to me. (1>3)

b. ɐ-sə́-n-t^{w}-ɐ-n
3.ABS-1S.DAT-3S.ERG-give-PL-PRES
She gives them to me. (1>3)

(26) a. ɐ-wə́-n-t^{w}ə-n
3.ABS-2S.DAT-3S.ERG-give-PRES
She gives him to you. (2>3)

b. ɐ-wə́-n-t^{w}-ɐ-n
3.ABS-2S.DAT-3S.ERG-give-PL-PRES
She gives them to you. (2>3)

(Fenwick 2011, §2.6.1.1.2.4)

Finally, as discussed above, clitics also concatenate straightforwardly in cases where both objects are local person, regardless of which is direct object and which is indirect:

(27) a. sə-wə́-n-t^{w}ə-n
1S.ABS-2S.DAT-3S.ERG-give-PRES
She gives me to you. (2>1)

b. wə-sə́-n-t^{w}ə-n
2S.ABS-1S.DAT-3S.ERG-give-PRES
She gives you to me. (1>2)

(Fenwick 2011, §2.6.1.1.2.4)

These data confirm that Ubykh lacks a PCC restriction of any type, both a forward PCC effect and a reverse one, thus adding to the small set of languages which counterexemplify Bonet's proposed universal.

*4.3 *3-on-3*

The simple pattern of clitic concatenation just discussed is found in all cases where at least one object is local person. Where both objects are third person, however, the pattern is more complex. Some of this complexity is plausibly attributed to the optionality of clitic doubling for 3rd person absolutives and to general Ubykh phonology—and we begin with cases that have this character—but this type of explanation is not available in all cases. Remaining to be explained are the patterns arising specifically when the linearly second of two 3rd person clitics is 3rd person singular. I will suggest

[29] Examples (25b) and (26b) feature a plural marker between tense and the root, indicating the plurality of the absolutive argument. This is a general pattern in Ubykh, unrelated to clitic combinations; it appears equally well when the only argument is absolutive. See Fenwick (2011, §2.6.1.1.1) for discussion.

that these restrictions should be assimilated to *3-on-3 effects in other languages, for instance Spanish or Catalan.

Let us first consider the combination of 3rd person absolutive objects with 3rd person dative plurals. Elsewhere in the paradigm, the dative plural clitic is uniformly *ɐ-*, and indeed, an *ɐ-* naturally attributable to the dative plural is found in 3PL>3 forms. However, in contrast to the pattern seen with local person absolutives, there is no additional absolutive clitic that appears before the dative. Fenwick (2011) suggests that this pattern reflects a special null allomorph of the 3rd person absolutive morpheme, appearing whenever the following morpheme is 3rd person plural. The glossing of the examples in (28) reflects this analysis:

(28) a. ∅-ɵ́-n-t^{w}ɨ-n
3.ABS-3P.DAT-3S.ERG-give-PRES
She gives it to them.

b. ∅-ɵ́-n-t^{w}-ɐ-n
3.ABS-3P.DAT-3S.ERG-give-PL-PRES
She gives them to them.

(Fenwick 2011, §2.6.1.1.2.4)

I suggest that positing an allomorphic pattern of this type is ultimately unnecessary in view of two facts. First, clitic doubling is optional for 3rd person absolutives (subject to factors that remain to be fully understood, as noted above); the surface forms in (28) could therefore contain not a zero absolutive clitic but rather no absolutive clitic at all. Second, the overt form of the 3rd person absolutive clitic is also *ɐ-*, meaning that the most straightforwardly concatenated form for these cases if an absolutive clitic were indeed present would be an *ɐ-ɐ-* sequence. This, however, is phonologically illegal in Ubykh, which generally lacks vowel length contrasts and vowel hiatus. Vowel hiatus is generally resolved by deletion of one vowel (Fenwick 2011, §1.4.2). Therefore, the underlying form of examples (28) could indeed contain an *ɐ-ɐ-* sequence, with the single resulting *ɐ-* segment in the output corresponding to two distinct *ɐ-* clitics in the input. (This is essentially the analysis of Charachidzé 1989, 367.) Both of these analyses of (28) require no special mechanisms for the 3PL>3 context, whether allomorphic or otherwise.

Turning now to the combination of third person absolutive objects with 3rd person dative singulars (3SG>3), two types of patterns are expected. The first is a pattern with no overt object person markers at all; this results whenever the absolutive is not clitic-doubled, given that there is never any overt clitic for 3rd person singular dative (see (23a), (24a)). This pattern is indeed attested.

(29) a. ∅-n-t^{w}ɨ-n
3S.DAT-3S.ERG-give-PRES
She gives it to her.

b. ∅-n-t^{w}-ɐ-n
3S.DAT-3S.ERG-give-PL-PRES
She gives them to her.

(Fenwick 2011, §2.6.1.1.2.4)

The second expected pattern is one where the 3rd person absolutive clitic takes its standard form, *ɐ-* (and the 3rd person dative singular clitic remains null). The resulting strings are certainly phonologically well-formed; they are exactly those found where the dative clitic is plural, as shown in (28). Notably, however, the forms *ɵ́-n-t^{w}ɨ-n* (28a) and *ɵ́-n-t^{w}-ɐ-n* (28b) are not ambiguous. They have only

the plural dative parse noted in (28).[30] When the dative is singular, if any absolutive clitic at all is present, it is not *ɐ-* but rather an otherwise unattested clitic form, *jɨ-*:

(30) a. jɨ́-∅-n-t^{w}ɨ-n
3.ABS-3S.DAT-3S.ERG-give-PRES
She gives it to her.

b. jɨ́-∅-n-t^{w}-ɐ-n
3.ABS-3S.DAT-3S.ERG-give-PL-PRES
She gives them to her.

