The Person Case Constraint

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1   Introducing the PCC

The Person Case Constraint (PCC) (or *me lui* or *Ditransitive Person-Role Constraint*) prohibits first- and second-person phonologically weak accusative or absolutive direct objects (DOs) (clitics, agreement markers, and weak pronouns) when they cluster together in ditransitives with phonologically weak dative indirect objects (IOs) of the same type. The constraint was first documented by Meyer-Lübke

(1899) for Romance, was later discussed by Perlmutter (1971) as a restriction apply-
ing to combinations of clitics, and was then studied in detail by Bonet (1991; 1994),
who showed that it affects phonologically weak elements more generally. The PCC
turned out to be extremely robust cross-linguistically, has been documented for a
large number of typologically unrelated languages, and has been argued to relate
to a number of agreement restrictions displayed in domains other than
ditransitives.

The correct characterization of what constitutes the core manifestation of the PCC
has been a matter of considerable debate in the literature. According to one view
(Bonet 1991; 1994; Boeckx 2000; Anagnostopoulou 2003; Bejar and Rezac 2003; Has-
pelmath 2004; Adger and Harbour 2007; Ormazabal and Romero 2007; Baker 2008;
2011; among others), there is an absolute prohibition against first- and second-
person weak direct objects in the presence of weak IOs, regardless of the person
of the latter (i.e. whether they are first, second, or third). This description reflects
what has been called the *strong version* of the PCC. According to another view
(Murasugi 1994; Haspelmath 2004; Anagnostopoulou 2005; Nicol 2005; Bianchi
2006; Nevins 2007), the prohibition against first- and second-person direct objects
is not absolute; combinations of first/second-person direct and first/second-person
IOs are allowed, in principle. What is truly forbidden is for a third-person dative to
co-occur with a first/second-person accusative/absolutive. This has been referred
to as the *weak version* of the PCC.

A number of correlations have been identified and studied between the PCC in
ditransitives and agreement/clitic restrictions attested in other syntactic contexts.
Which of these correlations are amenable to a unified analysis is an open question,
partly depending on whether one chooses to focus on the Strong or the Weak PCC.
For example, Anagnostopoulou (1999; 2003; 2005), Boeckx (2000), Bejar and Rezac
(2003), M. Richards (2008), Walkow (2012), and others drew attention to the fact that
the Strong PCC is reminiscent of a restriction found in Icelandic passives, unaccu-
satives, and infinitival constructions, where first/second-person agreeing nomina-
tive pronouns are disallowed in the presence of higher quirky subjects (Sigurðsson
1990–1991; 1996; Taraldsen 1995). On the other hand, Haspelmath (2004), Bianchi
(2006), and others proposed to treat the PCC as one of the many phenomena reflect-
ing the effects of a person–animacy hierarchy in morphosyntax. Assume the follow-
ing descriptive rules (see Nichols 2001, 516): (i) argument features have a relative
ranking (e.g. first person > second person > third-person animate > third-person
inanimate); and (ii) DO person must not outrank IO person. The requirement for
alignment of grammatical function prominence with person–animacy prominence
results in a prohibition against ranking DOs higher than IOs in the person–animacy
scale. The PCC has accordingly been viewed as reflecting alignment of grammatical
function prominence with person–animacy prominence; such a treatment is most
straightforward if the Weak PCC is seen as the core phenomenon.[1]

In the literature, the PCC has mostly been treated as either a morphological or a
syntactic restriction arising in configurations in which there is some sort of compe-
tition between the dative and the accusative/nominative/absolutive argument. In
the syntactic minimalist literature, it has been seen as a key phenomenon sharpen-
ing our understanding of the syntax–PF interface and the relationship between syn-
tactic Agree and morphological agreement. PCC effects have been argued to reveal

crucial details on how Agree operates, to provide evidence that phi-features do not necessarily probe all at once but can do so independently from one another, and to derive from Cyclic Agree (Bejar and Rezac 2009) or from Multiple Agree (Anagnostopoulou 2005; Nevins 2007). The PCC has been studied in close connection to intervention effects, especially by focusing on the escape strategies to it. See Rezac (2011) for a thorough and insightful discussion of escape strategies to PCC effects; the present article does not focus on them. The PCC also provides a key toward understanding how the effects of a person–animacy hierarchy are encoded in morphosyntax: either through feature geometries on probes or, alternatively, through the ordering of functional heads in the IP–CP domain. Finally, a particularly interesting recent discovery has been that the PCC also seems to affect binding relationships (Bhatt and Šimík 2009; Charnavel and Mateu 2014; Giblin 2014). If correct, this discovery will have significant consequences for our understanding of the syntax–semantics interface, and in particular the relationship between Agree, agreement, and binding.

It is impossible to do justice to the large amount of literature on all of the topics and views mentioned above in the limited space of an overview chapter. Therefore, this survey will mainly concentrate on different syntactic approaches to the phenomenon as these have developed in the past 15 years or so, focusing on the question of the scope of the constraint and its relation to comparable agreement restrictions in other domains. The chapter is organized as follows. Section 2 presents the different versions of the PCC, and section 3 summarizes its main properties. Section 4 presents some representative approaches to the Strong PCC based on Agree, and relates Strong PCC effects to comparable restrictions. Section 5 focuses on the Weak PCC and the proposals that have been put forth to derive the various versions of the PCC on the basis of parameterizations of properties of Agree. Section 6 reviews a proposal that has treated the PCC in terms of cartography. Section 7 critically discusses a functional, usage-based approach. Finally, section 8 concludes.

2   Versions of the PCC: Strong, Weak, and Ultrastrong

The PCC comes in two main versions. The *strong version* (based on Bonet 1991, 182) is formulated in (1) and exemplified in (2) with data from Greek, a language that never allows first/second-person DO clitics in the presence of IO clitics:

(1)   *The Strong PCC*
       In a combination of a weak direct object and an indirect object [clitic, agreement marker or weak pronoun], the direct object has to be third person.
       (Bonet 1991, 182)

(2)   Greek
       a.   Tha   mu   *to*   stilune.
            FUT   CL.GEN.1ST.SG   CL.ACC.3RD.SG.NEUT   send.3PL
            'They will send it to me.'
       b.   Tha   su   *ton*   stilune.
            FUT   CL.GEN.2ND.SG   CL.ACC.3RD.SG.MASC   send.3PL
            'They will send him to you.'

    c. *Tha   *su*   *me*   sistisune.
         FUT   CL.GEN.2ND.SG   CL.ACC.1ST.SG   introduce.3PL
         'They will introduce me to you.'

    d. *Tha   tu   *se*   stilune.
         FUT   CL.GEN.3RD.SG.MASC   CL.ACC.2ND.SG   send.3PL
         'They will send you to him.'

Examples (2a) and (2b), which contain a genitive first/second-person IO clitic and an accusative third-person DO clitic, are well-formed. On the other hand, examples (2b) and (2c), in which a genitive co-occurs with a first/second-person accusative, are ill-formed. Observe that (2c), which contains a cluster of a second- and a first-person clitic, is as strongly ungrammatical as (2d) in which a third-person genitive co-occurs with a second-person accusative.

   The *weak version* of the PCC is formulated in (3).

(3) *The Weak PCC*
    In a combination of a weak direct object and an indirect object [clitic, agreement marker or weak pronoun], if there is a third person it has to be the direct object.
                                                 (Bonet 1991, 182)

In some languages, combinations of first/second-person IO and DO clitics are by many speakers acceptable. This is exemplified in (4a) and (4b) (see Bonet 1994, 41) with examples from Catalan and Italian, respectively:

(4) Catalan
    a. Te   m'   ha   venut   el   mercader   més   important.
        you.DO me.IO has   sold   the   merchant   most   important
        'The most important merchant has sold you to me.'
    Italian
    b. Vi   ci   manderà.
        2PL.IO 1PL.DO send.FUT.3SG
        'S/he will send us to you (*plural*).'

According to Bonet (1991, 179–182; 1994, 40–41), the judgments concerning combinations of first/second-person clitics vary considerably from speaker to speaker in Catalan, unlike the effects of the strong version of the PCC, which are much more robust and do not show comparable idiolectal variation. This difference led her to adopt the strong version of the PCC in (1) and to put aside (3). As discussed in Nicol (2005), however, Spanish, Italian, and Old and Modern Occitan, along with Catalan, tolerate violations of the strong version of the PCC rather easily (data from Nicol 2005):[2]

(5) Spanish
    a. Te   me   presentas.
        DO.2SG IO.1SG presented.2SG
        'You presented yourself to me.'
    b. ?Te   me   presentó.
        IO.2SG DO.1SG presented.3SG
        'He presented me to you.'

Italian

c. Mi   ti   presentano.
   DO.1SG   IO.2SG   introduce.3PL
   'They introduce me to you.'

d. Mi   ti   presento.
   DO.1SG   IO.2SG   introduce.1SG
   'I introduce myself to you.'

(6) Old Occitan
    Qu'ie us   mi   don   ses   bauzia.
    that I 2PL.IO 1sg.DO give without deceit
    'I surrender myself to you without deceit.'

(Jensen 1986, 105–106)

According to Nicol (2005), French seems to have never allowed Strong PCC violations, while all southern Romance varieties seem to have allowed them at least to some extent at some point of their diachronic evolution.[3]

In recent literature, two more versions of the PCC have attracted attention. One has been called by Nevins (2007) the "Ultrastrong PCC," and it is illustrated in (7) from Catalan (Bonet 1991; 1994):

(7) Catalan
    Te' m van recomanar   per la   feina.
    2   1   recommended.3PL   for the job
    'They recommended you to me for the job.'   (OK in Weak/Ultrastrong Catalan)
    'They recommended me to you for the job.'   (OK in Weak/* in Ultrastrong Catalan)

According to Bonet (1991; 1994) and Nevins (2007), there are two groups of Catalan speakers. On one hand, the Weak PCC speakers freely accept 2,1 and 1,2 combinations. On the other hand, the Ultrastrong PCC speakers accept 1-IO, 2-DO combinations, but not 2-IO, 1-DO combinations. Classical Arabic also shows Ultrastrong PCC effects. There is, finally, a version of the PCC called by Nevins the "Me-First PCC effect," which is found in Romanian. These two versions will be discussed in section 5.

3   Main properties of the PCC

The PCC has the following general characteristics (Bonet 1991; 1994; Anagnostopoulou 2003; 2005):

(i)   It applies to a wide range of genetically unrelated languages. The languages discussed by Bonet are Arabic, Greek, Romance, Basque, Georgian, English, and Swiss German. Haspelmath (2004, table 1) provides the following list of languages:[4]

(8)   *List of languages showing the PCC*

Zurich German	Germanic	Werner (1999, 81)
Spanish	Romance	For example: Perlmutter (1971)
Catalan	Romance	For example: Bonet (1994, 33, 35)
Italian	Romance	For example: Seuren (1976), Wanner (1977)
Romanian	Romance	For example: Farkas and Kazazis (1980)
Albanian	Indo-European	Buchholz and Fiedler (1987, 449–450)
Maltese	Semitic	Borg and Azzopardi-Alexander (1997, 360)
Cairene Arabic	Semitic	Broselow (1983, 281–282)
Migama	Chadic	Jungraithmayr and Adams (1992, 40)
Georgian	Kartvelian	Harris (1981), Boeder (1999), Amiridze and Leuschner (2002)
Hakha Lai	Chin, Tibeto-Burman	Peterson (1998)
Kambera	Central Malayo-Polynesian	Klamer (1997, 903)
Manam	Oceanic, Austronesian	Lichtenberk (1983, 162, 166)
Yimas	Sepik-Ramu	Foley (1991, 210)
Monumbo	Torricelli	Vormann and Scharfenberger (1914)
Warlpiri	Pama-Nyungan	Hale (1973, 334)
Takelma	Penutian	Sapir (1922, 141–142)
Ojibwa	Algonquian	Rhodes (1990, 408)
Passamaquoddy	Algonquian	Leavitt (1996, 36)
Southern Tiwa	Kiowa-Tanoan	Allen et al. (1990), Rosen (1990)
Kiowa	Kiowa-Tanoan	Adger and Harbour (2007)
Tetelcingo Nahuatl	Uto-Aztecan	Tuggy (1977)

(ii) It affects phonologically *weak* elements (i.e. clitics, agreement affixes, and weak pronouns) when they occur in *clusters.* When one of the two elements is not weak, the PCC does not apply. In (9) from Greek, a third-person dative clitic co-occurs with a second-person accusative full pronoun, and the result is grammatical. In the well-formed example (10) from French, a first-person accusative clitic co-occurs with a third-person dative full pronoun:

(9)   Greek
      Tha   tu   stilune   *esena*.
      FUT   CL.IO   send.3PL   you.DO
      'They will send you to him.'

