ON REACHING AGREEMENT EARLY (AND LATE) [*]

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Many languages constrain how arguments may combine based on their person or animacy. Chung (1998, 2012) argues that such person-animacy effects in Chamorro have a morphological source, arising from language-specific constraints on pronunciation. I explore whether such an account can be extended to certain person-animacy effects in Santiago Laxopa Zapotec, in particular one pattern that parallels the "Ultrastrong" Person Case Constraint (Nevins 2007). While the morphological account that Chung proposes may be appropriate for Chamorro, I argue that a syntactic account is necessary for this person-animacy effect.

1.   The grammatical source of person-animacy effects

To what extent, if at all, do morphological patterns reflect deeper syntactic relations? Chung (1998, 2012, 2013) has argued that, at least for verb agreement, they need not. While morphological agreement might parallel the effects of a syntactic operation like Agree, it is, in principle, independent. An important argument comes from certain restrictions on the person or animacy of arguments in Chamorro. A direct object cannot be higher on the hierarchy in (1) than the subject.

(1)   *The person-animacy hierarchy in Chamorro*
        2 > 3 animate pronoun > 3 animate non-pronoun > 3 inanimate   (Chung 1998:34)

Chung argues that this person-animacy effect has a morphological source. Chamorro lacks a pronunciation for verbal agreement that corresponds to the prohibited combinations of arguments.

Many languages exhibit person-animacy effects. In Santiago Laxopa Zapotec (SLZ), it is not possible for the direct object to be first or second person when the subject is third person, if both are pronominal clitics. [1]

(2) a.   Ba   betw**=a'=ba'**.
         already   hit.COMP**=1SG=3SG.INF**
         'I already hit her/him.' (FA, GZYZ011-s, 19)   *1 > 3*
    b.   *Ba   betw**=ba'=a'**.
         already   hit.COMP**=3SG.INF=1SG**
         Intended: 'S/he already hit you.' (RM and FA, GZYZ015, 6:17)   *3 > 1*

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[1] The abbreviations used here are: ANIM = animal, COMP = completive aspect, CONT = continuative aspect, DUB = dubitative, FOR = formal, INAN = inanimate, INF = informal, SG = singular.

(3) a. Ba   betw**=o'=ba'**.
         already   hit.COMP**=2SG=3SG.INF**
         'You already hit him.' (FA and RM, GZYZ015, 7:00)   *2 > 3*
    b. *Ba   betw**=ba'=o'**.
         already   hit.COMP=**3SG.INF=2SG**
         Intended: 'S/he already hit you.'(RM and FA, GZYZ015, 7:07)   *3 > 2*

This resembles the Person Case Constraint, familiar from many Romance languages, which in its weak version prohibits the direct object from being third person when the indirect object is local (first or second) person (Perlmutter 1968, Bonet 1991).

      There are many theories of the Person Case Constraint. Most are syntactic (Anagnostopoulou 2003, Béjar and Rezac 2003, 2009, Adger and Harbour 2007, Nevins 2007, 2011, a.o.), though some are morphological (Bonet 1991, Sturgeon et al. 2012). After providing some background on Santiago Laxopa Zapotec in Section 2, I identify three person-animacy restrictions on pronominal clitic combinations between subjects and direct objects in Section 3. One of these patterns parallels what Nevins (2007) calls the "Ultrastrong" Person Case Constraint.

      In Section 4, I explore a morphological account of this pattern, inspired by Chung's (1998, 2012) proposal for person-animacy effects in Chamorro. However, as I show in Section 5, the behavior of pronominal clitics with ditransitive verbs reveals that SLZ cannot simply lack pronunciations for the ill-formed combinations. A syntactic account along the lines advanced in Section 6–7 can derive the person-animacy effects with monotransitives, as well as their absence with ditransitives. As I conclude in Section 8, it may not be so surprising that these effects have a morphological source in Chamorro, but a syntactic one in SLZ.

2.   A brief introduction to Zapotec grammar

The Zapotec languages comprise one branch of the Oto-Manguean language family. I present data from Guiloxi and Yalina Zapotec, two mutually intelligible varieties spoken in the southeastern Sierra Norte mountains of Oaxaca. While they differ from one another in some aspects of their phonology and morphology, they exhibit the same person-animacy effects. I will refer to them as a group by a hypernym, Santiago Laxopa Zapotec (SLZ), following the classification of the *Instituto Nacional de Lenguas Indígenas* (http://www.inali.gob.mx/clin-inali/).[2]

      Like other Zapotec varieties, SLZ has basic verb-subject-object word order. When arguments follow the verb, they are rigidly ordered.