(Fenwick 2011, §2.6.1.1.2.4)

(31) ɐ-χ^{j}'ɨ-n t^{w}ɜt^{w}ɜ wɜ-tɨti-n jɨ-∅-n-t^{w}ɨ-n, . . .
DEF-prince-ERG gold DEM-man-DAT 3.ABS-3S.DAT-3SG.ERG-give-GER
The prince having given money to this man, . . . (Charachidzé 1989, 427)

(32) jɨnɜ́ ʃɨ́-n jɨ-∅-ɕ^{w}-t^{w}-q'ɜ-nɜ-j?
this who-DAT 3.ABS-3S.DAT-2PL.ERG-give-PAST-PL-INTERROG
To whom did you give this? (Fenwick 2011, §3.2.2)

Let us refer to the appearance of *jɨ-* in lieu of absolutive *ɐ-* as *jɨ-replacement*. This pattern matches Walkow's (2012, 27) description of a *3-on-3 restriction: "In combinations of a third person DO and a third person IO clitic, only one of them surfaces with the third person morphology it shows in isolation." From this perspective, *jɨ*-replacement is naturally approached as a type of morphological "repair", comparable to Spanish spurious *se*. There are two natural ways the generalization governing *jɨ*-replacement can be stated, the difference concerning the precise relevant factor (whether number or overtness) in the conditioning environment:[31]

(33) *Jɨ-replacement*

a. When the immediately following clitic is 3rd person singular, the 3rd person absolutive clitic is realized as *jɨ-* instead of *ɐ-*.

b. When the immediately following clitic is null, the 3rd person absolutive clitic is realized as *jɨ-* instead of *ɐ-*.

We return to the choice between these formulations after some discussion of further environments in which *jɨ*-replacement applies.

Evidence that *jɨ-* is a special form of the absolutive clitic (rather than the dative clitic, or a portmanteau form exponing both absolutive and dative) comes from patterns of clitic behavior in monotransitives. Given Ubykh's ergative alignment, together with absolutive-(dative)-ergative clitic order, monotransitive verbs involve an absolutive clitic followed by an ergative clitic. Except in cases where the verb bears a dative clitic or a preverb, the 3rd person ergative singular clitic is typically null (Fenwick 2011, §2.6.1.1.1.1.1).

(34) a. sɨ-∅-b(ɨ)jɜ́-n
1S.ABS-3S.ERG-see-PRES
She sees me.

[30] On a few exceptions to this pattern in the corpus of Ubykh, see fn 36.

[31] Both versions of the generalization have been advanced in descriptive work on Ubykh: Charachidzé (1989, 394) emphasizes that the following clitic must be null, for instance, whereas Fenwick (2011) emphasizes that it must be 3rd person singular.

b. wɨ-∅-b(ɨ)jʒ́-n
1S.ABS-3S.ERG-see-PRES
She sees you.

c. ∅-b(ɨ)jʒ́-n
3S.ERG-see-PRES
She sees him. (no clitic doubling of absolutive)

(Fenwick 2011, §2.6.1.1.2.3)

Here, again, if the 3rd person absolutive is clitic-doubled, and its clitic is followed by a (null) 3rd person singular clitic, which in this case is ergative rather than dative, *ji-* results, rather than *ɐ-*:

(35) jɨ-∅-b(ɨ)jʒ́-n
3.ABS-3S.ERG-see-PRES
She sees him. (Fenwick 2011, §2.6.1.1.2.3)

(36) sɨ-tʃʲ́ zʒ-wːʈːɐkʲʼʒ-gʷʒrʒ-n jɨ-∅-qʷʼʒ-n
1SG.POSS-horse one-thief-certain-ERG 3.ABS-3S.ERG-seize-PRES
A thief is taking my horse. (Dumézil 1961, 48, Fenwick 2011, §3.2.1)

The expected but unattested *ɐ-* form is again entirely well-formed phonologically, appearing for the combination of 3rd person plural ergative with 3rd person singular absolutive. For (37), as in (28), we can assume that *ɐ-* at least in part reflects the plural ergative clitic, with the absolutive clitic either absent (because there is no absolutive clitic doubling) or realized together with the plural ergative clitic in a single *ɐ-* segment.

(37) ɐ-b(ɨ)jʒ́-n
(3.ABS)3P.ERG-see-PRES
They see him. (Fenwick 2011, §2.6.1.1.2.3)

And finally, it should be noted that Ubykh contains a set of oblique intransitive verbs, whose subjects are absolutive and whose objects are dative.[32] Like ditransitives, these verbs give rise to the sequence of an absolutive clitic followed by a dative, and again, when the absolutive is 3rd person and the dative is 3rd singular, we find *ji-*replacement:

(38) a. ɐ-sɨ́-jʒ-n
3.ABS-1S.DAT-hit-PRES
She hits me.

b. ɐ-wɨ́-jʒ-n
3.ABS-2S.DAT-hit-PRES
She hits you.

c. jɨ́-∅-jʒ-n
3.ABS-3S.DAT-hit-PRES
She hits him.

(Fenwick 2011, §2.6.1.1.2.2)

[32] As Fenwick (2011, §2.6) notes, some oblique intransitives correspond to meanings that are quite classically transitive crosslinguistically, including 'to hit', (38); 'to hit' is an oblique intransitive in all NW Caucasian languages discussed by Dumézil and Esenç (1975). See Arkadiev and Lander (2021, §6.3) for further discussion of oblique intransitives across the family.

(39) ɐ-tɨt ɐ-χ^{j}'ɨ-n jɨ-∅-jɜ-q'ɜ
DEF-man DEF-prince-DAT 3SG.ABS-3S.DAT-hit-PAST
The man struck the prince. (Charachidzé 1989, 439)

Again, the *ɐ-* form is phonologically possible, but appears only if *ɐ-* at least in part reflects a plural dative:

(40) ɐ́-jɜ-n
(3.ABS)3P.DAT-hit-PRES
She hits them. (Fenwick 2011, §2.6.1.1.2.2)

As the reader can confirm, these data from transitives and oblique intransitives are consistent with both formulations of the conditioning environment for *jɨ*-replacement as stated in (33). In all cases, the clitic triggering *jɨ*-replacement of the absolutive is both 3rd person singular and phonologically null.

An account of these data requires two interrelated pieces. First is an account of why the parses of (41) with a singular dative or ergative clitic immediately following the 3rd person absolutive clitic are ruled out—why, that is, the standard 3rd person absolutive clitic *ɐ-* cannot be used in the *jɨ*-replacement environment.

(41) a. * ɐ́-∅-n-t^{w}ɨ-n
3.ABS-3S.DAT-3S.ERG-give-PRES
✗He gives it to her. (String ok as: he gives it to them.)

b. * ɐ́-∅-jɜ-n
3S.ABS-3S.DAT-hit-PRES
✗She hits it. (String ok as: she hits them.)

c. * ɐ-∅-b(ɨ)jɜ́-n
3.ABS-3S.ERG-see-PRES
✗She sees him. (String ok as: they see him.)