(10) French
      Paul   me   présentera   *à*   *lui*.
      Paul   CL.DO   will.introduce.3RD   to   him
      'Paul will introduce me to him.'

See Bonet (1991; 1994), Anagnostopoulou (2003; 2005), and especially Rezac (2011) for extensive discussion of these and other escape strategies.

(iii)   In some languages, the PCC also seems to constrain combinations in which the accusative clitic is *reflexive* (Kayne 1975, 173; Bonet 1991; 192). This is shown in (11) for French:

(11)   French
        *Elle *se*   *lui*   est   donnée   entièrement.
        she   REFL   him.DAT   is   given.FEM   entirely
        'She gave herself to him entirely.'

Note, though, the *IO-dative SE-reflexive-accusative* constraint does not hold in all PCC languages. For example, the Italian sentence in (12) with a dative IO and a reflexive DO is well-formed (Nicol 2005; Monachesi 1996), and similarly in Spanish (see e.g. Rivero 2004, 498, fn. 2, ex. ii):

(12)   Italian
                Ci   si   è   rivolto   in   inglese.
        (he)   to.us   SE.REFL has   spoken   in   English

(iv)   Finally, in many cases, the PCC is limited to constructions with an *external argument*. Unaccusatives and passives with a dative and a first/second-person nominative/absolutive argument are well-formed. This is shown in (13) with examples from Basque (see Laka 1991, 183):

(13)   Basque
        a. Hi   niri   ettori   h-atzai-t.
            you.ABS   me.DAT   arrived   2ABS-AUX-1DAT
            'You came to me.'
        b. Joni   joan   na-atzai-t.
            John.DAT go   1ABS-AUX-3DAT
            'I went to John.'

In these examples, first/second-person absolutive agreement may co-occur with a first/third-person dative, combinations not allowed in ditransitives (see e.g. Laka 1991; Ormazabal and Romero 2007; Arregi and Nevins 2008; Rezac 2011):

(14)   Basque
        a. Bat-an   bat-eri   emo-ngo   d-o-tze-t.
            one-GEN   one-DAT   give-FUT PRE-PRS.DEF-DAT.3SG-ERG.1SG
            'I'll give it to someone or other.'
        b. *Eur-ek   su-ri   ni-Ø   sal-du   n-o-tzu-e.
            3SG-ERG   2SG-DAT   1SG-ABS   sell-PERF ABS1-PRS.DEF-DAT.2SG-ERG.3PL
            'They have sold me to you.'
                                (Arregi and Nevins 2008, 57, exs 17–18)

The difference between (13) and (14b) is that (13a) and (13b) involve unaccusatives, while (14b) is an active ditransitive predicate. But see Rezac (2011) that Basque has the PCC with another class of unaccusatives and Rivero (2004) for a similar split in Spanish.

4   Agree-based approaches to the Strong PCC and its relatives

In this section, I concentrate on Strong PCC effects and how they have been ana-
lyzed in Agree-based approaches. These approaches also attempt to explain the
common properties between the Strong PCC and related phenomena. As will be
seen, these phenomena are quite diverse, and different authors have been led to pro-
pose a number of alternative generalizations in their attempt to unify the PCC with
the particular phenomena they are interested in.

4.1   Person restrictions in Icelandic, the PCC, and Split Agree

Taraldsen (1994; 1995) and Sigurðsson (1990–1991; 1996) observed and discussed a
restriction on nominative objects in Icelandic quirky subject constructions. This is
formulated in (15):

(15)   *The person restriction on (agreeing) nominative objects*
       In the presence of a dative subject, the agreeing nominative object has to be third
       person.

The restriction is mainly found in Icelandic (though see Rezac (2011) and Rivero
(2004) that Basque and Spanish, respectively, have a comparable constraint with
certain classes of unaccusatives) and applies to constructions with a dative subject
and a nominative object. Two environments must be distinguished:

(i)   Infinitival constructions in which the matrix subject is realized as dative and the
       nominative serves as an argument of the infinitival. These are called by Sigurðs-
       son (1996) *dative and nominative with infinitive* and are exemplified in (16). (16a)
       contains a third-person nominative, and the sentence is well-formed. (16b) con-
       tains a first-person nominative, and the sentence is ill-formed:

(16)   Icelandic
       a. *Mér*   höfðu   fundist [*þær*   vera   gáfaðar].
           me.DAT   had   found   they.NOM.PL   be   intelligent
           'I had found them intelligent.'
       b. *Þeim*   höfum   alltaf   fundist [*við*   vinna   vel].
           them.DAT   have   always   found   we.NOM.PL   work   well
           'They have always thought that we work well.'

(ii)   Monoclausal quirky subject constructions (passives, unaccusatives) with nom-
       inative objects. Here again, we find a contrast in grammaticality, depending on
       whether the nominative object is third or first/second person:

(17)   Icelandic
       a. *Henni*   leiddust   *þeir*.
           she.DAT   was.bored.by.3PL   they.NOM
           'She was bored by them.'
       b. *Henni*   leiddumst   *við*.
           she.DAT   was.bored.by.1PL   us.NOM
           'She was bored by us.'

It is crucial that nominative objects are affected whenever they *agree* with the verb. When the nominative object does not agree with the verb, the constraint does not apply. This is clearly seen in biclausal constructions where agreement between the matrix verb and the nominative argument of the infinitival is optional, as illustrated in (18):

(18) Icelandic
    a. Mér   *þóttu/þótti*   [*þæær*   vera duglegar].
        me.DAT thought.3PL/DFT they.NOM.PL be   industrious
        'I thought they were industrious.'
    b. Mér   *virtust/virtist* [*þær*   vinna vel].
        me.DAT seemed.3PL/DFT they.NOM.PL work well
        'It seemed to me that they were working well.'

The third-person restriction surfaces only when the matrix verb is marked for agreement (Taraldsen 1995; Sigurðsson 1996; Schütze 1997). Example (19) containing a first-person nominative is ungrammatical only when the matrix verb agrees with it, not when it shows default singular agreement:

(19) Icelandic
    Þeim   hefur/*höfum*   alltaf fundist [*við*   vinna vel].
    them.DAT has.SG/*have.PL always found   we.NOM.PL work well
    'They have always thought that we work well.'

Differently than in the main PCC contexts, the restriction is limited to constructions *without an external argument*. Active ditransitives with a dative and a first/second-person accusative are well-formed (Collins and Thráinsson 1996, 423, fn. 42; Schütze 1997, 117, citing H. Sigurðsson p.c.):

(20) Icelandic
    a. *Honum varst gefinn þú.
        him.DAT was   given   you.NOM
    b. Ég   gaf honum þig   í   jólagjöf.
        I.NOM gave him.DAT you.ACC as Xmas.gift
        'I gave him you as a Christmas present.'

Example (20a) features a passive ditransitive verb, and the person restriction applies. In its active counterpart ((20b)), the person restriction does not apply.

    Anagnostopoulou (1999; 2003), Boeckx (2000), and Bejar and Rezac (2003) argued that the strong version of the PCC and the person restriction on nominative objects should be treated on a par.[5] In both cases, a first/second-person argument is banned under very similar conditions:

(i)   *Roles of the arguments affected*: In both cases, the restriction arises in environments involving an *argument with an IO role* (goal, beneficiary, or experiencer) and another argument with a *DO role* (theme) or, in infinitivals, a *lower subject*. Active ditransitives with a goal, benefactive, or possessor argument co-occurring with a theme constitute the main environment in which the PCC

is found. Similarly, in Icelandic, the restriction arises in quirky subject con-
structions formed with passive ditransitives or with unaccusatives, and
thus they typically involve a goal, an experiencer, or a benefactive argument
co-occurring with a theme (monoclausal constructions) or a lower subject
(biclausal constructions).

(ii)   *Case properties of the two arguments*: In both types of constructions, the IO argu-
ment typically bears *morphological dative or genitive case*, while the other argu-
ment has *structural case*. In the core PCC environments, the IO with dative
(Romance, Basque, Swiss German) or genitive (Greek)[6] co-occurs with the
DO that has accusative (Romance, Swiss German, Greek) or absolutive
(Basque, Georgian). In quirky subject constructions, the quirky subject, which
typically has dative, co-occurs with the object-bearing nominative case.

(iii) *Structural case–third person*: In both cases, the argument with structural case
has to be *third person*. In PCC constructions the accusative or absolutive object
cannot be first or second person, and in quirky subject constructions the nom-
inative object cannot be first or second person.

(iv)   *Relation to the same verbal head*: The constraints arise whenever both the dative
and the argument with structural case relate to the *same functional head* via
movement or agreement. In PCC constructions, the constraint applies only
to *clusters* of weak elements: clitics, agreements, and weak pronouns. As long
as one of the two arguments is a strong pronoun realized in its base position,
the constraint does not arise. In quirky subject constructions, the restriction
arises only when the dative argument undergoes (EPP-driven) movement
to the [SpecTP] and the nominative argument *agrees* with the inflected
verb in T.

(v)   *Escape strategies*: Finally, the first/second-person restriction can be circum-
vented if (i) one of the two weak objects is realized as strong, that is, there
is no cluster formed (in PCC environments); or (ii) the nominative object does
not enter Agree with T (in Icelandic).

In order to capture the properties the two constraints have in common, Anagnos-
topoulou (1999; 2003) proposed that in constructions where a person restriction
arises, person is checked separately from number. Such split φ-feature checking
takes place whenever two arguments, a dative and a lower argument with struc-
tural case (accusative, absolutive, or nominative), relate to the same functional head
via Move or Agree. In such configurations, the indirect object checks person and the
lower argument checks number. In the PCC environments, split φ-feature checking
takes place in transitive v, the locus of accusative. In quirky subject constructions,
split checking takes place in T, the locus of nominative. The different locus of split
feature checking derives the different environments where the two constraints arise.

The specific analysis that Anagnostopoulou (1999; 2003) offers is based on the fol-
lowing assumptions:[7]

1   The dative in (21) is "defective" in the sense that its number feature is inacces-
    sible to T (Taraldsen 1995).
2   First, second, and reflexive pronouns are [person][8] pronouns (Bonet 1991; 1995;
    Ritter 1995; Taraldsen 1995; Kayne 2000), while third-person pronouns are

determiner pronouns lacking a person feature (Postal 1969; Silverstein 1986; Bonet 1991; Johns 1993; Ritter 1995; Taraldsen 1995; Kayne 2000; among many others).

3   Dative/IO arguments are specified for person (and therefore check person features on T and v) even when they are third person (Anagnostopoulou (2003, 270–271) discusses evidence for this based on the serialization of agreement markers in Georgian). Accusative-nominative/DO third-person pronouns lack person features altogether. Technically, this distinction is expressed under the proposal that third-person IOs have a negative person specification (i.e. they are [−person]), while third-person DOs lack a person feature entirely (building on ideas of Adger and Harbour (2007) and earlier drafts).

4   When two arguments Move to a single head, the argument that is closer moves/ agrees first while the argument that is further down moves/agrees second. Multiple movements to the same head employ *tucking in*, which results in crossing paths (i.e. the pre-movement configuration is preserved) (Richards 1997).

