

PRONOUNS AND ATTRACTION IN SIERRA ZAPOTEC*

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Abstract Many languages have clitic or weak pronouns, which are displaced from their base argument position. What causes these pronouns to move, and what does pronoun movement have to tell us about displacement, more generally? We examine two classes of pronouns in Sierra Zapotec, which exhibit a distributional asymmetry: while clitic pronouns are perfectly grammatical without an accompanying independent pronoun, an independent pronoun often requires an accompanying clitic. We explore to what extent this asymmetry can be attributed to a theory in which pronoun movement is triggered by the properties of a functional head, as in an attraction theory of movement. This investigation provides a new perspective on the structural and derivational relationships between pronominal classes, as well as between classes of nominal arguments.

1 WHY DO PRONOUNS MOVE?

In many languages, pronouns regularly fail to surface in the same position as non-pronominal arguments (henceforth, *full DPs*). In one famous case, object shift in Scandinavian, a weak pronoun is obligatorily displaced, when certain conditions are met (1). In other languages, such as French, an independent pronoun must be doubled by a clitic, which itself is obligatorily displaced (2).

(1) *Object shift (Danish)*

- a. Du husker **ham** sikkert ikke.
you remember **him** probably not
'You probably don't remember him.'
- b. *Du husker sikkert ikke **ham**.
you remember probably not **him** (Mikkelsen 2011: 232–233)

(2) *Clitic doubling (French)*

- a. Jean **me** connaît (**moi**).
Jean **me** knows **me**
'Jean knows me.'

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b. *Jean connaît {**me**, **moi**}.

Jean knows **me**, **me**

(Kayne 2000: 163–164)

Why is this? What is the trigger for pronoun movement, and what can we learn about displacement, more generally, from it?

While pronoun movement is a widespread phenomenon, it has been studied most extensively in Romance and Germanic. Our focus here will be on pronoun movement in Sierra Zapotec, a group of Zapotec varieties from the southeastern Sierra Norte of Oaxaca, Mexico.¹ Clitic pronouns cannot occur in an argument's base position, only in a designated position immediately following the verb.

(3) *Sierra Zapotec*

Shtahs=**a'** (**nada'**).

sleep.CONT=**1SG 1SG**

'I am sleeping.'

(FA/RM, GZYZ051, 51:24)

Sierra Zapotec also has independent pronouns, which are not obligatorily displaced (though they are, under certain conditions, doubled by a clitic).

The behavior of these two classes of pronouns finds a parallel in other languages. In French, as in (2) above, the clitic must move, while an independent pronoun can stay in an argument's base position. In Scandinavian, the division is, at least superficially, into non-stressed pronouns, which must move, as in (1) above, and stressed pronouns which need not move, as in (4).

(4) *Danish*

...men du husker sikkert ikke **HAN**.

but you remember probably not **him**

'...but you probably don't remember HIM.'

(Mikkelsen 2011: 233)

Based on facts like these, a substantial line of work has emerged that takes pronoun movement to be driven by what Chomsky (1993) calls "greed" (Roberts and Shlonsky 1996; Cardinaletti and Starke 1999; Holmberg 1999; Koopman 1999). The displacement patterns in Romance and Germanic lend themselves naturally to the view that it is the pronoun itself that bears the trigger for movement, since this makes it easy to state the fact that only pronouns, and often only a subset of pronouns, are targeted. The question, of course, then becomes why it is just these nominal elements that bear the relevant movement trigger.