Second is an account of why, in the expression of these meanings, the otherwise unattested form *jɨ-* surfaces instead (as in (30a), (38c), (35)).

Both pieces are familiar from the analysis of *3-on-3 restrictions in other languages. For Spanish, for instance, the corresponding questions concern (first) the ill-formedness of examples like (42a), where the 3rd person dative is expressed in its standard form, *le*, and (second) the expression of the corresponding meaning with the special form *se*, as in (42b).[33]

(42) Spanish (Perlmutter 1971)

a. * Le lo recomendé.
3S.DAT 3SM.ACC recommended
Intended: I recommended it to him.

b. Se lo recomendé.
3S.DAT 3SM.ACC recommended
I recommended it to him.

[33] These questions are distinguished with particular clarity in Manzini and Savoia (2002).

For (non-Valencian) Standard Catalan, the facts mirror their Ubykh counterparts even more closely, with sensitivity to number as well as person.[34] As in Ubykh, when the dative clitic is plural, dative and accusative clitics take their standard forms (respectively *els* and *les* in (43b)) and there is no *3-on-3 effect:

(43) (Non-Valencian) Standard Catalan (Bonet 1993)

a. Als nois, els donaré les pomes més tard.
to.the boys 3PL.DAT give.1SG.FUT the apples later

b. Les pomes, als nois, els les donaré més tard.
the apples(FEM) to.the boys 3PL.DAT 3PL.FEM.ACC give.1SG.FUT later
I will give the apples to the boys later.

But when the dative clitic is singular, the expected clitic combination is ill-formed, (44b), and a special form of the clitic cluster (featuring ACC-DAT order with the dative clitic expressed as *hi*) must appear, (44c).

(44) (Non-Valencian) Standard Catalan (Bonet 1993)

a. Al noi, li donaré les pomes més tard.
to.the boy 3SG.DAT give.1SG.FUT the apples later

b. * Al noi, les pomes, li les donaré més tard.
to.the boy the apples(FEM) 3SG.DAT 3PL.FEM.ACC give.1SG.FUT later

c. Al noi, les pomes, les hi donaré més tard.
to.the boy the apples(FEM) 3PL.FEM.ACC 3SG.DAT give.1SG.FUT later
I will give the apples to the boy later.

Such data suggest that the distribution of Ubykh *ɐ-* and *ji-* should be thought of as indicative of a wider phenomenon of *3-on-3 restrictions and their repairs. Beyond Spanish and Catalan, morphological restrictions and repairs specific to the 3-on-3 environment are also found in Ondarru Basque, where they regulate combinations of 3rd person plural datives and 3rd person ergatives (Arregi and Nevins 2012, 228). They are found in Northern Greek, where they regulate combinations of 3rd person accusative direct objects and 3rd person (accusative) indirect objects (Anagnostopoulou 2018, 163). Elsewhere in NW Caucasian, they are found in West Circassian, where they regulate the combination of the 3rd person dative marker with the 3rd person ergative marker—though notably, unlike in Ubykh, neither of the two morphemes in this case is null (Dumézil and Esenç 1975, 75, 99).[35] These

[34] Pancheva and Zubizarreta (2018, fn 19) note these facts and suggest that they can be handled in a way parallel to spurious *se* (though they do not clarify the exact role of number features in this analysis).

[35] According to Dumézil and Esenç (1975, 74, 99), the West Circassian 3rd person dative marker is typically *je* (singular) or *ja* (plural); the 3rd person ergative marker is typically *je-* (singular) or *a-* (plural). When a 3rd person dative immediately precedes a 3rd person ergative marker, the typical dative */j/* form is impossible and the dative marker must instead be expressed as *r-* (singular) or *ar-* (plural). While portions of this pattern could be attributed to a purely surface phonological dissimilation rule operative in */j(V)j/* sequences (see Ershova 2019, 40, citing Arkadiev et al. 2009), a morphological solution seems necessary for cases where the ergative marker is plural (and thus would have been *a-* rather than *je-*), as in (i-b). (The alternative, presented by Smeets (1984, 218), is an opaque phonological derivation whereby the plural ergative is underlyingly /ja/, and /j/ is deleted after conditioning dissimilation.)

(i) a. w-je-se-tə
2SG.ABS-3SG.DAT-1SG.ERG-give
I give you to her.

b. sə-r-a-tə (*sə-j-a-tə)
1SG.ABS-3SG.DAT-3PL.ERG-give
They give me to her. (Dumézil and Esenç 1975, 99)

patterns overall lend support to Arregi and Nevins's (2012, 211) observation that "although the feature [-PARTICIPANT] by itself is not marked, the combination of more than one morpheme with this feature is marked." Of the two possible statements of the *ji*-replacement generalization in (33), the cross-linguistic view suggests that the formulation directly in terms of 3rd person in the conditioning environment, (33a), is the more natural one; while there is no particular reason to expect a pattern of this type to be conditioned by a null clitic, such patterns are frequently conditioned by 3rd person (and even, in the particular case of Standard Catalan, 3rd person singular).

5 The purely morphological character of Ubykh ji-replacement

The Ubykh data reveal that the typology of PCC and *3-on-3 effects is at least somewhat less constrained than indicated in Table 2: in addition to languages like Moro, which lack both PCC effects and *3-on-3 restrictions (as discussed in section 3), we must also recognize languages that lack PCC effects but nevertheless restrict 3-on-3. For Pancheva and Zubizarreta (2018), the Ubykh data pose a challenge in particular because this constellation of behaviors cannot be explained either by P-constraint parameter settings or by syntactically grounded morphological rules of the spurious *se* type. On the former count, in order to rule in 3>1 configurations, it must be the case that no particular featural constraint is imposed on indirect objects. (Domain of Application must not be set to All.) A featural constraint therefore cannot be appealed to to rule out 3-on-3. On the latter count, recall that Pancheva and Zubizarreta approach spurious *se* as resulting from the need for a [+PROXIMATE] feature on the indirect object, which conflicts with the 3rd person [-PARTICIPANT] feature. This approach is inapplicable in a language where indirect objects are not required to be [+PROXIMATE]. Moreover, as we have seen, the *ji*-replacement pattern is independent of whether an indirect object is present—it holds also in simple transitives, between ergative and absolutive clitics—and the clitic that takes a special form is the absolutive (direct object) not the dative (indirect object).