(4)   Dzutw   **nu'ule'en bene' xjage'en.**
        hit.CONT   **woman**   **person man**
        'The woman is hitting the man.' (FSR, SLZ57a-s, 1)
        Not possible: 'The man is hitting the woman.'

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[2]The *Instituto Nacional de Lenguas Indígenas* includes the Guiloxi and Santiago Laxopa varieties in the same dialect area, though the Yalina variety is grouped with *zapoteco serrano del sureste medio*. Impressionistically, all three varieties are close enough to form a single group. Nearly all the data in the paper comes from the Guiloxi and Yalina varieties, and I verified the data in Section 3 with a speaker from Santiago Laxopa proper.

Arguments are cross-referenced on the verb with pronominal clitics, or "syntactically dependent" pronouns in Marlett's (1993) terms.

(5)   Bdel**=e'=ba'.**
        hug.COMP**=3SG.FOR=3SG.INF**
        'S/he (e.g. an elder) hugged her/him (e.g. a non-elder).' (FA, GZYZ012-s, 19)

The full inventory of pronouns in SLZ is provided in Table 1. Alongside the clitics, there are also independent pronouns. Neither set is restricted by grammatical relation.

	INDEPENDENT	CLITICS
1sg.	*neda' (nada')*	=a'
2sg.	*lé'*	=o'
3sg. formal	*lè'*	=e'
3sg. informal	*leba'*	=ba'
3sg. animal	*leb*	=(e)b(a)
3sg. inanimate	*len*	=(e)n

Table 1: Independent and clitic pronouns (singular only) in Santiago Laxopa Zapotec.

At first glance, the clitic pronouns appear to be themselves arguments, since they are in complementary distribution with R-expressions.

(6)   Ba   bdel**(*=ba')**   **bidao' ni**   Pedro.
        already   hug.COMP**=3SG.INF**   **child   this**   Pedro
        'This child already hugged Pedro.' (FA and RM, GZYZ014, 27:09)

But, as Kalivoda (2015) observes for Teotitlán del Valle Zapotec, independent pronouns in subject position must be doubled by a clitic. The same is true in SLZ, but with one difference. Only local person independent pronouns must be doubled (7). All third person independent pronouns are, by contrast, in complementary distribution with a clitic (8).

(7) a. Tzxizh***(=a')**   **neda'**.
        laugh.CONT **=1SG 1SG**
        'I am laughing.' (FA and RM, GZYZ013, 5:27)
   b. Tzxizh***(=u')**   **lé'**.
        laugh.CONT**=2SG   2SG**
        'You are laughing.' (FA and RM, GZYZ013, 6:07)
(8) a. Ba   shtas(***=e'**)   **lè'**.
        already   sleep.CONT**=3SG.FOR 3SG.FOR**
        'S/he is sleeping.' (FA and RM, GZYZ014, 47:53)
   b. Ba   bdel(***=ba'**)   **leba'**   beku'.
        already   hug.COMP**=3SG.INF   3SG.INF**   dog
        'S/he already hugged the dog.' (RM and FM, GZYZ013, 11:35)
   c. Shtas(***=b**)   **leb**.

sleep.CONT**=3SG.ANIM**   **3SG.ANIM**
'It (an animal) is sleeping.' (RM and FA, GZYZ013, 10:48)
  d. Ba   bzxup(*=en)   **len**.
      already   fall.COMP**=3SG.INAN** **3SG.INAN**
      'It fell.' (RM and FA, GZYZ014, 49:55)

Kalivoda proposes the pronominal clitics arise through clitic doubling, driven by a probe bearing an unvalued person feature (cf. Béjar and Rezac 2003, Preminger 2014). In his system, R-expressions lack person features entirely, so that they never Agree and hence are never doubled. Independent pronouns, by contrast, possess the relevant features. When the probe Agrees with them, it copies their entire ϕ-feature bundle, including person (π) and number (#) features.

(9) a. *R-expression*
      [π:] . . . DP
                 [#:**α**]
   b. *Independent pronoun*
      [π:] . . . DP
                $\begin{bmatrix} \pi{:}\boldsymbol{\beta} \\ \#{:}\boldsymbol{\alpha} \end{bmatrix}$

This account can be extended to SLZ by treating the third person independent pronouns just like R-expressions, as lacking π-features altogether. However, since third person pronominal clitics do show up when there is no overt argument (8), there would have to be a corresponding null pronoun for each independent third person pronoun that possessed the relevant π-features.[3] While this nonuniformity is unappealing, it is a familiar problem (McCloskey and Hale 1984).

The verb can bear a clitic cross-referencing the direct object as well, as long as a subject clitic is present. A direct object cannot encliticize across an R-expression, across a trace of the subject, or onto the subject itself, as is possible in other Zapotec languages (Marlett 1993).