Anagnostopoulou argues that the PCC and the restriction on nominative objects arise in such "two arguments against one head" contexts. Whenever a dative argument enters Move/Agree with a functional head F checking its person features, as in Step I of (21), the lower argument enters Move/Agree with F *second* and checks the remaining number features, as in Step II of (21):

(21)   *Base*:

(P = person features
N = number features)
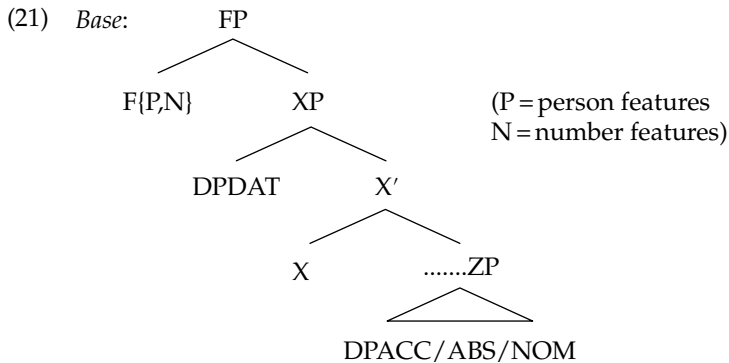
Step I: Checking of person feature by dative
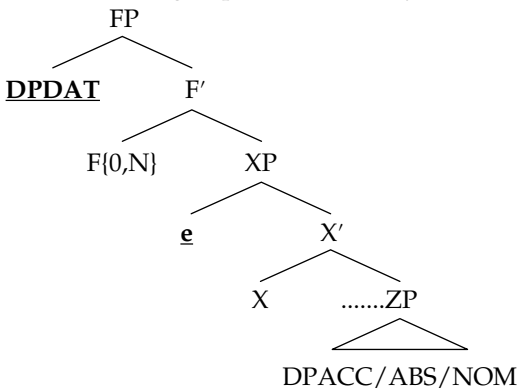
Step II: Checking of number by structurally marked DP
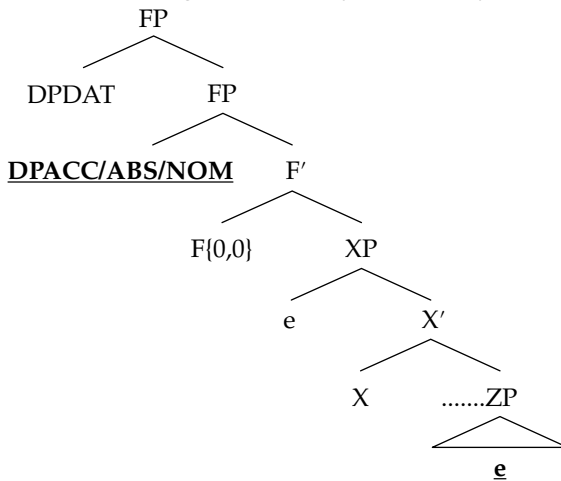
If the lower argument is of an appropriate type (third person, i.e. no person), the derivation converges. If, however, the accusative/absolutive or nominative argument is inappropriate (first or second person), the derivation crashes.

Bejar and Rezac (2003, 53–54) develop a very similar account, except that they propose that split checking is a consequence of incomplete valuing of the phi-features of the Probe by the dative. In their proposal, Agree proceeds cyclically as follows. First, the person feature on the Probe in a configuration like (21) (T in Icelandic or v in PCC environments) matches the person feature of the dative. Agree between the Probe and the dative cannot take place because the dative argument lacks structural case, and hence is not active (Chomsky 2000). The person feature of the Probe remains unvalued and gets a default value. Next, the dative moves/cliticizes to the Probe, leaving a trace that does not block the relationship between the Probe and the lower theme argument. Finally, number must match the theme, Agree with it, and assign accusative case. This is possible when the accusative is third person, but not if it is first or second person.

The most straightforward way of explaining the inappropriateness of first- and second-person pronouns in contexts where only the number feature of F is available for checking is to propose that the person feature of pronouns must be checked against the person feature of a functional head (see Taraldsen 1995). Bejar and Rezac (2003, 53) propose to express this in terms of the *Person Licensing Condition* (PLC) axiom in (22) (see Bejar and Rezac (2009, 46) for a more complex formulation, and for discussion of (22) in the context of agreement displacement phenomena; see also Preminger (2014) and Baker (2008; 2011)):[9]

(22)   *Person Licensing Condition (PLC)*
      An interpretable first/second-person feature must be licensed by entering into an Agree relation with a functional category (see Nichols 2001).

Anagnostopoulou (2003) further links the requirement for checking of person features on accusative/nominative/absolutive arguments to structural case. Assuming

that case checking takes place only when there is complete phi checking (Chomsky 2000), it follows that pronouns entering case checking cannot have phi-features that remain unchecked. See Rezac (2011) for arguments that many of the escape strategies to PCC effects can be better understood in light of the case approach.[10]

The proposal that the PCC results from split checking in v while the restriction on nominative objects results from split checking in T leads to a view on checking of dative arguments according to which they check person features "parasitically" either on the head that canonically checks nominative (T) or on the head that canonically checks accusative (v):

(23) *Dative checking*
      The dative argument checks [+/− PERSON/PARTICIPANT] either in v or in T.
      a. [+/− PERSON/PARTICIPANT] is checked in v.
      b. [+/− PERSON/PARTICIPANT] is checked in T.

(23) accounts for the different environments where object restrictions are found in PCC languages versus Icelandic. The PCC is found in a wide range of languages, while the person restriction on nominatives is much more limited. This entails that dative arguments check person features against v more frequently than they do against T.[11] Anagnostopoulou (2003) argues that this correlates with the fact that quirky subjects of the type found in Icelandic are cross-linguistically rare. But see Rezac (2011) and Rivero (2004) for discussion of the fact that Basque and Spanish have a PCC effect in one class of unaccusatives, in a way strongly reminiscent of the Icelandic constraint, as it is seen in monoclausal constructions.

4.2   Case syncretism, the PCC, and a constraint on specifiers and complements

In many languages showing PCC effects, first- and second-person pronouns have identical morphology or trigger identical agreement, whether they are direct or indirect objects. Adger and Harbour (2007) call this *case syncretism*:

(24) *Case syncretism*
      For any combination of number and local[12] person, direct object agreement/clitics and indirect object agreement/clitics are identical.

Case syncretism applies in many typologically unrelated languages. For example, it obtains in French and other Romance languages, and it also obtains in Kiowa (a Kiowa-Tanoan language of Oklahoma), Chinook, Georgian, and Yimas (Silverstein 1986; Foley 1991; Hewitt 1995). In French, the forms of DO clitics and IO clitics are identical for any combination of number and first and second person (Adger and Harbour 2007, 5, exs 10–11):

(25) French
      On   me/   te/   nous/   vous   voit.
      one   me.ACC/ you.SG.ACC   us.ACC you-PL.ACC sees
      'They see me/you/us/you all.'

(26) French
      On   me/   te/   nous/   vous   donnera   un   livre.
      one   me.DAT/ you.SG.DAT   us.DAT you-PL.DAT will.give   a   book
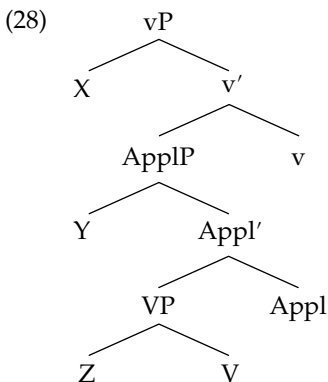   'They will give me/you/us/you-all a book.'

The same case syncretism is seen in Kiowa, a language that has verbal agreement
prefixes composed of fused phi-features contributed by the subject, IO, and DO. The
agreeing forms for local persons are identical, whether these are DOs or IOs, unlike
non-local persons where the forms are distinct (for detailed discussion and exam-
ples, see Adger and Harbour 2007, 6–9).

   Adger and Harbour (2007) propose an account aiming to account for the corre-
lation between the PCC and case syncretism. Their account combines two key ingre-
dients: (i) the idea that local person arguments bear the same phi-feature
specification whether they are DOs or IOs, and (ii) the idea that a probe cannot select
as its specifier an element bearing identical φ-features with the φ-features of a goal
in its complement domain.

   More specifically, Adger and Harbour (2007, 20, ex. 61) propose the following
typology for pronominal elements:

(27) a. [participant: value, number: value][13] = first- and second-person pronominals
          of any number
      b. [participant: number: value] = semantically animate third-person pronouns
          of any number
      c. [number: value] = third-person pronominals, with no entailments as to
          semantic animacy.

They furthermore assume that IOs are introduced by an applicative head Appl,
which requires that its specifier bears a participant feature [participant:]. In ditran-
sitives, Appl is selected by a little v head that introduces the external argument and
selects a VP that contains the DO:

(28)

```
                vP
             /      \
            X        v'
                  /     \
              ApplP       v
             /     \
            Y      Appl'
                 /      \
               VP       Appl
              /   \
             Z     V
```

Due to the selection properties of Appl: Y = [participant: value, number: value].

In (28), the IO Agrees with v and checks its uninterpretable φ-features, and the DO Agrees with Appl and checks its uninterpretable φ-features. In this account, the PCC is the result of the constraint in (29) (Adger and Harbour 2007, 26, ex. 77):

(29) The features that a functional head requires its specifier to bear cannot be used as probes in the head's complement domain.

Following Rezac (2003), who argues that probe–goal relations between a head and a specifier are only possible when the head's complement domain lacks a goal that matches the probing features, Adger and Harbour (2007) propose that Appl cannot have an argument bearing the feature [participant] in its complement domain because then it will be unable to select a specifier bearing the feature [participant]. As a result, the only legitimate direct objects in ditransitives are arguments bearing [number] (i.e. third-person arguments). This derives PCC effects.

   Turning to the issue of case syncretism for first/second-person DOs and IOs, note that they bear exactly the same feature specifications; for example, a first-person singular DO is [participant: 1, number: singular], and a first-person singular IO is also [participant: 1, number: singular]. As a result, realization of local DOs and local IOs is identical.

   What about languages like Greek where, as shown in (30), indirect and direct person objects are not case syncretic?

(30)

	Direct object	Indirect object
First-person singular	me	mu
First-person plural	mas	mas
Second-person singular	se	su
Second-person plural	sas	sas

To account for languages of this type, Adger and Harbour (2007) propose that the Appl head may serve as a context conditioning the realization of φ-features. In the pairs *mu ~ me* and *su ~ se* in (30), *u* realizes [number: singular] in the context of Appl and *e* realizes the same feature in its absence. It is interesting, though, that even in Greek, case syncretism holds in the plural.[14]

4.3   SCOPA, the PCC, and other restrictions on complete agreement

Baker (2008; 2011) views the PCC as a partial agreement phenomenon, a case where agreement in number and gender is possible while person agreement is precluded. Adjectival agreement, shown in (31), shows exactly the same restriction:

(31) (Nosostras)   somos   gord-as/   *gord-amos.
     we.FEM.PL   are.1PL   fat-FEM.PL/   fat-1PL
   'We are fat.'

According to Baker (2008; 2011), this is not a coincidence. Person agreement requires a particular configuration that is much stricter than the configuration necessary for number and gender agreement:

(32)   *The Structural Condition on Person Agreement (SCOPA)*
        A category F can bear the features +1 or +2 if and only if a projection of F merges with a phrase that has that feature and F is taken as the label of the resulting phrase.

According to (32), there must be a very local relationship between a probe and a goal in order for first and second person to be licensed. Any long-distance Agree relationship will result in failure of person agreement.

In adjectival predications, SCOPA fails because the subject is not generated inside the AP but as the specifier of a special copular category, Pred (Baker 2003):

(33)
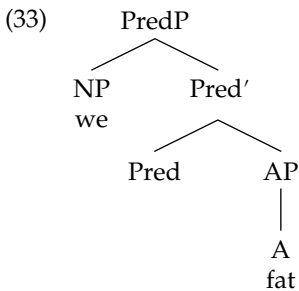
Since the subject does not merge with A (instantiating F), it is too high to check person with A, resulting in partial gender and number agreement.

In environments showing person restriction effects of the PCC type, agreement is incomplete for exactly the same reason, namely SCOPA. This time, the phrase entering Agree with F is too low to check person with F. The agreeing phrase is in the c-command domain of F and does not merge directly with F (as its specifier).

In contrast to all the accounts for the PCC and the person restriction in Icelandic presented so far, Baker's account does not rely in any crucial way on a competition or an intervention effect caused by the dative argument. It is sufficient that in Icelandic, quirky datives check EPP in spec, TP blocking the nominative from moving to the specifier of T. In PCC and what he calls "two and a half agreement" environments, as in (34) from Nahuatl (a special case of the PCC applying to agreement markers; examples from Baker 2011, 883, ex. 13), the same logic applies.

(34)   Nahuatl
        a. Xi-nēch-palēhui.
            2ss-imp.1so-help
            'Help me.'

                                                                    (Launey 1981, 82)

        b. Xi-nēch-**im**-maca   huēhuèxōlô.
            2ss-imp.1so-**pl**-give   turkeys
            'Give me some turkeys.' (*Not*: 'Give me to some turkeys.')

                                                                   (Launey 1981, 174)

c. <u>Ni-qu-**im**-maca</u> huēhuèxōlô in n-ocnī-uh.
 1SS-3O-**PL**-give turkeys PRT 1SP-friend-POSS
 'I give some turkeys to my friend.'

(Launey 1981, 174)

d. <u>Ni-qu-(*im)-maca</u> in xōchitl in cihuātl.
 1SS-3O.(PL)-give PRT flower PRT woman
 'I give the flower to the woman.'