Theories which do not tie *3-on-3 effects to PCC typology fare better in light of the Ubykh facts. A potential model for a theory of *ji*-replacement entirely compatible with the absence of PCC effects comes from Nevins' (2007) proposal for Spanish spurious *se*, repeated in (45):

(45) Spanish spurious *se* rule (Nevins 2007)
Delete/alter the features corresponding to 3rd person on a dative [clitic] when it precedes another 3rd person.

While Nevins' proposal for spurious *se* and Pancheva and Zubizarreta's are both morphological in nature, they differ in that Nevins' does not in any way reference the featural syntax of ditransitives. Rather, his proposal is formulated with sufficient generality so as to fit into any theory that allows the morphology access to deletion or feature-altering rules, ϕ-features, and linear precedence. (In addition, in leaving open whether the rule involves feature deletion or feature alternation, his formulation makes room for a variety of possible analyses of the output clitic *se*.) These same ingredients make available the outlines of a morphological rule for *ji*-replacement:[36]

[36] A few Ubykh forms are attested in which *ji*-replacement might be expected to apply but does not. In certain cases, whether *ji*-replacement is expected depends on whether an indirect object is truly syntactically present, and reported data is not sufficient to determine with surety that indeed it is. (See Fenwick (2011, §2.6.1.1.4) for discussion of cases where notional arguments, including datives, are omitted.) In others, an overt indirect object is present in the clause, and yet *ji*-replacement still does not apply. Such cases are found primarily in causatives, e.g. (i), where dative in question is a causee. Note that the verb bears *ɐ*- rather than *ji*-.

(46) Ubykh *ji*-replacement rule
Delete/alter the features corresponding to 3rd person on an absolutive clitic when it precedes a 3rd person singular clitic.

On a feature-deletion view of the *ji*-replacement rule, the clitic *ji-* is the unique absolutive form in Ubykh that expones no person feature whatsoever (including 3rd person). The clitic *ɐ-* expones 3rd person; *ji-* expones only absolutive case.[37] On a feature-alteration view, the rule changes the 3rd person feature to an alternative feature (call it [F]) which is uniquely exponed by *ji-*, and which *ji-* uniquely expones. Notably, all such formulations of the *ji*-replacement rule have effects confined to the 3rd person corner of the clitic system of Ubykh. They are accordingly entirely compatible with the absence of PCC effects in the language.

Before turning to the typological implications of rules such as (45) or (46), it should be noted that there are three types of facts about the Ubykh data discussed above which lend support to the purely morphological character of the proposed rule in (46). First, as seen above in the discussion of ditransitive, monotransitive, and oblique intransitive verbs, the conditioning environment for *ji-* in Ubykh is naturally described in terms that reference morphophonological properties—linear order and adjacency (and perhaps also overtness)—rather than syntactic configuration. The examples in (47), repeated from above, remind us that *ji*-replacement occurs in strings of clitics representing the two objects of a ditransitive (47a), the subject and object of a transitive (47b), and the subject and oblique object of an oblique intransitive (47c).

(47) a. jɨ́-∅-n-t^{w}ɨ-n
3.ABS-3S.DAT-3S.ERG-give-PRES
She gives it to her.

b. ji-∅-b(ɨ)jʒ́-n
3.ABS-3S.ERG-see-PRES
She sees him.

(i) ʁɜ-ʤʒpχ^{j}ʒ́-n ʃi-pχ^{j}ʒ́dɨk^{w}'ɨ-n ɐʃʒ́ ɐ-∅-nɨ-∅-d^{w}ɨ-n
3POSS-sister-ERG 1PL-young.woman-DAT shirt 3.ABS-3.DAT-3SG.ERG-CAUS-sew-PRES
His sister makes our young woman sew a shirt. (Rhona Fenwick, p.c.)

Other apparently similar examples, however, do feature *ji*-replacement:

(ii) jɨ́-∅-si-∅-k^{w}'-ʒwt
3.ABS-3S.DAT-1SG.ERG-CAUS-kill-FUT
I will have X kill Y. (Rhona Fenwick, p.c.)

In view of such data, it may be that a full statement of the *ji*-replacement rule requires at least one additional conditioning factor beyond those stated in (46) (perhaps related in some way to causative structure), or alternatively, that the rule is optional or found only in some grammars. (This variation could not be simply idiolectal, however, as both examples above come from the same consultant, Tevfik Esenç.) Thanks to Rhona Fenwick for discussion of these issues.

[37] This view of course requires that there be a characteristic feature of 3rd person, and thus that 3rd person is not simply the absence of [PARTICIPANT] or [AUTHOR] features; see Nevins (2007) for a lengthy defense of this position. Reason to suspect that *ɐ-* does not also expone absolutive comes from its appearance throughout the 3rd person paradigm, e.g. in 3rd person plural (absolutive, dative, or ergative), in addition to 3rd person singular absolutive. Of course, if both *ɐ-* and *ji-* expone only one feature, some factor other than the standard Subset Principle is called for to regulate the choice among them in a Distributed Morphology framework. One possibility is that, in the case of "ties" in numbers of features among vocabulary items, the item with a more specific contextual specification is inserted, as proposed by Hankamer and Mikkelsen (2005). In this case it would suffice to attach nearly any contextual specification to *ɐ-* to ensure its insertion.

c. jɨ́-∅-jɜ-n
3.ABS-3S.DAT-hit-PRES
She hits it.