There are reasons, however, to doubt that pronoun movement is driven en-

¹ The data presented here are based on the judgements of three Zapotec speakers who grew up in the towns of San Sebastián Guiloixi, Santiago Laxopa, and Santa María Yalina and now reside in California (Santa Cruz and Los Angeles). These varieties are all highly mutually intelligible, and are most closely related to the Zapotec spoken in San Bartolomé Zoogocho (Sonnenschein 2004), Hidalgo Yalálag (López and Newberg 2005; Avelino Becerra 2004), and San Baltazar Yatzachi el Bajo (Butler 1980).

tirely by considerations of greed. On a conceptual level, Sichel (2001, 2002) argues that this would make the displacement of pronouns entirely distinct from other kinds of movement, such as *wh*-movement, which are motivated by requirements of the position to which an element moves, as in a theory of attraction (Chomsky 1995, 2000). Based on a detailed examination of pronominal doubling in Celtic (Welsh and Breton) and Standard Arabic, Sichel also offers empirical reasons that pronoun movement is driven, at least in part, by attraction. In these languages, strong pronouns, which do not themselves move, are doubled by raised pronominal element. Such patterns point to the essential role for a functional head (the probe), which satisfies its needs by searching and moving an eligible pronoun (the goal) in its domain.

There are other empirical reasons for rejecting a greed-only based approach. Many languages constrain the combinations of clitic or weak pronouns that are possible, e.g. Person–Case Constraints (5) (Perlmutter 1971; Bonet 1991) and Gender–Case Constraints (6) (Foley and Toosarvandani, to appear).

(5) *Person–Case Constraint (Spanish)*

- a. Pedro **me lo** envía.
Pedro **1SG 3SG.M.ACC** send.PRES.3SG
'Pedro sends it to me.'
- b. *Pedro **le me** envía.
Pedro **3SG.M.DAT 1SG** send.PRES.3SG
Intended: 'Pedro sends me to him.'

(Ormazabal and Romero 2007: 316–317)

(6) *Gender–Case Constraint (Sierra Zapotec)*

- a. Bdel=**ba'**=**b**.
hug.COMP=**3.HU=3.AN**
'S/he hugged it.' (RM, GZY012-s, 23)
- b. *Bdin=**b=ba'**.
bite.COMP=**3.AN=3.HU**
Intended: 'It bit her/him.' (RM, GZY014, 33:30)

These asymmetrical hierarchy-sensitive constraints require multiple pronouns to interact with a single head (Anagnostopoulou 2003, 2005; Béjar and Rezac 2003; Nevins 2007, 2011, a.o). It is possible, of course, that distinct pronouns with distinct needs just happen to target the same position. But a more straightforward approach would attribute this convergence of needs to a single functional head, which attracts all the pronouns in its domain.

Our goal here is to bring pronoun movement deeper into the fold of the theory of attraction, as required by the considerations above. As in Sichel's analysis of Celtic and Semitic, we argue that the patterns of pronominal displacement and

doubling in Sierra Zapotec are best understood in terms of attraction. As we will show, there is a distributional asymmetry between clitic and independent pronouns, which suggests a central role for a probe in their syntax. Whereas clitics are perfectly grammatical without an accompanying independent pronoun, an independent pronoun often requires an accompanying clitic. This asymmetry follows directly if pronoun movement is triggered by the properties of a functional head. While this is, in principle, compatible with the pronoun also having needs of its own, we will explore to what extent these can be eliminated altogether, or at least removed from the syntax by reducing them to phonological requirements.

2 TWO TYPES OF PRONOUNS IN SIERRA ZAPOTEC

Sierra Zapotec has two series of pronouns: independent and clitic. The distinction between the series is not governed by case or grammatical function, as both appear in multiple syntactic environments: as subjects, direct objects, indirect objects, possessors, and prepositional complements. In this respect, these pronouns are similar to pronouns in French, Standard Arabic, and Celtic.

	INDEPENDENT	CLITIC
1sg.	<i>nada' ~ neda'</i>	<i>=a'</i>
2sg.	<i>lhe'</i>	<i>=o' ~ =u'</i>
3 el(der)	<i>le'</i>	<i>=e'</i>
3 hu(man)	<i>leba'</i>	<i>=ba'</i>
3 an(imal)	<i>leb</i>	<i>=(e)b ~ =ba</i>
3 in(animate)	<i>lenh</i>	<i>=(e)nh</i>

Table 1 Pronouns in Sierra Zapotec

At the same time, the distribution of these pronouns is not free. In “neutral” contexts (broad focus or out of the blue) with subjects in the first or second person, only clitics can appear, as in (7a) and (8a). An independent pronoun is impossible, as in (7b–c) and (8b–c).