(Launey 1981, 173)

Baker (2011, 883) takes the contrast between (34c) and (34d) to indicate that there is some degree of agreement between the verb and its animate theme object in Nahuatl, but crucially this is not complete agreement. Nahuatl allows for agreement with three different persons and two numbers, but in (34c) we only see number agreement with the DO. Baker (2001, 883) concludes that "Nahuatl verbs thus do more than agree with two arguments, but they do less than agreeing fully with all three arguments"; this is why he calls it "two and a half agreement." Similarly to PCC effects with clitics, Baker (2011) argues that "two and a half agreement effects" follow from SCOPA. The IO resides in the specifier of v, preventing the DO from moving to that position, and person agreement with the DO is blocked, while number agreement is not. On this view, adjectival agreement, the person restriction in Icelandic, the PCC, and its agreement subcase called the *two and a half agreement effect* are all unified under a configurational approach not relying on any competition between dative and accusative/nominative/absolutive arguments.

In contrast to other accounts, Baker's (2008; 2011) SCOPA predicts PCC-like effects to also arise in configurations where no higher dative is present. If the element bearing person is prevented by some other element (e.g. an expletive) from moving the specifier position of F, this element is predicted not to be able to enter Person Agree. Baker (2008; 2011) argues that this is indeed correct. In Northern Ostyak (Finno-Ugric), the verb shows number agreement but not person agreement even with a single object (Nikolaeva 1999; Baker 2011, 878, ex. 5):

(35) Northern Ostyak (Finno-Ugric)
 a. Ma **tăm kălaŋ** wel-sə-**l**-<u>am</u>.
 I this reindeer kill-PAST-**PO**-1SS
 'I killed these reindeer.'
 b. Xŭnśi năŋ **mŭŋ-iluw** xălśa want-lə-**l**-<u>an</u>?
 when you we-ACC where see-PRES-**PO**-2SS
 'When did you see us where?'

Moreover, as extensively argued by Baker (2008, 103–107), long-distance Agree in Tsez, Basque, Hungarian, Lokạạ, and so on is always incomplete for person (no agreement with first and second person). Note, though, that in Icelandic copular constructions with an expletive (unlike quirky subject constructions), agreement between T and a pronoun bearing person is possible, as shown in (36)

(Sigurðsson 2000). This fact is unexpected by the SCOPA and expected by the "competition" PCC accounts discussed in this chapter:

(36) Það   erum   bara   við.
      it   are.1PS only   us
      'It's only us.'

Baker (2008, 89, 17) tentatively assumes that in example (36), the expletive is introduced in SpecCP, the person pronoun resides in SpecTP, and the verb has moved from T-to-C.

4.4   Animacy, the PCC, and a restriction on agreeing objects

Based on *leísta* dialects of Spanish, Ormazabal and Romero (2007) argue that the crucial property underlying PCC effects is animacy and not person. *Leísta* dialects are dialects of Peninsular Spanish and use the clitic *le* (the dative clitic) not only for dative arguments but also for accusative animate ones. Their clitic system is represented in (37):

(37)   *Accusative and dative clitics in Spanish* leísta *dialects*

		Masculine	Feminine
	Animate	le	la/le
Accusative			
	Unmarked	lo	la
Dative			le

In *leísta* dialects, when the accusative clitic appears in isolation, it must be realized either as *lo* when it is inanimate or as *le* when it is animate:

(38) a. Lo   vi.   b.Le   vi.
          CL.ACC[.ANIMATE] saw   CL.ACC[.ANIMATE] saw
          'I saw it.'   'I saw him.'

Importantly, in clitic clusters, the animate clitic triggers PCC effects while the inanimate does not:

(39) a. Te   lo   di.   b. *Te   le   di.
          2.DAT   3.ACC   gave   2.DAT 3.ACC   gave
          'I gave it to you.'   'I gave him to you.'

Ormazabal and Romero (2007) take the ungrammaticality of (39b) as evidence that animacy and not person is the cause for PCC effects.

Since PCC effects are viewed as animacy effects, the next step is to relate them to a set of agreement restrictions showing sensitivity to animacy, in languages with object agreement induced by animacy. There are many languages with object agreement induced by animacy (for an overview, see Corbett 2006). Ormazabal and Romero (2007) discuss KiRimi (Hualde 1989; Woolford 2000), Mohawk (Baker

1996), and other languages of the type discussed in Baker (1996). Consider KiRimi, where animate definite objects trigger obligatory object agreement that is disallowed with inanimate objects (Ormazabal and Romero (2007, 322, exs 17–18), based on Hualde 1989):

(40) a. N   -a   -mU-on-aa   Maria.
         I.SUBJ   TNS   OM-saw   Maria
         'I saw Maria.'
     b. *N   -a   -on-aa   Maria.
         I.SUBJ   TNS   -saw   Maria
         'I saw Maria.'

(41) a. *N   -a   -ki   -on-aa   kitabu.
         I.SUBJ   TNS   OM   -saw   book
         'I saw a book.'
     b. N   -a   -on-aa   kitabu.
         I.SUBJ   TNS   -saw   book
         'I saw a book.'

In KiRimi double object constructions, the applicative (IO) object shows agreement with the verb, while DO agreement is blocked. As a result, inanimate DOs are licit, but animate and definite ones are not (Ormazabal and Romero 2007, ex. 20):

(42) *N   -a   -va   -tUm   -I-aa   alimu   Yohana.
       1.SUBJ   TNS   OM.PL   -bring-   APPL   teachers   Yohana
       'I sent the teachers Yohana.'

The ungrammaticality of (42) is analyzed as a PCC effect, understood as a constraint blocking animate DOs in the presence of IOs.

4.5   A note on Cyclic Agree and the PCC

Bejar and Rezac (2009) develop a cyclic theory of Agree aiming to account for agreement patterns that have a single agreement slot for which multiple arguments compete. The result is sensitive to the person features of the competing arguments; thus, these systems are sensitive to person hierarchies. In the systems they discuss, there is a preference for the internal argument (IA) to control Agree; this preference is suspended by an external argument (EA) if the IA does not have the features necessary to check the features of the probe, which resides on v. In this model, any probe on v will first search for an argument in its c-command domain, the VP, and if it will not find an argument that can match its features, it will then look upward, resulting in configurations where the EA controls agreement. Crucially, successful IA agreement bleeds EA agreement. The analysis relies on the hypothesis that first-person agreement is more specific than second-person agreement, which, in turn, is more specific than third-person agreement. There are entailment relations among person

features that derive from feature geometric approaches such as Harley and Rit-ter's (2002):

(43)   first person > second person > third person
              | | |
         [speaker]   [participant]   [person (π)]

The proposed model generates two classes of derivations for transitive clauses: one where the IA controls agreement, corresponding to so-called *inverse* contexts, and another where the EA controls agreement, corresponding to *direct* contexts. The phenomena they discuss include inverse contexts and agreement displacement phe-nomena in a number of languages, including Basque, Georgian, Karok, Ezra Mord-vinian, and Nishnaabemwin. Even though Bejar and Rezac (2009) do not handle (and, probably, do not intend to handle) PCC effects in terms of Cyclic Agree, the logic of their account can easily be extended to them, as pointed out by Nevins (2011, 940). If we assume that the basic element entering Agree in ditransitives is the applicative head Appl introducing the IO in (44), Appl first searches downward; and, if a first- or second-person DO is present, it will completely value its features, rendering it inactive for upward agreement with the IO and resulting in a PCC effect. On the other hand, a third-person object will leave the probe on Appl not completely valued, and hence it will probe upward, establishing Agree with a first- or second-person IO.

(44)   ApplP
             /   \
           IO   Appl'
                   /   \
                Appl   VP
                         /   \
                        V   DO

Thus, the asymmetry between 1,2 > 3 and *3 > 2,1 can be analyzed as the result of a preference for Agree with a lower argument over the higher argument in a Cyclic Agree system, unifying PCC effects with the phenomena discussed by Bejar and Rezac's (2009) paper.

4.6   Summary

In this section, I reviewed a number of syntactic approaches to the PCC proposed by different authors who wanted to account for potential correlations between PCC effects and related phenomena in domains other than clitics. Strong PCC effects have been argued to relate to person restrictions in Icelandic quirky subject con-structions, case syncretism, adjectival agreement, two and a half agreement, partial long-distance agreement, animacy restrictions on object agreement leading to a ban against DO agreement in ditransitives, inverse systems, and agreement

displacement phenomena. The correlations that are considered important are crucial for the design of individual analyses. For example, SCOPA is a configurational approach not resorting to a competition between the DO and the IO precisely because Baker sees adjectival agreement as the core phenomenon correlating with the PCC. On the other hand, one has to talk about competition if PCC effects are to be related to person hierarchy effects in inverse contexts. This is perhaps the most important puzzle posed by the PCC: whether it should be seen as a constraint arising in a configuration banning person licensing or as a competition effect between two arguments attempting to enter Agree with the same head. In section 5, we will look at weak PCC effects, which will narrow down some of the analytical possibilities presented in this section.

5 Different versions of the PCC: Parameterizing Agree

5.1 Split Agree versus Multiple Agree

Even though Bonet (1991; 1994) and many others attempted to dismiss the *weak version* of the PCC on the basis of the observation that the availability of first/second > first/second sequences in Romance is limited and subject to idiolectal variation (see the discussion in section 2), the well-formedness of such combinations for a group of native speakers calls for an explanation. Moreover, the data supporting the weak version of the PCC are quite widespread among varieties of Romance, leading to the view that the distribution of clusters of two clitics with the feature [person] is systematic. Recall that Italian and Catalan (see the examples in (4) in section 2 from Catalan and Italian, and see (45) for Italian) tolerate violations of the strong version of the PCC rather easily:[15]

(45) Italian
    a. Mi   ti   presentano.
          DO.1SG IO.2SG introduce.3PL
          'They introduce me to you.'
    b. Mi   ti   presento.
          DO.1SG IO.2SG introduce.1SG
          'I introduce myself to you.'

Moreover, violations of the strong version of the PCC in Old Occitan are well-attested, as shown by (46):

(46) Old Occitan
    qu'ie usq   miq   don   ses   bauzia.
    that.I 2PL.IO 1sg.DO give without deceit
    'I surrender myself to you without deceit.'

<div align="right">(Jensen 1986, 105–106)</div>

Modern Occitan varieties productively violate the strong version of the PCC too. Other counterexamples can be found in literary Portuguese texts (Anagnostopoulou 2005).

In Romance, there appears to be interesting micro-variation in the conditions under which first/second-person clusters are allowed to surface in those languages that they do. Nicol (2005) observes that first/second-person combinations in Spanish are judged grammatical when the direct object is interpreted as reflexive (47a) while they are considered to be less acceptable when the direct object is understood as a pronoun (47b):

(47)   Spanish
    a.   Te   me   presentas.
        DO.2SG   IO.1SG   presented.2SG
        'You presented yourself to me.'
    b.   [?]Te   me   presentó.
        IO.2SG   DO.1SG   presented.3SG
        'He presented me to you.'

I tentatively take this to mean that Spanish does not really have the Weak PCC. I will come back to this at the end of this section.

Other language families also have the Weak PCC. Anagnostopoulou (2008) argues that German is a Weak PCC language. PCC effects in German can only be detected in one particular position, namely when Wackernagel pronouns precede the subject and only for those speakers who have a strict DO > IO serialization of pronouns in the Wackernagel position (i.e. a left-peripheral position after the complementizer and preceding all elements in the clause, except for subjects). In those contexts, speakers have no problem to accept 1/2 > 1/2 combinations, while they reject 3 > 1/2 combinations, as shown by the data in (48) and (49):

(48)   *The kind of data German speakers reject (*first, *second DO > third IO)*
    a.   *?weil/   daß   dich   ihm   die Maria   vorgestellt   hat
        because/   that   you.ACC   him.DAT   the Mary.NOM   introduced   has
        'because/that Mary has introduced you to him'
    b.   ??weil/   daß   mich   ihr   die Maria   vorgestellt   hat
        because/   that   me.ACC   her.DAT   the Mary.NOM   introduced   has
        'because/that Mary has introduced me to her'
(49)   *German speakers accept Weak PCC combinations*
    a.   weil/   daß   dich   mir   die Maria   vorgestellt   hat
        because/   that   you.ACC   me.DAT   the Mary.NOM   introduced   has
        'because/that Mary has introduced you to me'
        'because/that someone has introduced you to me'
    b.   weil/   daß   mich   dir   die Maria   vorgestellt   hat
        because/   that   me.ACC   you.DAT   the Mary.NOM   introduced   has
        'because/that Mary has introduced me to you'

Riedel (2009) argues on the basis of her own field study that Bantu languages quite robustly fall under the Weak PCC. In, for example, Sambaa (Riedel 2009, 140, ex. 7), 1,2 combinations of objects are fully grammatical, as shown in (50), while 1,2 > 3 combinations are ill-formed (Riedel 2009, 140, ex. 8):

(50)   a.   A-   za-   ku-   ni-   onyesha.
        SM1   PERF.DJ   OM2S   OM1S   show
        'He pointed you out to me.'

b. A-   za-   ni-   ku-   onyesha.
    SM1   PERF.DJ OM1S   OM2S   show
    'He pointed me out to you.'

versus:

(51) a. A-   za-   m-   ni-   onyesha.
          SM1   PERF.DJ OM1   OM1S   show
          'He pointed her/him out to me.'
      b. *A-   za-   ni-   mu-   onyesha.
          SM1   PERF.DJ OM1S   OM1   show
          'He pointed me out to her.'