These examples represent a range of distinct syntactic configurations for the two arguments involved. In ditransitive (47a), for instance, the absolutive plausibly occupies the complement position of V whereas the dative occupies the specifier of an applicative head. In monotransitive (47b), the absolutive plausibly remains in the VP whereas the ergative occupies the specifier position of Voice. In oblique intransitive (47c), the absolutive presumably occupies the specifier of Voice (assuming this verb is semantically unergative) whereas the dative occupies the specifier of an applicative head or the complement of a silent adposition.[38] The fact that *jɨ*-replacement is impervious to these manipulations would be surprising if the relevant rule is sensitive to sentential syntax. In the same vein, also potentially unexpected from a syntactic point of view (but entirely natural from a morphological one) is the sensitivity to adjacency these facts evince. *Jɨ*-replacement in a monotransitive is triggered by a 3rd person ergative singular clitic, as in (47b). As soon as a dative clitic linearly separates the absolutive from the ergative, however, the 3rd person ergative singular no longer conditions *jɨ*-replacement:

(48) ɐ-sɨ́-n-t^{w}ɨ-n
3.ABS-1S.DAT-3S.ERG-give-PRES
She gives him to me.

A second point in favor of a purely morphological analysis concerns the conditioning environment for *jɨ*-replacement. As we saw in (33), purely on Ubykh-internal grounds, this generalization may be stated in two ways, in each case with equivalent empirical coverage—*jɨ*-replacement is either sensitive to the fact that the clitic following the 3rd person absolutive is phonologically null, or to the fact that it is 3rd person singular. Either approach raises challenges for a syntactic view. A statement in terms of overtness would be particularly challenging, given a late insertion model of the syntax-phonology interface; information about which morphemes will receive an overt realization is not available internal to the syntactic component. The formulation in terms of 3rd person singular, however, raises the question of how the *singular* in particular is to be singled out syntactically. As Bonet (1993) notes in her discussion of the Standard Catalan facts above in (43)-(44), the syntax of clitics is not generally taken to be sensitive to their number specification—certainly not in the way it might be sensitive to their person or their case. From a morphological perspective, on the other hand, sensitivity to number is perfectly natural, as this information is of course readily available in the morphology, and routinely conditions allomorphy and morphological rules of other types.

A third point in favor of a purely morphological analysis concerns the fact that the *jɨ*- clitic is not attested outside of the *jɨ*-replacement environment. Ubykh thus provides a counterexample to the generalization from Bonet (1995) that Walkow (2012) dubs *The Closed System Generalization*:

(49) *The Closed System Generalization*
Opaque output forms in clitic combinations always result in another clitic form, indicating a closed system. (Bonet 1995:612)

The Closed System Generalization is not without other counterexamples (see Pescarini 2005 and

[38] See for instance Ershova (2019), Driemel et al. (2020a) on similar configurations in related language West Circassian (Adyghe).

Walkow 2012, 46-48 for discussion of examples from Romance dialects).[39] Like the *ji*-replacement data, these data show that the 3-on-3 context may call not just for a special interpretation of a given clitic, as certain syntactic theories propose—e.g., in Spanish, a non-reflexive interpretation of *se* (see for instance Manzini 2014)—but rather for a special, otherwise unattested clitic. This finding is welcome from the perspective of a morphological theory, wherein the Closed System Generalization, if it were to hold as a true universal, would present an explanatory challenge. While it is straightforward to write individual morphological rules that have the property of yielding existing forms (as Harris 1995 and Bonet 1991 *et seq.* emphasize), it is difficult to rule out the possibility of morphological rules that yield distinctive outputs not otherwise attested. It is exactly this type of rule that we find in *ji*-replacement, given a purely morphological theory.

6 Me-first and *3-on-3 revisited

In terms of the typology laid out in Table 2, the one language type remaining to be attested is one that combines a Me-first PCC with *3-on-3. From the perspective of a theory like Nevins' (2007), the absence of such a case can only be treated as an accidental gap; since the morphological rules responsible for spurious-*se*-type *3-on-3 restrictions do not interact with PCC grammar, there is nothing to rule out the presence of such a restriction in a language whose syntax is of the Me-first type. Much the same situation faces a potential revision of Pancheva and Zubizarreta's (2018) theory that allows for non-syntactically-grounded rules like (45) or (46) (presumably in addition to the two other ways of deriving *3-on-3 already allowed by the theory). Of course, the advantage of this potential revision, as compared to Pancheva and Zubizarreta's (2018) approach as reviewed in section 2, is its ability to account for the data from Ubykh. The disadvantage is that the absence of *3-on-3 in a Me-first language no longer receives a principled explanation.

I would like to suggest that the situation in which both approaches find themselves—treating the absence of a Me-first PCC with *3-on-3 as an accidental gap—is perhaps not surprising. While there is much yet to be adequately described in terms of the full distribution of PCC varieties among, say, speakers of southern Romance languages (for whom variation between different PCC grammars is often reported; see Pancheva and Zubizarreta 2018 on Spanish, Monachesi 1998 on Italian, Bonet 1991 on Catalan), it does appear to be the case that the Me-first pattern is significantly less attested in general than other varieties. In contrast to the Me-first pattern, Strong, Weak, Ultrastrong, and No-PCC grammars are each found in genetically and areally diverse languages. Strong PCC is found in French, in Kiowa (Kiowa-Tanoan, USA; Adger and Harbour 2007), and in Warlpiri (Pama-Nyungan, Australia; Hale 1973). Weak is found in Catalan, in Yakkha (Kiranti, Nepal; Schackow 2012), and quite broadly in Bantu languages, including Haya, Nyaturu, Sambaa, and Swahili (Riedel 2009).[40] Ultrastrong is found in Spanish, Czech (Sturgeon et al. 2011), and Arabic (Nevins 2007, Walkow 2012, 2013). And languages with doubly weak ditransitives but no PCC include, as we have seen,

[39] Pescarini notes that at least some (synchronic) counterexamples reflect historically older forms that have become specialized for the 3-on-3 context. This is likely the case in Ubykh as well, given that morphemes phonologically similar to *ji*-, and plausibly cognate with it, occur in other NW Caucasian languages' 3rd person paradigms. For instance *j*- is perhaps simply the default 3rd person marker in Abaza (Hewitt 2005; see also Baier 2018, who emphasizes the default nature of this affix).

[40] Pancheva and Zubizarreta (2018) propose that weak PCC is a highly marked pattern, "more idiolectal than dialectal," which can only be learned if input from Ultrastrong grammars is present in the speech community (p 1309). I suggest that this connection between Weak PCC and Ultrastrong PCC may be confined to Romance languages; there is no report of Ultrastrong grammars in Bantu, for instance, to my knowledge.