(10) a. Bdel**=ba'=ba**.
       hug**=3SG.INF=3SG.ANIM**
       'S/he hugged it.' (RM, GZYZ012-s, 23)
    b. *Bdel**=b**   **Maria**.
       hug**=3SG.ANIM**   **Maria**
       Intended: 'Maria hugged it.' (FA and RM, GZYZ012, 24:55)
    c. *No₁   bet t₁ **=eb**?
       who   hit   **=3SG.ANIM**
       Intended: 'Who hit it?' (RM and FA, GZYZ013, 3:34)
    d. *Bdel **Maria=b**.

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[3]The probe cannot simply be endowed with an unvalued [participant] feature, as this would make all clitic doubling with third person pronouns impossible, including null ones. Instead, third person clitics could be actual arguments. Despite their paradigmatic relationship to other clitics, they originate in an argument position and encliticize onto the verb. The person-animacy effects in Section 3 suggest the account in the text might be on the right track.

hug   Maria**=3SG.ANIM**
Intended: 'Maria hugged it.' (RM and FA, GZYZ013, 4:40)

Unlike subject clitics, direct object clitics are always in complementary distribution with an overt argument, regardless of whether it is an independent pronoun or an R-expression.

3.   Person-animacy effects

Subject and direct object clitics exhibit specific cooccurrence restrictions. For instance, as shown in (11), if the subject clitic is local person, the object clitic must be third person (b–e). A first or second person object can only be realized as an independent pronoun (a).

(11) a. Ba   betw**=a'**   **lé'**.
       already   hit.COMP**=1SG 2SG**
       'I already hit you.' (RM, GZYZ011-s, 18)
   b. Ba   betw**=a'=ne'**.
       already   hit.COMP**=1SG=3SG.FOR**
       'I hit her/him (e.g. an elder).' (FA, GZYZ011-s, 16)
   c. Ba   betw**=a'=ba'**.
       already   hit.COMP**=1SG=3SG.INF**
       'I hit her/him (e.g. a child).' (RM, GZYZ011-s, 19)
   d. Betw**=a'=ba**.
       hit.COMP**=1SG=3SG.ANIM**
       'I hit it (an animal).' (RM, GZYZ011-s, 20)
   e. E   wak=e'   gaw**=a'=n**?
       Q   happen.DUB=3SG.FOR eat**=1SG=3SG.INAN**
       'Can I eat it (a thing)?' (RM and FA, GZYZ011, 1:34:06)

The full paradigm of subject and direct object clitic combinations is shown for singular clitics in Table 1. The colored shading, which highlights three important patterns in the data, will be described shortly. There are also local person plural clitics that are not shown for reasons of space.

		DIRECT OBJECT				
		1sg./2sg.	3sg. formal	3sg. informal	3sg. animal	3sg. inanimate
	1sg.	*	=a'=ne'	=a'=ba'	=a'=ba	=a'=n
	2sg.	*	=o'=ne'	=o'=ba'	=o'=b	=o'=n
	3sg. formal	*	*/=e'=ne'⁴	=e'=ba'	=e'=b	=e'=n
SUBJECT	3sg. informal	*	=ba'=ne'	*	=ba'=ba	=ba'=n
	3sg. animal	*	*	*	*	=b=en
	3sg. inanimate	*	*	*	*	*

Table 2: Subject and direct object pronominal clitic combinations in Santiago Laxopa Zapotec.

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⁴ This is, in fact, a point of variation. The speaker from Yalina allows the combination of two formal pronominal clitics, while the speakers from Santiago Laxopa and Guiloxi do not.

There are three striking patterns here. First, as shown in (11) above and by the ungrammaticality of the combinations in blue, the direct object clitic must be third person.

(12)   In monotransitive clauses, a pronominal clitic cross-referencing the direct object must be third person.

This mirrors the "Strong" Person Case Constraint, which rules out in some Romance languages a local person direct object clitic in ditransitives (Perlmutter 1968:160, Bonet 1991:182).

Second, as shown by the ungrammaticality of the combinations in green, SLZ prohibits the subject and direct object clitics from having the exact same featural specification, if they are both third person.

(13)   In monotransitive clauses, if the subject and direct object pronominal clitics are both third person, they may not have exactly the same featural specification.

This effect resembles the ban in Spanish on any combination of third person indirect and direct object clitics: *lo le, *lo les, etc. (Perlmutter 1968:140). In SLZ, the relevant constraint is more specific, as just the combinations identical in animacy and formality are banned.

Finally, there is a *relative* constraint on subject and direct object clitics, which can only be seen when both are third person, due to the constraint in (12). As shown by the ungrammaticality of the combinations in pink, the direct object cannot be more animate than the subject.