It thus seems accurate to conclude that clitic/weak pronoun and agreement languages split into two basic types, Strong PCC languages and Weak PCC languages.[16]

Proceeding now to an explanation of the *weak version of the PCC*, Anagnostopoulou (2005) proposed that in, for example, Catalan, Italian, German, and Sambaa, the person feature P on a head H is allowed to enter *Multiple Agree* with two goals, G1 (the IO) and G2 (the DO), as a matter of a parameter (see Hiraiwa (2004) on Multiple Agree):

(52) H [P] $G1_{DAT}$ $G2_{ACC}$
           P Agree with G1
      └─────────────────┘   │
           P Agree with G2   │
      └──────────────────────────────┘

In this proposal, Person can be checked *simultaneously* against both objects, subject to the constraint in (53):

(53) *A condition on Multiple Agree*
      Multiple Agree can take place only under non-conflicting feature specifications of the agreeing elements.

The first Agree leads to valuation of Person on H. As a result, the Probe cannot Agree with a lower argument with a conflicting Person specification because this will contradict the Person feature determined by the first Agree. Consider the following cases:

(54) a. ✓First/Second IO > First/Second DO
      b. ✓First/Second/Third IO > Third DO
      c. *Third IO > First/Second DO

In (54a), both G1 and G2 are [+P]. The first Agree leads to valuation of Person on H as [+P]. The second Agree with a [+P] element is possible because this does not contradict the person feature determined by the first Agree. In (54b), G1 is [+P] or [−P], while G2 only carries number [N] (see the specifics of Anagnostopoulou's

(2003) analysis of Strong PCC effects in section 4.1). Split Agree takes place just as in Strong PCC languages (i.e. P on H is valued by G1 and N by G2). The important case to consider is (54c), where G1 is [−P] and G2 is [+P], leading to contradictory Person values for P on H. This is ruled out.

A crucial assumption behind this approach is that the Probe in Weak PCC languages is only specified and sensitive to [+participant] or [−participant] without being further specified for speaker or addressee. Thus, the values 1 and 2 ([+speaker], [−speaker]) do not count as contradictory. As mentioned in note 16, Bonet (1994) observed that agreement languages always show Strong PCC effects, while clitic languages sometimes show Strong PCC effects and sometimes Weak PCC effects:

(55) *Bonet's (1994) Generalization*
      Agreement languages always have Strong PCC effects.
      Clitic and weak pronoun languages sometimes have Strong and sometimes Weak PCC effects.

Anagnostopoulou (2014a) argues that the Multiple Agree Parameter can provide an explanation for Bonet's Generalization. Recall that, in order for a language to permit Multiple Agree, it must lack fully specified probes for objects, that is, the probes must "see" the features [+participant] and [−participant] but no further specifications for speaker and addressee. It is plausible that (some) clitic and weak pronoun languages (i.e. languages lacking object agreement) have such incomplete probes. On the other hand, if object agreement languages are defined as languages with fully specified probes, then they are expected to always be sensitive to the values 1 and 2 ([+speaker], [−speaker]) in addition to [+participant] and [−participant]. Thus, the values for speaker and addressee will count as contradictory, disallowing Multiple Agree.[17] We can then restate Bonet's Generalization as follows:

(56) *Strong versus Weak PCC languages and specification of φ-probes on v*[18]
      Object agreement languages always have fully specified φ-probes on v and, therefore, lack Multiple Agree.
      Clitic and weak pronoun languages have either unspecified φ-probes (Multiple Agree) or fully specified φ-probes (no option for Multiple Agree).

Before closing this discussion, a final remark on Spanish is in order. Recall that Spanish has been claimed to show Weak PCC effects, but only if the DO is interpreted as a reflexive, not if it is interpreted as a pronoun (see the data in (47)). However, the reflexive requirement seems to suggest that the DO checks Person by entering binding Agree with the subject (see Reuland (2001) and earlier work), and not under Multiple Agree. If this is the correct way to understand the data in (47), then Spanish qualifies as a Strong PCC language and not as a Weak PCC language.

5.2   Relativization to all: contrastive and marked values of [±Part], [±Auth]

Multiple Agree as the core mechanism underlying PCC effects has been further explored in Nevins (2007; 2011). This is a highly articulated and complex analysis, and it would take me too far afield to present it in full detail. In this section, I will

attempt to highlight the main considerations motivating his proposal and provide an outline of it, focusing on the 2007 paper.

Nevins (2007) first argues against all accounts that assume for third-person direct objects that third person is no person (Harley and Ritter 2002; Anagnostopoulou 2003; 2005; Bejar and Rezac 2003; Adger and Harbour 2007). His main argument is morphological and comes from the spurious *se* rule in Spanish (Perlmutter 1971; for extensive discussion, see Bonet 1991). This rule takes place in environments where a third-person dative and a third-person accusative clitic would have to co-occur. This is impossible in Spanish, and therefore the first clitic in the cluster must change its shape, resulting in an opaque form *se* instead of *le*:

(57) a. *A   Pedro, el   premio, le   lo   dieron   ayer.
          to   Pedro, the prize,   3RD.DAT 3RD.ACC   gave.3PL yesterday
          'They gave Pedro the prize yesterday.'
     b. A   Pedro, el   premio, se   lo   dieron   ayer.
          to   Pedro, the prize,   SE   3RD.ACC   gave.3PL yesterday
          'They gave Pedro the prize yesterday.'

Nevins argues that the spurious *se* rule should be seen as a dissimilation rule along the lines of (58) (Nevins 2007, 275, ex. 6), which prevents the presence of two identical person feature specifications when they are adjacent (for extensive argumentation, see Nevins 2007, 274–283).

(58) Delete/alter the features corresponding to third person on a dative when it precedes another third person.

But in order to state a morphological dissimilation rule as in (58), it is necessary to refer to the presence of a feature for third person, contra approaches taking third person to be absent from the representation. Nevins (2007) concludes that third person must have a featural representation of person. This is possible with binary features such as [+/− participant] and [+/− author], which define pronouns as follows (Nevins 2007, 288, ex. (44)):

(59) a. [+Auth, +Part] = first person
     b. [−Auth, +Part] = second person
     c. [−Auth, −Part] = third person
     d. [+Auth, −Part] = logically impossible

Having concluded that third person is represented as in (59c), the next thing to address is the proper analysis of PCC effects. An important aspect of the proposal is that it aims in accounting for the full range of PCC effects, not just Strong PCC effects discussed in section 4 and Weak PCC effects discussed in section 5.1, but also two types that he calls the "Me-First PCC" and the "Ultrastrong PCC."

The Me-First PCC is attested in Romanian and prevents a second- and third-person dative (DAT) in the presence of a first-person accusative (ACC). On the other

hand, 3 > 2 and 1 > 2 combinations are well-formed (Nevins 2007, 297, exs 67–70; citing Farkas and Kazazis 1980; Ciucivara 2004):

(60) a. Maria i-   te-   a   prezentat.
          Maria 3.DAT 2.ACC has   introduced
          'Maria has introduced you to her.'
      b. Maria me-   te-   a   prezentat.
          Maria 1.DAT 2.ACC has   introduced
          'Maria has introduced you to me.'
      c. *Maria i-   m-   a   prezantat.
          Maria 3.DAT 1.ACC has   introduced
          'Maria has introduced me to her.'
      d. *Maria tie- m-   a   prezantat.
          Maria 2.DAT 1.ACC has   introduced
          'Mary has introduced me to you.'

The Ultrastrong PCC permits combinations respecting a 1 > 2 > 3 hierarchy (i.e. <1,2>, <1,3>, and <2,3> combinations are well-formed, while <2,1>, <3,1>, and <3,2> combinations are ill-formed). Nevins (2007, 298, exs 71–76) presents examples from Classical Arabic showing this type of PCC (from Abdelkader Fassi-Fehri, p.c.; see also Fassi-Fehri 1988, 116). Consider also (61) from Catalan (Bonet 1991; 1994):

(61) Catalan
      Te' m van recomanar   per la   feina.
      2   1   recommended.3PL for the job
      'They recommended you to me for the job.'   (OK in Weak/Ultrastrong
                                                  Catalan)
      'They recommended me to you for the job.'   (OK in Weak/* in Ultrastrong
                                                  Catalan)

There appear to be two groups of speakers in Catalan. The Weak PCC speakers freely accept 2,1 and 1,2 combinations. On the other hand, the Ultrastrong PCC speakers accept 1-IO, 2-DO combinations, but not 2-IO, 1-DO combinations.

   Nevins puts forth a uniform account for PCC effects aiming to account for all four versions of the PCC. While he agrees with Anagnostopoulou (2003; 2005) that PCC effects obtain when a single probe enters Agree with two goals, he does not take Strong PCC effects to result from Split Agree and Weak PCC effects to derive from Multiple Agree, but proposes instead that all languages showing PCC effects are subject to the same core mechanism (Nevins 2007, condition 52):

(62) *Desideratum*
      All versions of the PCC should be explained by the same syntactic mechanism,
      differing only in relativization to which (values of which) features must obey the
      constraint.

According to his proposal, all languages have Multiple Agree, and the four versions result from a parameterization of the person features searched by the probes, which

ultimately depends on the feature specifications of probes (Bejar 2003). In turn, this determines what kind of features count as conflicting in the spirit of Anagnostopoulou's (2005) condition on Multiple Agree, in (53). The specific conditions on Multiple Agree he proposes are Contiguous Agree and Matched Values in (63) and (64), respectively (see Nevins 2007, 291, conditions 50–51), an extension of Calabrese's (1995) theory of value-relativized parameterization in phonology in the morphosyntactic feature domain:

(63) *Contiguous Agree*
For a relativization R of a feature F on a probe P, and x ϵ Domain (R(F)), $\neg\exists$y, such that y > x and P > y and y $\notin$ Domain (R (F)): "There can be no inteveners between P and x that are not in the domain of relativization that includes x."

(64) *Matched Values*
For a relativization R of a feature F, $\exists$ α, α ϵ [+, −], $\forall$ x, x ϵ Domain (R (F)), val (x,F) = α: "All elements within the domain of relativization must contain the same value for the feature F being agreed with."

The specific explanations he offers for different versions of PCC effects crucially rely on *marked* and *contrastive* values of features (Nevins 2007, 290, condition 48):

(65) For a feature F, a search may be relativized to a domain which includes **all** values of F, only the **contrastive** values of F, or only the **marked** values of F.

For each binary feature, it must be indicated which value is marked. This can be determined on the basis of independent criteria such as syncretisms or conjunction agreement. For example, marked categories tend to show syncretisms for other features (Noyer 1992): gender features are often impoverished in the context of [+Author] and not [−Author] in, for example, Semitic, and they are impoverished in the context of [+Participant] and not of [−Participant] in Romance. Moreover, verbal agreement with conjoined "I" and "he" results in "we," and verbal agreement with conjoined "you" and "he" results in "you," once again suggesting that [+Author] is the marked value of [Author] and [+Participant] is the marked value of [Participant] (Nevins 2007, 289, ex. 47):

(66) a. + is the marked value of [Part].
     b. + is the marked value of [Auth].

Contrastiveness is defined as in (67) or (68) (Nevins 2007, 289, conditions 45–46):

(67) A pronoun S with specification αF is *contrastive* for F if there is another Pronoun S' in the inventory that is featurally identical to S, except that it is −αF.

(68) An instance of the feature F is contrastive within a set of other features S if both values of F may occur in S.