Moro (Kordofanian, Sudan; Jenks and Rose 2015) and Ubykh (NW Caucasian). By contrast, based on current evidence, the Me-first pattern holds broadly for essentially only two languages, Romanian and Bulgarian, which have been in long-standing contact, and may be found as well for some speakers of other languages in the Balkan sprachbund such as Serbo-Croatian (Runić 2013), as well as nearby Polish (Cetnarowska 2003 *apud* Pancheva and Zubizarreta 2018). The overall low rate of attestation of Me-first PCC means that the pairing of Me-first PCC with *any* additional grammatical phenomenon is likely to be very rare indeed, to the point where accidental gaps become quite likely. And the areal grouping of Me-first languages, together with their history of contact, makes it especially unsurprising that a *3-on-3 pattern is, say, lacking in Romanian, given that it is lacking in Bulgarian as well.

7 Conclusions

In this paper I have argued that the distribution of interactions between PCC effects and *3-on-3 restrictions is less constrained than predicted by Pancheva and Zubizarreta (2018). Two types of languages are predicted not to exist on this theory: one where a *3-on-3 restriction is present but a PCC effect is not, and one where a *3-on-3 restriction is paired with a Me-first PCC. While the second of these predictions may be correct, the first is falsified by Ubykh. Accommodating the Ubykh pattern seems to call for Nevins 2007-style morphological rules, grounded in the linear order of clitic sequences but not specific to PCC syntax. Indeed, the absence of a deep connection to ditransitive syntax is particularly clear in Ubykh, where the *ji*-replacement rule (by contrast to Spanish spurious *se*) extends across both IO-DO clitic sequences and Subject-Object clitic sequences of various types. The potential addition of a purely morphological *ji*-replacement rule to the general framework of Pancheva and Zubizarreta (2018), however, accounts for the Ubykh pattern at the cost of no longer predicting a gap where Me-first PCC meets *3-on-3. The theory instead predicts, as Nevins (2007) also does, that all types of PCC effects should be freely combinable (or not) with independent rules of *3-on-3. The absence of a Me-first grammar with a *3-on-3 restriction must therefore be treated as an accidental gap.

These results are of general importance because they show that not all ditransitive person restrictions flow from the same source. One consequence is that theories that regulate the entire paradigm of person combinations among IO and DO must be carefully compared to those that regulate only particular combinations in a more piecemeal or "à la carte" fashion; these include not only work specifically addressed to *3-on-3 restrictions, such as Nevins 2007, but also those that similarly regulate only 1>2 and 2>1 combinations, such as Drummond and O'Hagan (2020) and Bossi (2020). An additional consequence is a need for caution when evaluating what can be gleaned from evidence suggesting that the core PCC effect is syntactic, rather than morphological. The now-sizable body of literature on *3-on-3 effects, nearly of all of it focused on Romance languages, features both morphological and syntactic approaches of a variety of types. (See e.g. Perlmutter 1971, Bonet 1991, 1993, 1995, Harris 1995, Grimshaw 1997, Nevins 2007, Arregi and Nevins 2012, Cuervo 2013 for morphological approaches and Manzini and Savoia 2002, 2004, Walkow 2012, Manzini 2014, Cabré and Fábregas 2019 for syntactic ones—not to mention, among the latter class of papers, Pancheva and Zubizarreta 2018.) The existence of rules such as Ubykh *ji*-replacement serves as a reminder that fully morphological rules are likely to coexist with syntactic restrictions—and thus, granting that the core PCC effect is fully syntactic does not obviate the potential need to recognize morphological rules active in clitic combinations.

In terms of the syntax of the core PCC effect itself, in this paper I have not argued against Pancheva

and Zubizarreta's (2018) particular approach, based in the P-constraint. What we have seen is that this type of approach, paired with the limited means of regulating 3>3 sequences envisioned by its architects, undergenerates the typology of ditransitive person restrictions. One possible solution is simply to augment the theory with morphological rules of the *ji*-replacement type (and potentially the spurious *se* type as in (45) as well), while granting that the resulting typology predicts a language type not yet attested. At this point, however, equivalent empirical coverage in terms of PCC typology and *3-on-3 is available on other approaches to the syntax and typology of PCC effects, e.g. Nevins (2007), Deal (2020), Coon and Keine (To appear), all of which account for the four PCC patterns listed in (4). The decision among these approaches must therefore be made on the basis of some other factor—e.g. the behavior of reverse PCC patterns (see Stegovec 2020, Driemel et al. 2020a,b), or the potential existence of additional PCC types such as "me-last" (predicted Nevins 2007) or "you-first" or "A-descending" (predicted by Deal 2020).

References

Adger, David, and Daniel Harbour. 2007. Syntax and syncretisms of the Person Case Constraint. *Syntax* 10:2–37.

Anagnostopoulou, Elena. 2003. *The syntax of ditransitives: Evidence from clitics*. Walter de Gruyter.

Anagnostopoulou, Elena. 2005. Strong and weak person restrictions: a feature checking analysis. In *Clitics and affixation*, ed. Lorie Heggie and Francisco Ordóñez, 199–235. Amsterdam: John Benjamins.

Anagnostopoulou, Elena. 2008. Notes on the person-case constraint in Germanic. In *Agreement restrictions*, ed. Roberta D'Alessandro, Susann Fischer, and Gunnar Hrafn Hrafnbjargarson, 15–47. De Gruyter.

Anagnostopoulou, Elena. 2016. Clitic doubling and object agreement. In *Proceedings of the VII Nereus International Workshop: "Clitic Doubling and other issues of the syntax/semantic interface in Romance DPs"*, ed. Susann Fischer and Mario Navarro, 11–42. Arbeitspapier 128. Fachbereich Sprachwissenschaft, Universität Konstanz.

Anagnostopoulou, Elena. 2017a. Clitic doubling. In *The Wiley Blackwell Companion to Syntax*, ed. Martin Everaert and Henk van Riemsdijk.

Anagnostopoulou, Elena. 2017b. The person case constraint. In *The Wiley Blackwell Companion to Syntax*, ed. Martin Everaert and Henk van Riemsdijk.

Anagnostopoulou, Elena. 2018. Defective intervention effects in two Greek varieties and their implications for ϕ-incorporation as Agree. In *Order and structure in syntax II : Subjecthood and argument structure*, ed. Michelle Sheehan and Laura R Bailey, Open Generative Syntax, 153–178. Berlin: Language Science Press.