- (7) (Bixtse'nh shlohk Maria? ‘Why is Maria upset?’)
- a. We'ej=**a'** meskal tse=**ba'**.
 drink.COMP=**1SG** mezcal of=3.HU
 ‘I drank her mezcal.’ (FA/RM, GZYZ054, 9:00)
 - b. *We'ej **nada'** meskal tse=**ba'**.
 eat.COMP **1SG** mezcal of=3.HU (FA/RM, GZYZ054, 11:19)
 - c. #We'ej=**a'** **nada'** meskal tse=**ba'**.
 drink.COMP=**1SG 1SG** mezcal of=3.HU (FA/RM, GZYZ054, 10:10)

- (8) (Bixtse'nh shlhoko'? 'Why are you upset?')
- a. Dzonh=**o'** dzed nada'.
do.CONT=**2SG** bother 1SG
'You are bothering me.' (FA/RM, GZY048, 10:07)
 - b. *Dzonh **lhe'** dzed nada'.
do.CONT **2SG** bother 1SG (FA/RM, GZY054, 12:44)
 - c. #Dzonh=o' **lhe'** dzed nada'.
do.CONT=2SG **2SG** bother 1SG (FA/RM, GZY048, 10:21)

Independent pronouns surface in “non-neutral” environments: when the subject bears narrow focus in postverbal position, as the answer to a question (9a), when it undergoes focus movement (9b), or when it appears in a fragment answer (9c).

- (9) (Nhu yega'an? 'Who is going to stay?')
- a. Yega'an=o' **lhe'**.
stay.POT=2SG **2SG**
'You are going to stay.' (FA/RM, GZY051, 53:34)
 - b. Bitu yega'an=a', **lhe'**₁ yega'an=o' t₁.
NEG stay.POT=1SG **2SG** stay.POT=2SG
'I am not going to stay, you are.' (RM, GZY051, 57:13)
 - c. (Nhu yeyej? 'Who is going to go?')
Le'.
2SG
'You.' (FA/RM, GZY052, 1:02:58)

The third person pronouns show the same distribution: a clitic appears in neutral contexts (10a–c), while the independent form appears in non-neutral contexts (11a–c).

- (10) (Bixtse'nh shlhoko'? 'Why are you upset?')
- a. We'ej=**ba'** meskal tsi=a'.
drink.CONT=**3.HU** mezcac of=1SG
'S/he drank my mezcac.' (FA/RM, GZY054, 13:48)
 - b. #We'ej **leba'** meskal tsi=a'.
drink.CONT **3.HU** mezcac of=1SG (FA/RM, GZY054, 14:50)
 - c. *We'ej=**ba'** **leba'** meskal tsi=a'.
drink.CONT=3.HU **3.HU** mezcac of=1SG (FA/RM, GZY054, 15:47)

- (11) a. (Nhu shtahs? ‘Who is sleeping?’)
 Shtahs **leba’**.
 sleep.CONT **3.HU**
 ‘S/he is sleeping.’ (FA/RM, GZYZ051, 55:02)
- b. Bitu shtahs=a’, **leba’**₁ shtahs t₁.
 NEG sleep.CONT=1SG **3.HU** sleep.CONT
 ‘I am not sleeping, s/he is.’ (FA/RM, GZYZ048, 37:21)
- c. (Nhu shtahs? ‘Who is sleeping?’)
Leba’.
3.HU
 ‘Her/him.’ (FA/RM, GZYZ052, 1:01:45)

But there are also differences between local and third person pronouns. In the third person, the two series of pronouns stand in a systematic morphological relationship: each independent pronoun is composed of the formative *le* and a clitic, e.g., *le + =ba’ = leba’*.

We take this morphological parallel seriously: while there are two pronominal series in the first and second person, there is actually only one series in the third person, the clitic pronouns (Marlett 1993, 2010; cf. Sonnenschein 2004: 41 on Zoogocho Zapotec).