As a result of (67) and (68), [±Author] is not contrastive when it co-occurs with [−Participant] (there is [−Part, −Auth], but there is no [−Part, +Auth]), while it is contrastive when it co-occurs with [+Participant] since there is [+Part, +Auth] and [+Part, −Auth].

With this information, we are now in a position to follow how the different versions of the PCC are derived in this proposal.

(i) *Derivation of Weak PCC effects.* Nevins (2007) proposes that in Weak PCC languages, the search is relativized to the marked values of [Participant] (i.e. the positive values). By Contiguous Agree (CA), there cannot be any unmarked values of [Participant] between the probe and the elements bearing the features the probe is looking for. The Matched Values (MVs) condition is trivially met whenever the probe is looking for a marked value since there cannot be any elements that have differing values for the feature in question. The table in example (69) summarizes the proposal for Weak PCC languages (ex. 64 in Nevins 2007):

(69) *Weak PCC: if Acc is 1/2, then Dat is 1/2*
      Probe's value-relativization: marked [Part]

		CA	MV
OK	1 3		
OK	1 2		
OK	2 1		
OK	2 3		
*	3 1	×	
*	3 2	×	

(ii) *Derivation of Strong PCC effects.* The proposal is that in Strong PCC languages, the probe is looking for contrastive values of the feature [Author]. Therefore, there can be no intervener bearing non-contrastive values for [Author]. Recall that [Author] is contrastive only in the context of [+Part] and not with [−Part] (i.e. with third-person pronouns). Thus, the condition on CA will be violated when a third-person pronoun intervenes between the probe and a first- or second-person pronoun in the Multiple Agree domain. Moreover, the MV condition will prevent the co-occurrence of conflicting contrastive values for [Author], preventing combinations of [+Part, +Auth] and [+Part, −Auth] (ex. 65 in Nevins 2007):

(70) *Strong PCC: Acc must be third*
      Relativization: contrastive [Auth]

		CA	MV
OK	1 3		
*	1 2		×
*	2 1		×
OK	2 3		
*	3 1	×	
*	3 2	×	

(iii) *Derivation of Me-First PCC effects.* For these languages, it is proposed that the probe is searching for marked values of [Author], that is, for [+Author]. Therefore, there can be no [−Author] intervening between the probe and the [+Author] goal in these languages (CA). As with Weak PCC effects, the MV condition is trivially met because there cannot be elements in the Multiple Agree domain that have differing values for the feature [Auth] (ex. 66 in Nevins 2007):

(71) *Me-First PCC: relativization: marked [Auth]*

		CA	MV
OK	1 3		
OK	1 2		
*	2 1	×	
OK	2 3		
*	3 1	×	
OK	3 2		

This derives the Romanian pattern in (60).

(iv) *Derivation of Ultrastrong PCC effects.* Finally, for Ultrastrong PCC languages, it is proposed that there is a relativization on the probe to Agree with marked values for [Author] and with marked values for [Participant], resulting in the following admissible combinations (ex. (77) in Nevins 2007):

(72) *Ultrastrong PCC: relativization: marked [Auth], and marked [Part]*

|		CA	MV
OK	1 3		
OK	1 2		
*	2 1	× ([Auth])	
OK	2 3		
*	3 1	× ([Auth, Part])	
*	3 2	× ([Part])	

Nevins (2007, 300–301) furthermore argues that a number of unattested but logically possible PCC effects are correctly excluded by his featural system.

5.3 Strong PCC analyses from the perspective of Weak PCC effects

As they stand, all approaches presented in section 4 for Strong PCC fail to capture Weak PCC effects. They are all designed to exclude first/second-person accusatives and direct objects in the presence of higher datives and indirect objects, regardless of the person specifications of the datives and indirect objects (i.e. whether they are first, second, or third). Only Multiple Agree, combined with a relativization of possible and impossible feature combinations, as in Anagnostopoulou (2005) and Nevins (2007), can derive the basic typological distinction between Weak PCC languages and Strong PCC languages.[19] And in order to additionally derive Me-First PCC grammars and Ultrastrong PCC grammars, it is necessary to appeal to even finer-grained relativizations of feature values, as Nevins (2007) does. Since, as

stated in section 4.6, the main dilemma posed by PCC effects is whether they result from competition between two arguments attempting to enter Agree with a single head or whether competition is irrelevant, and the problem results from an improper configuration banning person licensing on the accusative and direct object, I will briefly review here how Baker's (2008; 2011) SCOPA account could be extended to cover Weak PCC configurations, pointing to a number of problems arising for such an extension.

Baker accounts for Strong PCC effects as follows. In a configuration like (73),

(73)


```
          H
                  G1= DAT
      G1
            G2
                  G2= ACC
```
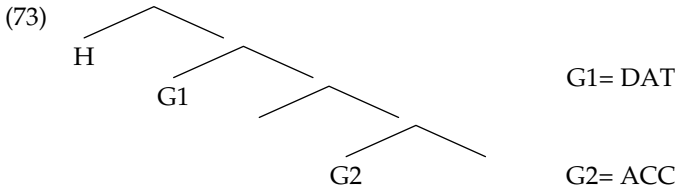
where H is a head v, the goal object (G1) can move to SpecvP but the theme object (G2) cannot. Crucially, v has at most one EPP feature triggering Move.[20] The little v head is therefore only allowed to enter long-distance Agree with G2. Thus, agreement with G2 can only be for number and gender, but not for person, by SCOPA, repeated here:

(32)   *The Structural Condition on Person Agreement (SCOPA)*
       A category F can bear the features +1 or +2 if and only if a projection of F merges with a phrase that has that feature and F is taken as the label of the resulting phrase.

Baker (2008; 2011) does not intend to account for Weak PCC effects in his system. This is explicitly stated in Baker (2011, fn. 8):

> Although Bonet (1991) treated the PCC as essentially universal, she and subsequent researchers have distinguished strong and weak versions of the PCC (the weak one allows two weak objects where both are first or second person, whereas the strong one does not), as well as a few (apparent) exceptions in some languages.… As far as I can tell, all the weakened or exceptional cases involve clitic pronouns, and the generalization may be strong and exceptionless for agreement.

But the assumption that there is a fundamental difference between Strong PCC and Weak PCC has a consequence for the analysis of clitics: it leads to a treatment of clitics in Strong PCC languages like Greek and French as agreement markers and their counterparts in Weak PCC languages such as Catalan and Italian as clitics. There is no independent evidence for such a division. More generally, it seems implausible to propose that there is a fundamental difference between Strong and Weak PCC effects, to an extent that they are subject to totally different explanations.

The above considerations lead to the question of whether Weak PCC effects can also be derived in terms of SCOPA, thus extending the empirical coverage of SCOPA to Weak PCC languages. The answer is "yes," but only if we allow for

the parametric availability of two EPP features on v. That would permit first/second-person accusatives to move to v, checking their person features and conforming with SCOPA. However, in order to account for the ungrammaticality of $^*3 > 1/2$ combinations in Weak PCC languages, the following stipulation would have to be added:

(74) Two EPP features on v in Weak PCC languages are possible only when the two objects bear the features +1 or +2.

As it stands, a stipulation like this is unsatisfactory, and things become even more complex once Me-First and Ultrastrong PCC effects are taken into account.[21]

6 Encoding hierarchical effects through cartography

Bianchi (2006) sees the PCC as an animacy hierarchy effect implemented as a series of functional heads checking the person features of the verb's arguments. She proposes that the same phenomenon applies in "animacy-based" systems where the transitive verb morphology is sensitive to the relative prominence of the external and internal arguments on an animacy hierarchy. I will limit the presentation to PCC effects here.

Bianchi (2006) takes as a starting point the observation that grammars show sensitivity to either Strong or Weak PCC effects, and proposes that PCC effects should be seen as reflecting two separate constraints. Therefore, she splits the PCC into (75) and (76) conditions 8–9 in Bianchi 2006):

(75) A first/second-person DO clitic cannot co-occur with a third-person IO clitic.

(76) A first/second-person DO clitic cannot co-occur with a first/second-person IO clitic.

(75) is universal, while (76) is subject to variation, including idiolectal variation. Bianchi (2006) proposes that (75) can be understood as animacy constraint (like Ormazabal and Romero 2007), and that PCC languages like Italian have a minimal animacy hierarchy ranking first and second person above third person. The effects of (75) can then be restated as in (77) and (78) (conditions 10–11 in Bianchi 2006):

(77) Animacy hierarchy in Italian: first, second person > third person.

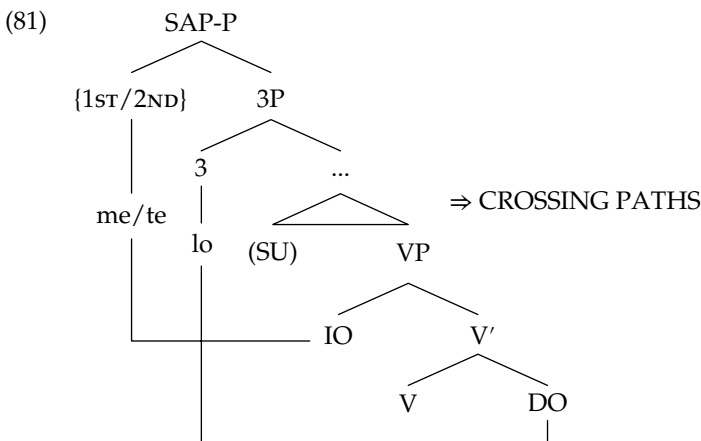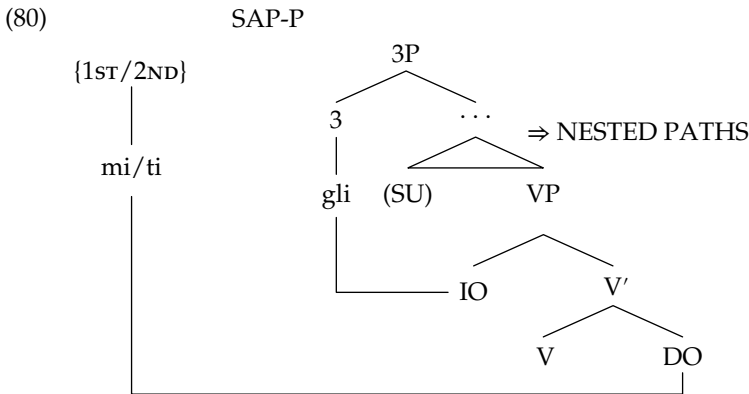(78) The DO cannot outrank the IO on the animacy hierarchy.

Taking as a starting point the observation that unstressed or unfocused personal pronouns in Italian (and other Romance languages) obligatorily need to be cliticized (or clitic doubled; Kayne 2000), Bianchi (2006) proposes that direct and indirect object clitics specifically license their person feature in the functional structure of the clause. A crucial assumption she relies on is that all pronominal arguments are intrinsically endowed with person features, unlike nonpronominal DPs. This means that for Bianchi (2006), third-person pronouns are specified for person, like

Nevins (2007); she provides extensive argumentation against the view that third-person pronouns lack person (for details, see Bianchi 2006).