Arkadiev, Peter. 2020. Abaza. Manuscript available on academia.edu, June 2020.

Arkadiev, Peter, and Yury Lander. 2021. The Northwest Caucasian languages. In *The Oxford Handbook of the Languages of the Caucasus*, ed. Maria Polinsky, 369–446.

Arkadiev, Peter, Yury Lander, Alexander Letuchiy, Nina R Sumbatova, and Yakov G Testelets. 2009. Vvedenije. osnovnyje svedenija ob adygejskom jazyke [Introduction: Basic information on Adyghe]. In *Aspekty polisintetizma: Očerki po grammatike adygejskogo jazyka*, ed. Yakov G Testelets, 17–120. Moscow: RGGU.

Arregi, Karlos, and Andrew Nevins. 2008. Agreement and clitic restrictions in Basque. In *Agreement restrictions*, ed. Roberta D'Alessandro, Susann Fischer, and Gunnar Hrafn Hrafnbjargarson, 49–86. Berlin: Mouton de Gruyter.

Arregi, Karlos, and Andrew Nevins. 2012. *Morphotactics: Basque auxiliaries and the structure of spellout*. Springer.

Baier, Nicholas. 2018. Anti-agreement. Doctoral Dissertation, University of California, Berkeley.

Baker, Mark, and Ruth Kramer. 2018. Doubled clitics are pronouns: Amharic objects (and beyond). *Natural Language and Linguistic Theory* 36:1035–1088.

Béjar, Susana, and Milan Rezac. 2003. Person licensing and the derivation of PCC effects. In *Romance linguistics: theory and acquisition*, ed. Ana Teresa Pérez-Leroux and Yves Roberge, 49–62. Amsterdam: John Benjamins.

Bhatt, Rajesh, and Radek Šimík. 2009. Variable binding and the person-case constraint. Paper presented at 25th annual meeting of the Israel Association for Theoretical Linguistics (IATL), Ben Gurion University of the Negev.

Bonet, Eulalia. 1991. Morphology after syntax: Pronominal clitics in Romance. Doctoral Dissertation, MIT.

Bonet, Eulàlia. 1993. 3rd person pronominal clitics in dialects of Catalan. *Catalan Working Papers in Linguistics* 3:85–111.

Bonet, Eulalia. 1994. The person-case constraint: A morphological approach. In *The morphology-syntax connection*, ed. Heidi Harley and Colin Phillips, 33–52. MITWPL.

Bonet, Eulália. 1995. Feature structure of Romance clitics. *Natural Language and Linguistic Theory* 13:607–647.

Bossi, Madeline. 2020. *Local > local is morphological: Promiscuous agreement and a novel ditransitive person restriction in Kipsigis. Manuscript, UC Berkeley.

Cabré, Teresa, and Antonio Fábregas. 2019. 3rd person clitic combinations across Catalan varieties: Consequences of the nature of the dative clitic. *The Linguistic Review* 36:151–190.

Cetnarowska, Bozena. 2003. On pronominal clusters in Polish. In *Investigations into formal Slavic linguistics*, ed. Peter Kosta et al, volume 1, 13–30. Bern: Peter Lang.

Charachidzé, Georges. 1989. Ubykh. In *The Indigenous Languages of the Caucasus*, ed. George Hewitt, volume 2, 357–459.

Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A Life in Language*, ed. Michael Kenstowicz, 1–52. Cambridge, Mass: MIT Press.

Coon, Jessica, and Stefan Keine. To appear. Feature gluttony. *Linguistic Inquiry*.

Cuervo, María Cristina. 2013. Spanish clitic clusters: three of a perfect pair. *Borealis: an international journal of Hispanic linguistics* 2:191–220.

Dawson, Virginia, and Amy Rose Deal. 2019. Third readings by semantic scope lowering: prolepsis in Tiwa. In *Proceedings of Sinn und Bedeutung 23*, ed. M. Teresa Espinal et al., 329–346. Universitat Autònoma de Barcelona, Bellaterra (Cerdanyola del Vallès).

Deal, Amy Rose. 2017. Covert hyperraising to object. In *Proceedings of NELS 47*, ed. Andrew Lamont and Katerina Tetzloff, 257–270. Amherst, MA: GLSA Publications.

Deal, Amy Rose. 2020. Interaction, satisfaction, and the PCC. Ms, Berkeley, May 2020.

Driemel, Imke, Ahmet Bilal Özdemir, and Marie-Luise Popp. 2020a. Direction toward person: canonical inverse and reverse PCC in Adyghe. Manuscript.

Driemel, Imke, Ahmet Bilal Özdemir, and Marie-Luise Popp. 2020b. A repair for PCC and inverse contexts in Adyghe. In *Proceedings of NELS 50*, ed. Mariam Asatryan, Yixiao Song, and Ayana Whitmal. Amherst: GLSA.

Drummond, Emily, and Zachary O'Hagan. 2020. Morphological and syntactic person restrictions in Caquinte. In *Proceedings of NELS 50*, ed. Mariam Asatryan, Yixiao Song, and Ayana Whitmal. Amherst: GLSA.

Dumézil, Georges. 1961. Chah-meymun, texte oubykh traduit et commenté. *Orientalia Suecana* 10:41–80.

Dumézil, Georges, and Tevfik Esenç. 1975. *Le verbe oubykh*. Imprimerie nationale.

Ershova, Ksenia. 2019. Syntactic ergativity in West Circassian. Doctoral Dissertation, University of Chicago.

Fell, Brian. 2012. Case and agreement in Ubykh. Manuscript available on academia.edu.

Fenwick, RSH. 2011. *A grammar of Ubkyh*. Lincom.

Foley, Steven, and Maziar Toosarvandani. To appear. Extending the person–case constraint to gender: Agreement, locality, and the syntax of pronouns. To appear, *Linguistic Inquiry*.

Grimshaw, Jane. 1997. The best clitic: constraint conflict in morphosyntax. In *Elements of grammar*, ed. Liliane Haegeman, 169–196. Dordrecht: Kluwer Academic Publishers.

Hale, Kenneth. 1973. Person marking in Walbiri. In *A festscrift for Morris Halle*, ed. Stephen Anderson and Paul Kiparsky, 308–344. New York: Holt, Rinehart and Winston.