(14)   In monotransitive clauses, the direct object clitic must not outrank the subject on the person-animacy hierarchy.

This parallels the "Ultrastrong" Person Case Constraint, which in Romanian and Classical Arabic prevents a direct object clitic from outranking an indirect object clitic on a person hierarchy: $1 > 2 > 3$ (Nevins 2007:297–298).

The relevant person-animacy hierarchy for SLZ is given in (15). Local persons are included for completeness, though strictly speaking they need not be included, as there are no first or second person direct object clitics.

(15)   *The person-animacy hierarchy in Santiago Laxopa Zapotec*
        $1, 2 > 3$ human > 3 animal > 3 inanimate

This hierarchy differs from the one for Chamorro in some crucial ways. It creates a more fine-grained division of third person along a scale of animacy: human vs. animal vs. inanimate. There is also no reference to pronouns, as it solely regulates the combination of pronominal clitics.

4.   A Chungian account

Moving forward, I leave the first two patterns above aside to seek an account for just the last pattern. Inspired by Chung's (1998, 2012) work on Chamorro, what would a morphological account of the generalization in (14) look like?

Within one realizational theory of morphology, Distributed Morphology, it is not easy to understand why the combinations of pronominal clitics in (16) and (17) are ungrammatical.

(16) a. *Bdi'in=**b**=**ne'**.
　　　 bite.COMP=**3SG.ANIM**=**3SG.FOR**
　　　 Intended: 'It bit her/him.' (RM, GZYZ014, 32:38)　　　　　　　 *3 animal > 3 human*
　　 b. *Bdi'in=**ba**=**ba'**.
　　　 bite.COMP=**3SG.ANIM**=**3SG.INF**
　　　 Intended: 'It bit her/him.' (RM, GZYZ014, 33:30)　　　　　　　 *3 animal > 3 human*
(17) a. *Betw=**en**=**ne'**.
　　　 hit.COMP=**3SG.INAN**=**3SG.FOR**
　　　 Intended: 'It hit her/him.' (RM and FA, GZYZ014, 42:21)　　　 *3 inanimate > 3 human*
　　 b. *Betw=**en**=**ba'**.
　　　 hit.COMP=**3SG.INAN**=**3SG.INF**
　　　 Intended: 'It hit her/him.' (RM and FA, GZYZ014, 42:54)　　　 *3 inanimate > 3 human*
　　 c. *Bxizh=**en**=**eb**.
　　　 strike.COMP=**3SG.INAN**=**3SG.ANIM**
　　　 Intended: 'It struck it.' (RM and FA, GZYZ016, 2:15)　　　　　 *3 inanimate > 3 human*

It is possible for a more specific vocabulary item to block the insertion of more general vocabulary items (Halle and Marantz 1993:120). But to derive the ill-formedness of these combinations, it would be necessary for a vocabulary item—really, for any vocabulary item—to fail to insert in contexts more specific than its featural specification require.

　　To account for the Person Case Constraint in some Romance languages, Bonet (1991:78–128) proposes a rule of impoverishment, which would eliminate the features that offend the constraint in (14). This would predict incorrectly, however, that the ungrammatical combinations could be repaired by simply omitting one of clitics. Rather, the object must be realized as an independent pronoun.

(18) a. Bdi'in=**b**　　　　　　**lè'**.
　　　 bite.COMP=**3SG.ANIM**　**3SG.FOR**
　　　 'It bit her/him.' (RM, GZYZ014, 32:37)
　　 b. Bdi'in=**b**　　　　　　**leba'**.
　　　 bite.COMP=**3SG.ANIM**　**3SG.INF**
　　　 'It bit her/him.' (RM, GZYZ014, 33:32)

For the ungrammaticality of (16)–(17) to arise through competition, pronominal clitics would have to stand in a blocking relationship with independent pronouns (Bonet 1991:201–209, Cardinaletti and Starke 1999). I do not see how this can be if independent pronouns and pronominal clitics pronounce distinct feature bundles (see also Nevins 2011:948 and Rezac 2011:114–133).

　　Chung (1998:199–205, 2012:186–187) takes a different approach, countenancing realizational rules that can filter syntactic representations through the satisfaction of their featural specification. In other words, she allows for rules whose outputs are not a morphological formative (a), but a diacritic indicating ill-formedness (b–d).

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    b. [–participant]_{subj},

 *   3 > 2*

    c. [–pronoun]_{subj},

 *   non-pronoun > 3 animate pronoun*

    d. [–animate]_{subj}

 *   inanimate > animate*

<div align="right">(Chung 2012:187)</div>

Once the features of both subject and direct object have been copied onto a functional head—whether through Agree or through a purely morphological operation—these rules fail to produce a well-formed output for that head, deriving the ungrammatical combinations of arguments.