She then puts forth a cartographic implementation of the animacy hierarchy, in the sense of Cinque (2002) and Rizzi (2004), and assumes that the relative ranking of the person features is encoded in the relative syntactic order of the functional heads that license them: third person is projected in a separate and lower head than first and second person. Since there is no clear evidence for a relative ranking between first and second person in Italian, she represents them as alternative values of the [Speech Act Participant] feature in the same structural slot. This leads to the following organization of the person field in Italian (Bianchi 2006, ex. 26):

(79)   SAP-P   (Italian)
          ╱   ╲
    {1ST/2ND}   3P
                  ╱   ╲
               3RD   ...
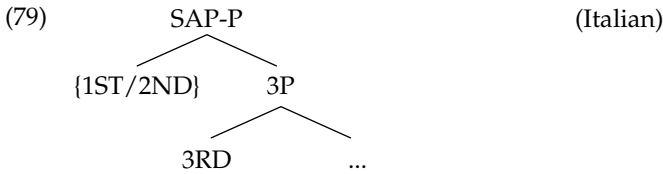
On the assumption that the base order of arguments is one where the IO is higher than the DO, she proposes that configurations violating the PCC result from nesting, while configurations satisfying the PCC result from crossing (Bianchi 2006, trees 27–28):

(80)   SAP-P
        {1ST/2ND}   3P
                              ╱   ╲
           │   3   . . .
                             │   ⇒ NESTED PATHS
          mi/ti   │   ╱   ╲
                           gli   (SU)   VP
                                          ╱   ╲
                             └────── IO   V′
                                              ╱   ╲
                                             V   DO

(81)   SAP-P
          ╱   ╲
    {1ST/2ND}   3P
          │   3   ╱   ╲
                   │   ...
        me/te   │   ╱   ╲
                  lo   (SU)   VP
                              ╱   ╲ ⇒ CROSSING PATHS
                    └─── IO   V′
                                    ╱   ╲
                                   V   DO

She proposes to derive the contrast between (80) and (81) in terms of minimality, computed with respect to intervening subchains. In (80), the DO chain encompasses the whole IO chain; in (81), instead, each chain only crosses one position of the other chain. Therefore, (80) violates minimality and (81) does not.[22]

Even though a cartographic approach along these lines seems to be supported from Romance clitic clusters where serialization is sensitive to person values, I am not convinced that such an approach can be generalized to all languages showing PCC effects. Apart from the fact that this particular analysis raises questions concerning the precise derivation of clusters of two third-person clitics, as well as the full spectrum of PCC effects discussed in Nevins (2007) (see note 22 for some rather inconclusive suggestions in Bianchi's system), there are languages showing PCC effects for which number (in Bianchi's terms, "third person") has been claimed to be higher than first and second person (see e.g. Preminger 2014). Moreover, the claim that PCC effects derive from a ban against nested paths is contradicted by PCC languages in which clitic/weak pronoun placement results in nesting (i.e. where clitic and weak pronoun clusters reverse the base order of arguments) (e.g. German (Anagnostopoulou 2008) and Bantu languages like Sambaa (Riedel 2009); see the discussion in section 5.1; see also Cardinaletti (2008) on Romance vs. Bantu clusters). See Anagnostopoulou (2014a; 2014b) for detailed discussion of the cross-linguistic distribution of crossing versus nesting in connection to the PCC, and Richards (1997) for detailed discussion of the cross-linguistic distribution of crossing versus nesting more generally.

7   A frequency-based approach

I have left for the end of this survey Haspelmath's (2004) frequency-based explanation for the PCC, which challenges grammar-based explanations like those presented in the preceding sections. Haspelmath's starting point is the Weak PCC stated as in (82) (Haspelmath 2004, condition 1):

(82)   *The Ditransitive Person-Role Constraint (weak version)*
       Combinations of bound pronouns with the roles Recipient and Theme are disfavored if the Theme pronoun is first or second Person and the Recipient is third person.

By the term "bound pronouns," Haspelmath (2004) refers to clitics and affixal pronominal affixes. He argues against explanations implicitly or explicitly appealing to grammatical constraints and in favor of a usage-based, functional, grammar-external explanation for the PCC. His starting observation is that even in languages lacking the PCC, the combinations ruled out in PCC languages are disfavored and therefore infrequent. He takes German to be a language lacking the PCC (but see below that German presents evidence for PCC effects in a particular environment).

The parallelism between French and German is shown in (83) (Haspelmath 2004, ex. 21):

(83)   *Favored combination*   *Disfavored combination*
        French   *Grammatical*:   *Ungrammatical*:
                      Agnès me la présente.   *Agnès me lui présente.
        German   *Frequent*:   *Infrequent*:
                      Agnès stellt sie mir vor.   Agnès stellt mich ihr vor.
                      'Agnès introduces her to me.' 'Agnès introduces me to her.'

To substantiate his claim for German, Haspelmath (2004) uses the Goethe subcorpus (1.4 million words) of the online COSMAS corpus of the Institut für deutsche Sprache in Mannheim. According to Haspelmath (2004), the Goethe corpus has the advantage that there are many first-person pronouns since Goethe's novels are written from the perspective of the protagonist (second-person pronouns are underrepresented due to the fact that this is a written text). Haspelmath (2004) finds 241 instances of ditransitive constructions with two object pronouns, distributed as follows:

(84)

		Dative pronouns	
		First and second person	Third person
Accusative pronouns	First and second person	15 (6%)	34 (14%)
	Third person	132 (55%)	60 (25%)

(Haspelmath 2004, table 2)

As the table in (84) shows, object-pronoun combinations with first/second-person accusative pronouns are rarer than expected, and the most favored combination is first/second-person IOs and third-person DOs (i.e. the combination attested in all clitic/agreement languages). The reason why the relevant combinations are rare or frequent has to do with harmonic associations of person and role scales as in (85) (Silverstein 1976; Aissen 1999). Person–role associations are more natural when high (first and second) persons are associated with high (Agent/Recipient) roles and low (third) persons are associated with low roles (Theme/Patient).

(85) a. *Person scale*
          First and second person > third person
      b. *Semantic role scale*
          Agent > Recipient > Patient/Theme

   In order to capture the connection between frequency patterns with independent pronouns and grammaticality patterns with bound pronouns (clitics and affixes), Haspelmath (2004) pursues a diachronic explanation. As is well known, clitics and pronominal affixes in the vast minority of languages originate from

independent pronouns via a process of *grammaticalization*, which Hawkins (1994) characterizes as a process by which performance principles are conventionalized as grammatical restrictions. Haspelmath (2004) proposes that the development from independent personal pronouns, with the full range of syntactic to bound pronouns that are phonologically and morphologically reduced and quite fixed in their syntactic possibilities, is subject to the Frequency Condition on Grammaticalization (Haspelmath 2004, ex. 23), like all grammaticalization changes. This condition is widely assumed in the relevant literature (see Haspelmath 2004, sect. 3.2 for possible explanations of the role of frequency and sect. 3.3 for other examples where frequency determines grammaticalization patterns):

(86) *The Frequency Condition on Grammaticalization*
      The more frequent a candidate for grammaticalization is relative to other
      competing candidates, the more likely it is that grammaticalization will take
      place.

He proposes that the combinations blocked by the PCC do not occur because they have not been grammaticalized, due to their less frequent occurrence. When unstressed uses of pronouns become clitics, they are grammaticalized in a rigid way (i.e. they have a fixed position in the clitic cluster and a rigid position with respect to the verb). The clitic paradigm has gaps in exactly those cases that were too rare to be grammaticalized. Finally, Haspelmath (2004) argues that the PCC can be seen as a subcase of a larger generalization, the Ditransitive Topicality–Role Constraint (Duranti 1979; Farkas and Kazazis 1980), according to which the higher positions on the role scale and the person scale are associated with greater inherent topicality and "empathy potential" in (87), leading to the harmonic associations in (88) (Haspelmath 2004, conditions 36 and 30, respectively):

(87) *Ditransitive Topicality–Role Constraint*
      Grammars are likely to put restrictions on Recipient–Theme combinations to the
      extent that the Recipient is not inherently more topicworthy than the Theme
      argument.

(88) *Expected harmonic associations*
More topicworthy	*Less topicworthy*
Recipient	Theme
First and second person	Third person
Pronoun	Full NP
Proper name	Common noun
Animate	Inanimate
Definite	Indefinite

Haspelmath (2004) points out that there are indeed languages conventionalizing the discourse preference for harmonic associations. For example, Lillooet (Interior Salish, British Columbia) has a grammatical restriction that when the IO is a full NP, the DO must be a full NP as well (Van Eijk 1997, 229), and a similar restriction is found in Lunda (Bantu-K, Zambia and Angola; Kawasha 2002, 38–40).

In Kikongo (Bantu-H, Democratic Republic of the Congo), two animate NPs (an IO and a DO) are allowed, but two proper names are not (Lumwamu 1973, 181). In *leísta* dialects of Spanish, the animate DO clitic *le* cannot co-occur with an IO clitic (Ormazabal and Romero 2007; see the discussion in section 4), and in Mohawk (Iroquoian, New York State, Ontario, and Quebec), a ditransitive Theme can only be inanimate (Baker 1996; Ormazabal and Romero 2007). Similar restrictions are found in monotransitives and should be treated along similar lines (for detailed discussion, see Haspelmath 2004, sect. 6.5).

Even though the claim that frequency might play a role in historical change and grammaticalization might not be implausible, there are a number of objections one could raise to Haspelmath's (2004) arguments against grammar-based explanations to the PCC. To begin with, Haspelmath (2004) ignores minimalist accounts in terms of feature checking on the basis of the following reasoning: "For the sake of completeness, I mention here a number of recent accounts of DPRC effects in minimalist terms.… None of them seems to have become widely accepted, and they are generally so complicated that it would take a lot of effort to discuss them. The paper is already very long, so I have to ignore them here." But since these accounts explore ways in which hierarchical effects are encoded in syntax through regular syntactic mechanisms underlying Agreement and Case that certainly belong to grammar, it is hard to compare and evaluate the adequacy of the two lines of approaches if the details of Agree-based explanations are ignored. For example, some of the arguments against grammar-based explanations turn out to be non-arguments from the perspective of syntax-based approaches. For one, the claim that the exceptions to PCC cast doubt on the universality and hence the grammatical basis of the constraint is a non-argument for syntax-based approaches, since many of them leave room for exceptions indicating ways in which they could possibly arise (see e.g. Anagnostopoulou 2003; 2008; Nevins 2007; Rezac 2011). Moreover, it is striking that most of the alleged counterexamples to the PCC mentioned in Haspelmath's section 2.3[23] involve 3 > 2 combinations, which are well-formed in Me-First PCC languages, as was seen in section 5.2. Nevins' (2007) grammar-based explanation predicts such combinations to be possible in a language disallowing 3 > 1 combinations, while Haspelmath (2004) expects that whenever a language allows for 3 > 2 it will also allow for 3 > 1. It is this difference in fine-grained predictions that will ultimately determine the choice between a grammar-based and a usage-based approach. Note in this context also that some claims in Haspelmath (2004) turn out to be inaccurate on closer inspection. For example, in his section 5 (*interim summary*), it is claimed that there is no evidence that the relative order of pronouns either with respect to each other or with respect to the verb is a relevant factor. This is not true, though. Already, Bonet (1991) pointed out that there are cases where order of pronouns is crucial. For example, in Swiss German, PCC effects arise when pronouns occur in the IO > DO order and not when they occur in the DO > IO order. This is expected in a syntactic approach along the lines of Anagnostopoulou (for an analysis of Swiss German PCC depending on different pronominal serializations, see 2003, ch. 5), but unexpected in the grammaticalization approach: it can always be claimed, of course, that Swiss German pronouns qualify as "bound pronouns" in the IO > DO order and as independent pronouns in the DO > IO order, but there must be some independent evidence for this claim.

There is a further issue I would like to address concerning Standard German. Haspelmath (2004) assumes that German does not have the PCC, but Anagnosto-poulou (2008) has found suggestive evidence that this needs to be qualified. Recall from section 5.1 that Anagnostopoulou (2008), based on consultants from different varieties of German,[24] has identified PCC effects in German, but only in one particular position, namely when Wackernagel pronouns precede the subject, and only for those speakers who have a strict DO > IO serialization of pronouns in the Wackernagel position. In the pre-subject Wackernagel position, speakers have no problem with accepting 1/2 > 1/2 combinations, while they reject 3 > 1/2 combinations (i.e. they have Weak PCC effects). The relevant data are repeated here:

(48) *The kind of data German speakers reject (*first, *second DO > third IO)*
    a. $^{*?}$weil/   daß   dich   ihm   die Maria   vorgestellt   hat
        because/ that   you.ACC him.DAT the Mary.NOM introduced has
        'because/that Mary has introduced you to him'
    b. $^{??}$weil/   daß   mich   ihr   die Maria   vorgestellt   hat
        because/ that   me.ACC   her.DAT the Mary.NOM introduced has
        'because/that Mary has introduced me to her'

(49) *German speakers accept Weak PCC combinations*
    a. weil/   daß   dich   mir   die Maria   vorgestellt   hat
        because/ that   you.ACC me.DAT the Mary.NOM introduced has
        'because/that Mary has introduced you to me'
        'because/that someone has introduced you to me'
    b. weil/   daß   mich   dir   die Maria   vorgestellt   hat
        because/ that   me.ACC you.DAT the Mary.NOM introduced has
        'because/that Mary has introduced me to you'

On the other hand, when the subject precedes Wackernagel pronouns, PCC effects do not arise:

(89) a. weil/   daß sie   **dich**   **ihm** wahrscheinlich vorgestellt hat
        because/ that she.NOM you.ACC him.DAT probably   introduced has
        'because/that she has probably introduced you to him'
    b. weil/   daß die Maria   **mich**   **ihr**   wahrscheinlich
        because/ that the Mary.NOM me.ACC her.DAT probably
        vorgestellt hat
        introduced has
        'because/that Mary has probably introduced me to her'

At first sight, the connection between strict serialization and the emergence of PCC effects might seem to lend support to the grammaticalization proposal. One could claim that German Wackernagel pronouns are not yet "bound pronouns" for those German speakers who allow for both the DO > IO and the IO > DO serializations, but they are bound pronouns for the strict DO > IO grammars. Accordingly, PCC effects show up as a consequence of grammaticalization in the strict DO > IO grammars, while they do not occur (or they only occur as a preference) in the grammars that permit two alternative serializations. But there is a crucial detail that cannot be

easily accommodated in such an approach, namely the effect of the position of the subject for those speakers who have a strict DO > IO order (i.e. the contrast between the data in (48) and the data in (89)). It is hard to understand the effect of the subject in a grammaticalization approach that takes strict serialization of pronouns as one of the diagnostics for grammaticalization, and hence does not have an independent reason to treat pronominal clusters in (48) as bound pronouns and pronominal clusters in (89), which also appear in a strict order, as "independent pronouns." In German, the emergence of PCC effects in the pre-subject Wackernagel position is so well hidden that even native speaker researchers have not seen it, and it is possibly not detectable in the input data available to the child. Its emergence, therefore, in this very specific context strongly indicates that the PCC is deeply rooted in the basic laws of syntax. Thus, the contrast between (48) and (89) can be seen as a "poverty of stimulus" argument supporting the grammar-based origin of the PCC.[25]

As a final remark, I would like to point out that if it is correct that PCC effects can be detected in binding, then this is a strong argument against a Haspelmath-type approach. It is, of course, very hard to argue that in the type of binding data discussed in Bhatt and Šimík (2009), Charnavel and Mateu (2014), and Giblin (2014), admissible and inadmissible binding options result from grammaticalization.