Hankamer, Jorge, and Line Mikkelsen. 2005. When movement must be blocked: A reply to Embick and Noyer. *Linguistic Inquiry* 36:85–125.

Harizanov, Boris. 2014. Clitic doubling at the syntax-morphophonology interface: A-movement and morphological merger in Bulgarian. *Natural Language and Linguistic Theory* 32:1033–1088.

Harris, James. 1995. The morphology of Spanish clitics. In *Evolution and Revolution in Linguistic Theory: Studies in Honor of Carlos P. Otero*, ed. Hector Campos and Paula Kempchinsky, 168—197. Georgetown University Press.

Haspelmath, Martin. 2004. Explaining the ditransitive person-role constraint: A usage-based account. *Constructions* 2:1–71.

Heck, Fabian, and Marc Richards. 2010. A probe-goal approach to agreement and non-incorporation restrictions in Southern Tiwa. *Natural Language and Linguistic Theory* 28:681–721.

Hewitt, George. 2005. North West Caucasian. *Lingua* 115:91–145.

Jenks, Peter, and Sharon Rose. 2015. Mobile object markers in Moro: the role of tone. *Language* 91:269–307.

Klamer, Marian. 1997. Spelling out clitics in Kambera. *Linguistics* 35:895–927.

Klamer, Marian. 1998. Kambera intransitive argument linking. *Studia Linguistica* 52:77–111.

Kramer, Ruth. 2014. Clitic doubling or object agreement: the view from Amharic. *Natural Language and Linguistic Theory* 32:593–634.

Manzini, M. Rita. 2014. Unifying minimality and the OCP: local anti-identity as economy. In *Identity Relations in Grammar*, ed. Kuniya Nasukawa and Henk van Riemsdijk, 123–160.

Manzini, M. Rita, and Leonardo M. Savoia. 2002. Clitics: lexicalization patterns of the so-called 3rd person dative. *Catalan Journal of Linguistics* 1:117–155.

Manzini, M. Rita, and Leonardo M. Savoia. 2004. Clitics: Cooccurrence and mutual exclusion patterns. In *The structure of CP and IP*, ed. Luigi Rizzi, 211–250. Oxford: Oxford University Press.

Monachesi, Paola. 1998. Decomposing Italian clitics. In *Romance in HPSG*, ed. S Balari and L Dini. CSLI Publications.

Nevins, Andrew. 2007. The representation of third person and its consequences for person-case effects. *Natural Language and Linguistic Theory* 25:273–313.

Nevins, Andrew. 2011. Multiple agree with clitics: person complementarity vs. omnivorous number. *Natural Language and Linguistic Theory* 29:939–971.

Ormazabal, Javier, and Juan Romero. 2007. The object agreement constraint. *Natural Language and Linguistic Theory* 25:315–347.

Pancheva, Roumyana, and Maria Luisa Zubizarreta. 2018. The person case constraint: the syntactic encoding of perspective. *Natural Language and Linguistic Theory* 36:1291–1337.

Perlmutter, David. 1971. *Deep and surface structure constraints in syntax*. New York: Holt, Rinehart and Winston.

Pescarini, Diego. 2005. Clitic clusters and morphological repairs: evidence from Italian, Spanish, and Barceloní. *Studi linguistici e filologici on line* 2.

Polinsky, Maria, and Eric Potsdam. 2001. Long-distance agreement and topic in Tsez. *Natural Language and Linguistic Theory* 19:583–646.

Preminger, Omer. 2009. Breaking agreements: Distinguishing agreement and clitic doubling by their failures. *Linguistic Inquiry* 40:619–666.

Preminger, Omer. 2014. *Agreement and its failures*. Cambridge, Mass: MIT Press.

Rezac, Milan. 2008. The syntax of eccentric agreement: the Person Case Constraint and absolutive displacement in Basque. *Natural Language and Linguistic Theory* 26:61–106.

Rezac, Milan. 2011. *Phi-features and the modular architecture of language*. Springer.

Riedel, Kristina. 2009. The syntax of object marking in Sambaa: A comparative Bantu perspective. Doctoral Dissertation, Universiteit Leiden.

Runić, Jelena. 2013. The person-case constraint: A morphological consensus. In *LSA Annual Meeting Extended Abstracts*, volume 4.

Schackow, Diana. 2012. Referential hierarchy effects in Yakkha three-argument constructions. *Linguistic Discovery* 10:148–173.

Smeets, Henricus Joannes. 1984. *Studies in West Circassian phonology and morphology*. Leiden: The Hakuchi Press.

Stegovec, Adrian. 2015. It's not case, it's personal! reassessing the PCC and clitic restrictions in O'odham and Warlpiri. In *Proceedings of the Poster Session of the 33rd West Coast Conference on Formal Linguistics*, ed. Pocholo Umbal, 131–140. SFU Working Papers in Linguistics.

Stegovec, Adrian. 2017. Two's company, three's a crowd: Strength implications in syntactic person restrictions. Handout from GLOW 40, Leiden, March 2017.

Stegovec, Adrian. 2020. Taking case out of the person-case constraint. *Natural Language and Linguistic Theory* 38:261–311.

Sturgeon, Anne, Boris Harizanov, Maria Polinsky, Ekaterina Kravtchenko, Carlos Gómez Gallo, Lucie Mendová, and Václav Koula. 2011. Revisiting the person case constraint in Czech. In *Formal Approaches to Slavic Linguistics (FASL)*, ed. John Bailyn, Ewan Dunbar, Yakov Kronrod, and Chris LaTerza. Ann Arbor: Michigan Slavic Publications.

Walkow, Martin. 2012. Goals, big and small. Doctoral Dissertation, University of Massachusetts Amherst.

Walkow, Martin. 2013. Locating variation in person restrictions. In *University of Pennsylvania Working Papers in Linguistics*, volume 19, 247–256.

Wurmbrand, Susi. 2001. *Infinitives: Restructuring and clause structure*. Mouton de Gruyter.

Yuan, Michelle. To appear. Diagnosing object agreement vs. clitic doubling: An Inuit case study. *Linguistic Inquiry* .

Zwicky, Arnold, and Geoffrey Pullum. 1983. Cliticization vs. inflection: English *n't*. *Language* 59:501–513.