      Of course, in SLZ, it is not combinations of arguments that are ruled out, but rather combinations of clitics. In addition, each clitic realizes a distinct feature bundle—that is, they are not portmanteaux—with the same pronunciation (for the most part) regardless of grammatical relation. Nonetheless, it is possible to formulate a set of realizational rules that derives the ungrammatical combinations of clitics in (16)–(17).

=(n)e'
=ba'
* / ___ [–participant, +animate, +human]
=(e)b(a)
* / ___ [–participant, +animate]
=(e)n

While human pronominal clitics have just one realizational rule (a–b), the other pronominal clitics have an additional rule (c, e) that produces an ill-formed result if they occur before a clitic higher on the person-animacy hierarchy.[5]

5.   A syntactic alternative

What would a syntactic account of these facts look like instead? There are numerous theories of the Person Case Constraint that could be extended to SLZ, and I cannot do justice to them all here (see Anagnostopoulou 2003, Béjar and Rezac 2003, 2009, Nevins 2007, 2011, a.o.). Instead, I simply demonstrate that Nevin's account using Multiple Agree is possible. An account based on Cyclic Agree might also be possible (Walkow 2014).

      Nevins (2007, 2011) proposes that the various versions of the Person Case Constraint arise as a type of intervention. His account builds on two core assumptions. First, a probe bearing an unvalued feature can Agree with multiple goals bearing a matching feature simultaneously (Hiraiwa 2001). Second, probes can be further relativized, so that they search for a specific value

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[5]Either these clitics are all strictly adjacent to one another, because they have moved into this position in the syntax, or the contextual restriction of the rules in (20) are relativized to clitics (Toosarvandani 2016).

of a feature. Based on this, relativization constraints, such as Contiguous Agree in (21), can be imposed on the Agree relation.

(21) *Contiguous Agree* (Nevins 2007:295)
      For a relativization R of a feature F on a probe P, and $x \in Domain(R(F))$, $\neg \exists y$, such that $y > x$ and $p > y$ and $y \notin Domain(R(F))$.

Contiguous Agree requires that no goal intervene between the probe and a goal matching its relativization that does not also match the relativization of the probe.

    Following Kalivoda (2015), I assume that the pronominal clitics realize a π-probe on T, which Agrees with every argument in the clause. These Agree relations are established, as Nevins proposes, simultaneously.

(22)
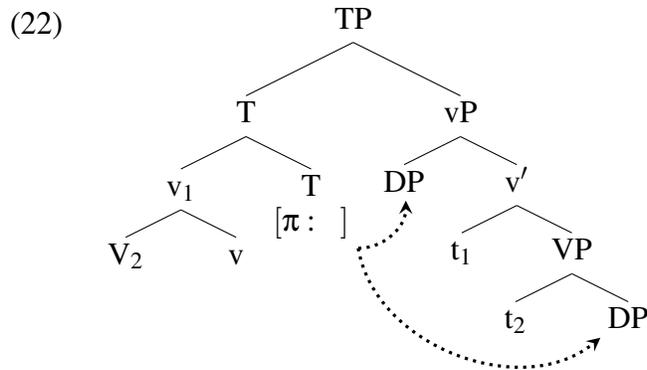
While the probe searches for π-features, it copies the entire φ-feature bundle of any DP it Agrees with, producing clitic doubling (Béjar and Rezac 2003, Preminger 2014). As Kalivoda proposes, some DPs do not have π-features, in which case they do not trigger clitic doubling (or trigger any person-animacy effects). In addition to R-expressions, independent third person pronouns that are phonologically overt would not possess π-features in SLZ.

    The forbidden combinations of third person pronominal clitics are ruled out by relativizing T to the marked values of two features: [+animate] and [+human]. To see why, consider the featural specifications for each combination:

(23) a. *3 human > 3 animal*
        [–participant, **+animate, +human**] > [–participant, **+animate**, –human]
     b. *3 animal > 3 inanimate*
        [–participant, **+animate**, –human] > [–participant, –animate]
     c. **3 animal > 3 human*
        [–participant, **+animate**, –human] > [–participant, **+animate, +human**]
     d. **3 inanimate > 3 human*
        [–participant, –animate] > [–participant, **+animate, +human**]
     e. **3 inanimate > 3 animal*
        [–participant, –animate] > [–participant, **+animate**, –human]

For the well-formed combinations, every goal bearing [+animate] is not c-commanded by another goal bearing [–animate] (a–b), and every goal bearing [+human] is not c-commanded by another goal bearing [–human] (a). By contrast, for the ill-formed combinations, there is such an intervening goal for either the [+animate] feature (d–e) or the [+human] feature (c).