	INDEPENDENT	CLITIC
1sg.	<i>nada’ ~ neda’</i>	<i>=a’</i>
2sg.	<i>lhe’</i>	<i>=o’ ~ =u’</i>
3 el(der)	–	<i>=e’</i>
3 hu(man)	–	<i>=ba’</i>
3 an(imal)	–	<i>=(e)b ~ =ba</i>
3 in(animate)	–	<i>=(e)nh</i>

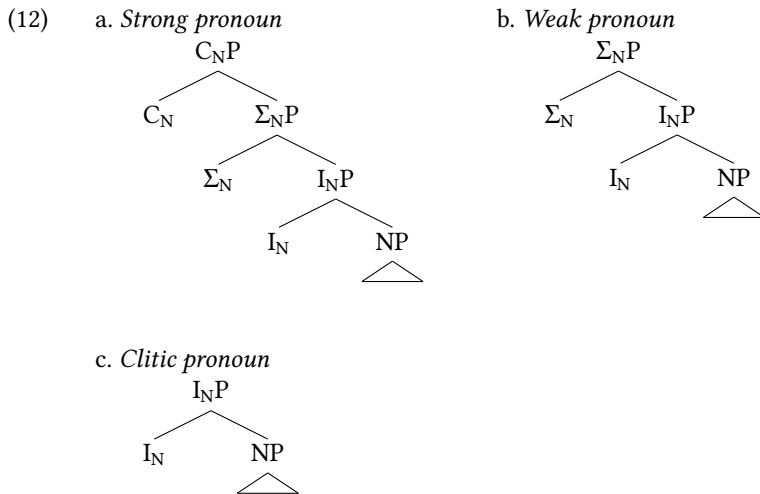
Table 2 Pronouns in Sierra Zapotec (reinterpreted)

In the third person, the “independent” pronouns are constructed synthetically, by adding the formative *le* to the clitic. For first and second persons, clitic and independent pronouns are distinct elements.

As we will see, this way of viewing the morphological overlap in the third person is supported by the distribution of clitic and independent pronouns. Whereas a local independent pronoun is invariably accompanied by a clitic, as in (10), an independent third person pronoun is not, as in (11). This follows if the clitic to which the formative *le* attaches is of the same type as the clitic which accompanies the independent pronoun. There is simply no other pronominal element to do the doubling.

3 SOME PROBLEMS WITH PURE GREED

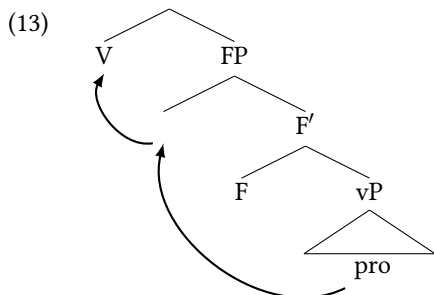
So why do some pronouns move? In a purely greed-driven theory, movement of the pronoun must be driven solely by the needs of the pronoun (Chomsky 1993; Bošković 2007). In one concrete implementation, a pronoun’s need to move is associated with its structural size. Cardinaletti and Starke (1999), for instance, propose a tripartite typology of pronouns, in which strong pronouns are associated with the most amount of structure (12a), clitics are associated with the least (12c), and weak pronouns fall in between (12b).



On this approach, weak pronouns and clitics are structurally deficient, while strong pronouns contain the nominal equivalent of a full CP (that is, they are DPs).

Extending Cardinaletti and Starke’s typology to Zapotec, the independent pronouns would qualify as strong pronouns, generated with full nominal functional structure. Since strong pronouns are equipped with full functional structure, they are free to remain in situ, as well as surface, for instance, in A’-positions. They are also prosodically independent, bearing word or phrasal stress, and may associate with particles such as *also* or *even*.

Since clitic pronouns, on the other hand, are not equipped with elaborate functional structure (CN and ΣN), they must make up, externally, for what internal structure might otherwise provide. Most importantly, this drives clitics to move into a derived argument position (simply Spec-FP). They must then move again to find a prosodic host, e.g., the verb in initial position (see Adler et al. 2018 for the derivation of this word order in Sierra Zapotec).