8   Conclusion

In the past 15 years, the PCC has become a central topic of theoretical linguistics that has opened up new domains of inquiry and has sparked an entirely new boom of research in the areas of syntax, morphosyntax, and the study of parameters. One recurrent question posed by the PCC and its relatives is how hierarchical effects that have been described in typology as reflecting harmonic alignment of scales are encoded in morphosyntax. There are a number of analytic options toward this goal that have been fruitfully explored by different researchers and have led to novel research questions.

At the same time, there are still some important unsettled debates regarding the nature of the PCC. Haspelmath's (2004) observed correlation between the frequency of particular combinations in non-PCC languages and the ungrammaticality of the same correlations in PCC languages (see also Doliana 2014) poses a fundamental dilemma: whether the PCC should be seen as a synchronic grammar-based constraint or as a restriction rooted in grammaticalization. While I presented some reasons to doubt the validity of Haspelmath's (2004) arguments against grammar-based approaches, the observed correlation between frequency of use and grammaticality, if correct, still calls for an explanation. In domains other than the PCC, where hierarchical effects have been claimed to play a role in syntax (e.g. person-induced split ergativity), such frequency claims have been questioned. For example, Jelinek (1993, 18) pointed out that contrary to the claim that first/second-person arguments are "more natural" agents than third-person arguments, the referents of third-person arguments are statistically as likely to be agents as first/second-person arguments, a fact confirmed by text counts by Wierzbicka (1981). For grammar-based approaches, the basic dilemma is whether the PCC should be seen as a configurational condition on person licensing, as claimed by

Baker, or as the result of competition between two arguments against one Agreement head, as proposed by everybody else.

Syntactic approaches to the PCC have sometimes been criticized that they rely on too many unmotivated or arbitrary assumptions regarding features and feature-checking relations. Even if there is a basis to this criticism, I hope that this survey has made clear that syntactic approaches have nevertheless been successful in developing a basic shared vocabulary on what possible characterizations of the constraint would be, as well as in exploring potential links between the PCC and a wealth of other phenomena from adjectival agreement to inverse constructions and ergative displacement, and from person agreement restrictions with nominative objects in Icelandic quirky subject constructions to animacy restrictions on theme agreement and on theme incorporation in clitic doubling, object agreement, and polysynthetic languages.

Acknowledgments

Glosses of the examples are mostly adopted from the way different authors have glossed the examples that they discussed; they are therefore not uniform.

SEE ALSO: Applicatives; Case: Oblique, Inherent, Semantic, Quirky; Clitic Climbing; Clitic Clusters; Clitic Doubling; Double Object Constructions; External Possession and Possessor Raising; Long-Distance Agreement; Multiple *Wh*-Questions; Object Shift in Scandinavian; Syntactic Ergativity

Notes

1. See Perlmutter (1971), Kayne (1975), Warburton (1977), Duranti (1979), Bonet (1991; 1994; 2008), Miller and Sag (1997), Monachesi (1996), Albizu (1997), Gerlach (1998), Anagnostopoulou (1999; 2003; 2005; 2008; 2014a), Alexiadou and Anagnostopoulou (2006), Ormazabal and Romero (2007), Haspelmath (2004), Bejar and Rezac (2003; 2009), Adger and Harbour (2007), Bianchi (2006), Desouvrey (2005), Nicol (2005), Richards (2005), Nevins (2007), Baker (2008; 2011), Rezac (2011), and Walkow (2012), among many others, for discussion of the PCC in different frameworks and from different perspectives. See the various contributions to Heggie and Ordoñez (2005), Boeckx (2006), and D'Alessandro, Fischer, and Hrafnbjargarson (2008) for extensive discussion of the PCC and its relation to other types of agreement restrictions.
2. Walkow (2012, 54) claims that some French speakers have the weak PCC, and this contradicts Nicol's (2005) claim.
3. This picture is simplified. See right below for the Ultrastrong PCC and the Me-First PCC.
4. As mentioned in Ormazabal and Romero (2007, 317, fn. 2) Albizu's thesis (1997) presents a study with 43 languages corresponding to families of very different typological

properties (Algonquian, Athabaskan, Iroquoian, Kiowa-Tanoan, Mayan, Salishan, Caucasian, Tibeto-Burman, Semitic, and Pama-Nyungan).

5. Sigurðsson and Holmberg (2008) revisit the Icelandic restriction and discuss it in connection with a separate restriction, first reported by Holmberg and Hróarsdóttir (2002), according to which an intervening dative blocks the higher verb from agreeing with the lower nominative, even if the nominative is third person. They claim (2008, 274, fn. 7) that the person restriction in Icelandic and the PCC are unrelated; however, they do not discuss why they think this is the case, due to space limitations.

6. As pointed out by Ormazabal and Romero (2007) and Haspelmath (2004), the PCC also arises in languages where the indirect object has accusative or no morphology. I take indirect objects in these languages to behave like the dative arguments discussed here. See Anagnostopoulou (2003, 316–321) for discussion.

7. As will be seen in the next sections, many of these assumptions have been questioned in later literature. However, the basic idea of the PCC as arising in a configuration where datives and lower accusatives/absolutives/nominatives check person and number separately against the same head has been adopted by many later approaches.

8. The terms [+/−*person*] and [+/−*participant*] are synonyms and are used interchangeably in this chapter.

9. Baker (2008; 2011), in addition, proposes that person licensing can only take place in a spec–head configuration, and he argues that this strict locality requirement is sufficient to derive PCC effects on a par with other phenomena. See below for discussion.

10. A common escape strategy for PCC effects is the realization of datives as full PPs. Rezac (2011) argues that this is so because applicative datives c-command accusative, absolutive, and nominative DPs bearing uninterpretable case, thus blocking the relationship between them and their case licensers, while PP datives do not c-command case-bearing arguments, thus not blocking their case licensing.

11. As pointed out by an anonymous reviewer, given that the Icelandic person restriction is unified with the PCC, it is worthwhile proposing that the PCC should also be unified with the Inverse Agreement Constraint (Comrie 1980) in Chukchee, Koryak, and Kamchadal, where the verb can agree with both the subject and the object, but if the O is higher ranked in the animacy hierarchy than the S, then object agreement is blocked. I agree that there is an obvious similarity between the two constraints that calls for a common explanation, and there have been attempts to unify the PCC with Inverse Agreement–like phenomena (see e.g. Bianchi's (2006) work discussed in section 6, the logic of Bejar and Rezac's (2009) cyclic Agree system, and other proposals). A natural way of extending PCC-type accounts to languages with Inverse Agreement would be to propose that in Inverse Agreement languages, unlike standard PCC languages, subjects and objects in transitive clauses always check phi-features against the same head.

12. First and second person are called *local*.

13. For example, [participant: 1,2, number: dual] for first-person inclusive dual, [participant: 1, number: singular] for first-person singular, and [participant: 2, number: plural] for second-person plural.

14. Adger and Harbour (2007) point out that in Greenberg's (1966) typological survey of number, plural emerges as the marked number, triggering loss of distinctions in other categories such as gender. An anonymous reviewer refers me to the work of Nevins and Săvescu (2008), who capitalize on the Greek type of syncretism found in the plural in Romanian, in order to explain away an apparent "Number Case Constraint" in this language.

15. See Seuren (1976) for Italian and Spanish, and Wanner (1987) for Italian. See also Monachesi (1996).

16. Bonet (1994) claims that only clitic languages show the weak version of the PCC. Agreement languages always have the strong version of the PCC. If she is right and if Riedel

(2009) is right, then Bantu languages have clitics, not agreement markers (for discussion, see Anagnostopoulou 2014b).

17. The degree of φ-specification of probes has been argued to be a possible locus of variation among languages by Bejar (2003) and work building on her; see for example Bejar and Rezac (2009).

18. An anonymous reviewer asks whether the generalization in (56) makes sense in view of recent claims that there are no true object agreement languages (Woolford 2010; Nevins 2011). The point is well-taken, but I am not convinced that the most important criterion proposed by Nevins (2011) to distinguish object agreement markers from object clitics, namely tense invariance, is a solid criterion for clitics versus agreement markers. Assuming that object agreement is parasitic on a lower head than Tense (e.g. Voice or Aspect), we would rather expect true object agreement markers to co-vary with Voice or Aspect rather than Tense, unlike subject agreement which predictably co-varies with Tense. See Anagnostopoulou (2014b; 2015) for some discussion.

19. As far as I can see, the accounts presented in section 4 would be able to deal with Weak PCC languages if they admitted Multiple Agree as a parametric option, following Anagnostopoulou (2005). It is still not easy to account for Me-First effects and Ultrastrong PCC effects, though.

20. Note that multiple object shift is problematic for this proposal (see Baker (2011, fn. 9) on this).

21. A stipulation like (74) might perhaps make more sense if multiple EPP features were linked to multiple Agree features in the spirit of Anagnostopoulou's (2005) division between Split Agree and Multiple Agree languages. But such a move would reintroduce the notion of competition between two arguments.

22. For well-formed clusters with two third-person clitics, she assumes two possible derivations. In the first one, the two arguments are licensed by one and the same 3P head. She assumes that the two clitics form a cluster by adjoining to one another (Terzi 1999; Ordóñez 2002) and then move as a unit to license their third-person feature against the 3P head. Alternatively, there is recursion of the 3P head, and the two clitics move to two distinct 3P heads: the IO argument (*gli*) moves to the higher one, and the DO (*lo*) to the lower one, with crossing chains. The idiolectal variation in the co-occurrence of a first- and a second-person clitic is reduced to the different way in which SAP features are projected in the functional structure. This variation is allowed by the fact that Universal Grammar does not determine a fixed relative ranking between the Speech Act Participants, whereas it universally ranks them above third person.

23. The combination of 3 > 1 from Haya (Duranti 1979) needs to be further investigated. Riedel (2009) based on her own fieldwork has come to the conclusion that many Bantu languages show Weak PCC effects (contra Duranti (1979), who claimed that they show Strong PCC effects). Moreover, Haya seems to qualify as a symmetric double object language (Riedel 2009), and symmetric double object languages are predicted by Anagnostopoulou (2003) to lack PCC effects.

24. These were Uli Sauerland, Kleanthes Grohmann, Susi Wurmbrand, Winfried Lechner, Florian Schaefer and Gereon Mueller, Susann Fisher, Kirsten Gengel, and Eva Forster (the last two via personal communication to Susann Fisher). The German informants consulted are native speakers of several dialects of German (e.g. Austrian, Franconian, and Swabian) as well as Standard German. Austrian German speakers generally do not have PCC effects, but they also do not have a strict DO > IO serialization requirement for Wackernagel pronouns.

25. I owe the last thought to David Pesetsky (written comments on Anagnostopoulou (2008), summer 2009).

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