6.   Testing a prediction

It is possible, I think, to choose between these morphological and syntactic accounts of person-animacy effects in SLZ. The morphological account predicts that there should be *no syntactic context* where the illicit combinations of pronominal clitics are allowed, as their ungrammaticality is conditioned solely by the featural identity of the following clitic. By contrast, the syntactic account, which refers to the relative hierarchical position of goals, could in principle allow for these combinations in the right syntactic configuration.

The prediction the morphological account makes is not borne out. There is at least one syntactic environment where the ungrammatical combinations of pronominal clitics are attested. With ditransitives, the indirect object can be cross-referenced by a pronominal clitic on the verb. It has the same form as subject and direct object clitics and is located invariantly between them.

(24) a. Ba   bia**=a'=ba'=ba**.
        already   give.COMP**=1SG=3SG.INF=3SG.ANIM**
        'S/he already gave it (an animal) to her/him.' (RM and FA, GZYZ014, 1:19:19)
    b. *Ba   bi**=a'=ba=ba'**.
        already   give.COMP**=1SG=3SG.ANIM=3SG.INF**
        Intended: 'S/he already gave it (an animal) to her/him.' (RM and FA, GZYZ015, 41:24)

While I do not show this here, the Strong Person Case Constraint remains in effect between subject and indirect object clitics, as well as between direct and indirect object clitics.

However, the Ultrastrong Person Case Constraint—which, it might be expected, would prohibit a direct object clitic from outranking the indirect object clitic on the person-animacy hierarchy—is lifted. The grammatical combinations in (26) are the same ones that are ill-formed in (16) above. They form minimal pairs with the combinations in (25).

(25) a. Ba   blo'ed=a'**=ne'=b**.
        already   show.COMP=1SG**=3SG.FOR=3SG.ANIM**
        'I already showed it to her/him.' (RM and FA, GZYZ015, 49:45)
    b. Ba   bi=a'**=ba'=b**.
        already   give.COMP=1SG**=3SG.INF=3SG.ANIM**
        'I already gave it to her/him.' (RM and FA, GZYZ014, 1:19:19)   *3 human > 3 animal*
(26) a. Ba   blo'ed=a'**=b=ne'**.
        already   show.COMP=1SG**=3SG.ANIM=3SG.FOR**
        'I already showed her/him to it' (RM and FA, GZYZ015, 48:35)
    b. E   blo'ed=o'**=ba=ba'**?
        Q   show.COMP=2SG**=3SG.ANIM=3SG.INF**
        'Did you show her/him to it?' (RM and FA, GZYZ015, 1:02:00)   *3 animal > 3 human*

The complete paradigm of indirect and direct object clitic combinations is given in Table 3.[6]

			DIRECT OBJECT			
		1sg./2sg.	3sg. formal	3sg. informal	3sg. animal	3sg. inanimate
	1sg.	*	*	*	*	*
	2sg.	*	*	*	*	*
INDIRECT	3sg. formal	*	*	=*ne'*=*ba'*	=***ne'*=*b***	=*ne'*=*n*
OBJECT	3sg. informal	*	=*ba'*=*ne'*	*	=***ba'*=*b***	=*ba'*=*n*
	3sg. animal	*	=***b*=*ne'***	=***ba*=*ba'***	*	*
	3sg. inanimate	–	–	–	–	–

Table 3: Indirect and direct object pronominal clitic combinations in Santiago Laxopa Zapotec.

It remains to be seen how a syntactic account might deal with these facts. But they clearly suggest a morphological account is not tenable for the Ultrastrong Person Case Constraint in SLZ.

7.   Toward a syntactic account of ditransitives

While I cannot offer a complete account here for the behavior of pronominal clitics in ditransitives, I would like to point to some facts suggesting that a syntactic account is on the right track.
      The underlying structure of ditransitives in SLZ is not entirely clear. But there is some evidence that the indirect object originates closer to the verb than the direct object. At least one verb, -*e* 'give', exhibits suppletion that is dependent on the person of the goal, as shown in (27): *ben* for local persons (a–b) and *be* for third person (c).

(27) a. Ba   **ben**=ba'   **nada'** beku'.
        already   **give.COMP**=3SG.INF   **1SG**   dog
        'Maria already gave the dog to me.' (RM, GZYZ015-s, 7)
      b. Ba   **ben**=ba'   **lé'**   beku'.
        already   **give.COMP**=3SG.INF   **2SG**   dog
         'S/he already gave the dog to you.' (RM, GZYZ015-s, 6)
      c. Ba   **be**=ba'   **leba'**   beku'.
        already   **give.COMP**=3SG.INF   **3SG.INF**   dog
        'S/he already gave the dog to her/him.' (RM, GZYZ015-s, 8)

It is absolutely ungrammatical for a local person indirect object to occur with *be*, or correspondingly a third person indirect object with *ben*.

(28) a. *Ba   **be**=ba'   **lé'**   beku'.
        already   **give.COMP**=3SG.INF   **2SG**   dog
        Intended: 'S/he already gave the dog to you.' (FA, GZYZ015, 31:49)

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[6]The combinations with an inanimate indirect object are not given, since I was not able to identify a verb for which this was permitted semantically.

b. *Ba   **ben**=ba'   **leba'**   beku'.
    already   **give.COMP**=3SG.INF   **3SG.INF**   dog
    Intended: 'S/he already gave the dog to her/him.' (RM and FA, GZYZ015, 32:15)

This kind of allomorphy must be subject to a locality constraint of some kind, since not just any element can condition suppletion of the verb. It might, for instance, be conditioned strictly locally (Bobaljik and Harley 2013).

(29)   *Strict Locality* (Bobaljik and Harley 2013:10)
        β may condition the insertion of α in (a), but not (b):
        (a) β … [$_{x^0}$ … α
        (b) *β … [$_{x^n}$ … α where $n > 0$

Under this view, the indirect object would have to merge as the sister of the verb in order to condition its suppletion.[7] The direct object could then merge as the verb's specifier.

    Crucially, the order of clitics, which is fixed, does not reflect this underlying order. This is true across languages in general. Even between closely related languages, there can be variation in the order of clitics, suggesting that this is an idiosyncratic, purely morphological property of languages (Bonet 1995, Miller and Sag 1997). There have been some attempts, though, to derive clitic ordering in individual languages from general grammatical principles (Grimshaw 2001, Sturgeon et al. 2012).

    While the position of the direct and indirect objects may not matter for the linear order of pronominal clitics, it does matter, under the syntactic account, for the conditions on Agree. Recall that Contiguous Agree in (21) prohibits the highest goal bearing a feature matching the relativization of the probe from being c-commanded by an intervening goal with a different value. As a consequence, the Ultrastrong Person Case Constraint should only arise in ditransitives if the indirect object *invariantly* asymmetrically c-commands the direct object.

    So, where do direct and indirect objects occur in SLZ? In terms of linear order, they are freely ordered (see also Sonnenschein 2004:156–157 on the closely related Zoogocho variety).

(30) a. Ba   be   Maria **beku' bidau' ni**.
      already   give.COMP Maria **dog   child   this**
      'Maria gave the dog to this child.' (RM and FA, GZYZ015, 18:13)
    b. Ba   be   Maria **bidau' ni   beku'**.
      already   give.COMP Maria **child this   dog**
      'Maria gave the dog to this child.' (RM and FA, GZYZ015, 18:46)

I take this to mean that the indirect object can undergo optional movement to some position above the direct object. This configuration gives rise to the combination in (25), where the indirect object clitic is located higher on the person-animacy scale than the direct object clitic.

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[7] Even if the locality condition on verb suppletion were loosened somewhat (Toosarvandani 2016), the indirect object would have to be located closer to the verb than the direct object.

(31)   TP   = (25)

Tree (31):
- TP
  - T
    - v_1
      - V_2
      - v
    - T $[\pi: \ ]$
  - vP
    - DP_S
    - v′
      - t_1
      - FP
        - DP_{IO} $\begin{bmatrix} +\textbf{animate} \\ +\textbf{human} \\ \pm\text{formal} \end{bmatrix}$
        - F′
          - F
          - VP
            - DP_{DO} $\begin{bmatrix} +\textbf{animate} \\ -\text{human} \end{bmatrix}$
            - V′
              - t_2
              - t_{IO}
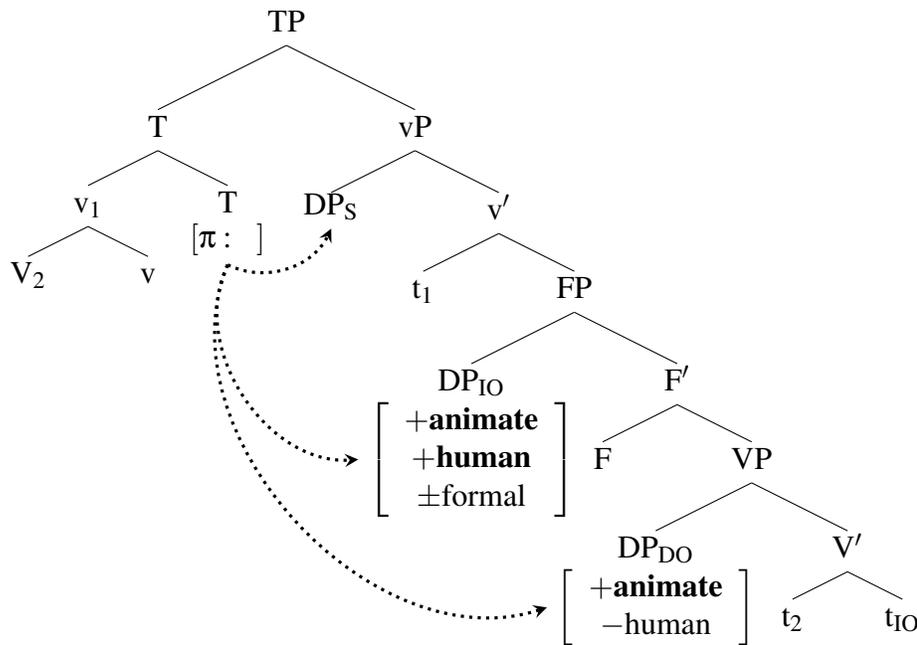
Though the indirect object merges below the direct object, it raises, so that the direct object does not intervene between it and the probe. It can thus possess the [+human] feature the probe is relativized to, despite the direct object bearing the [–human] feature.

    The opposite order of the same clitics in (26)—the order that appears to violate the Ultrastrong Person Case Constraint—arises when the indirect object does not move.

(32)   TP   = (26)

Tree (32):
- TP
  - T
    - v_1
      - V_2
      - v
    - T $[\pi: \ ]$
  - vP
    - DP_S
    - v′
      - t_1
      - VP
        - DP_{DO} $\begin{bmatrix} +\textbf{animate} \\ +\textbf{human} \\ \pm\text{formal} \end{bmatrix}$
        - V′
          - t_2
          - DP_{IO} $\begin{bmatrix} +\textbf{animate} \\ -\text{human} \end{bmatrix}$
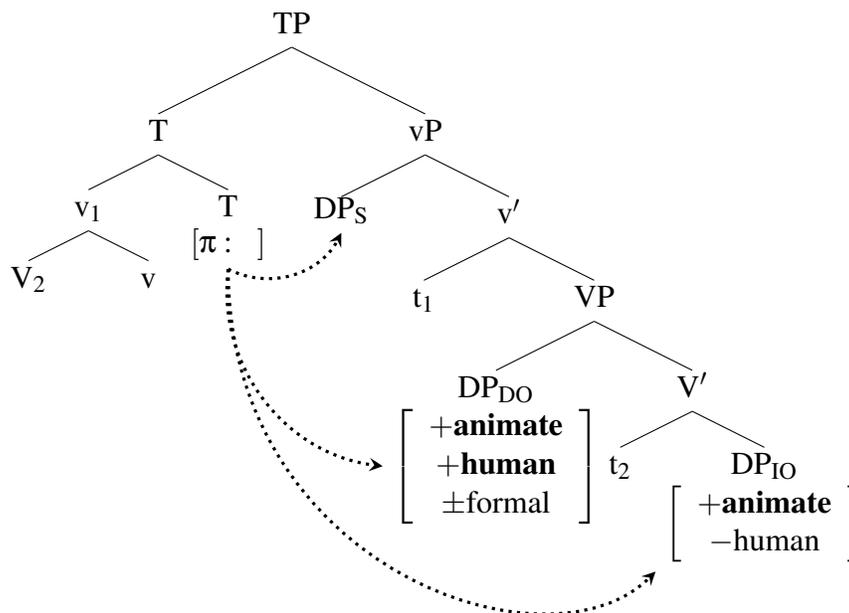
Now the direct object clitic can be located higher on the person-animacy scale than the indirect object clitic without violating Contiguous Agree.

8. Conclusion

While some person-animacy effects can be attributed to morphological constraints, some must, I have argued, arise from syntactic principles. In particular, the Ultrastrong Person Case Constraint in SLZ, which restricts the possible combinations of third person subject and direct object clitics, requires a syntactic account, possibly along the lines that Nevins (2007, 2011) proposes. This is necessary because the constraint is lifted in ditransitives: there are no restrictions between third person indirect and direct objects.

This result might not be particularly surprising if "today's morphology is yesterday's syntax" (Givón 1971:431). We should find similar patterns, which have a morphological source in one language and a syntactic source in another. What is interesting here is not this general finding, but rather that it is possible to discern where person-animacy effects come from in individual languages. While they have a morphological source in Chamorro, as Chung proposes, they have a syntactic source in SLZ.

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