Under this view, then, the clitics are greedy because of their syntactic need to move into a local relationship with a verbal functional head. While this part is shared with weak pronouns, clitics have an additional prosodic requirement, which forces them to cliticize to a host.

In a purely greed-based theory, these are the only reasons for movement; the head associated with the landing site imposes no requirements of its own. At first glance, the basic facts observed so far would seem to support such a theory. In neutral contexts, a local person pronoun must move.

(14) (Bixtse'nh xlhok Maria? 'Why is Maria upset?')

- a. We'ej=**a'**₁ t₁ meskal tse=ba'.
 drink.COMP=**1SG** mezcac of=3.HU
 'I drank her mezcac.' (FA/RM, GZYZ054, 9:00)
- b. *We'ej **nada'** meskal tse=ba'.
 drink.COMP **1SG** mezcac of=3.HU (FA/RM, GZYZ054, 11:19)

However, a theory based purely on greed raises two immediate problems. The first set of facts shows that greed alone cannot account for the distribution of pronouns; the second set of facts shows that the requirement imposed by pronouns would not hold of all pronouns. In other words, some pronouns can fail to move; thus when they do move, this cannot be due to greed.

3.1 PROBLEM 1

In non-neutral contexts, for local person pronouns, the subject clitic cannot be omitted; in other words, the independent pronoun cannot stand on its own.

(15) (Nhu yega'an? 'Who is going to stay?')

- a. Yega'an=**o'** **lhe'**.
 stay.POT=**2SG 2SG**
 'You are going to stay.' (FA/RM, GZYZ051, 53:34)

- b. *Yega'an **lhe'**.
 stay.POT **2SG** (FA/RM, GZYZ054, 22:47)
- (16) a. Bitu yega'an=a', **lhe'**₁ yega'an=**o'** t₁.
 NEG stay.POT=1SG **2SG** stay.POT=**2SG**
 'I am not going to stay, you are.' (RM, GZYZ051, 57:13)
- b. *Bitu yega'an=a', **lhe'**₁ yega'an t₁.
 NEG stay.POT=1SG **2SG** stay.POT (FA/RM, GZYZ054, 24:15)

While focus might be a necessary condition for the presence of an independent pronoun, it is not sufficient: a clitic is also required. Thus, while a clitic is obligatory, whether accompanied by an independent pronoun or not, an independent pronoun may not be licensed without an accompanying clitic.

But why would the clitic be obligatory? This does not follow from a theory of movement as pure greed. Greed can only explain why, when a clitic is present, it must move. It cannot explain why a clitic is obligatory in the first place: in the absence of a clitic, its greedy properties cannot be invoked. Nor can the necessity of the clitic be explained as a function of the properties of the independent pronoun, since the independent pronoun can occur, in some contexts, in the absence of a clitic, as we show next. To the extent that the presence of a clitic with an independent pronoun is conditioned by the external syntactic environment, we are led to consider the contribution of a probe, as we will discuss in Section 4.

3.2 PROBLEM 2

In the third person, clitics do not accompany independent pronouns. In neutral contexts, only a clitic on the verb is possible, just as with first and second persons.

- (17) (Bixtse'nh shlhoko'? 'Why are you upset?')
- a. We'ej=**ba'** meskal tsi=a'.
 drink.CONT=**3.HU** mezc'al of=1SG
 'S/he drank my mezc'al.' (FA/RM, GZYZ054, 13:48)
- b. #We'ej **leba'** meskal tsi=a'.
 drink.CONT **3.HU** mezc'al of=1SG (FA/RM, GZYZ054, 14:50)
- c. *We'ej=**ba'** **leba'** meskal tsi=a'.
 drink.CONT=**3.HU** **3.HU** mezc'al of=1SG (FA/RM, GZYZ054, 15:47)

In non-neutral contexts, an independent pronoun is necessary. Again, this is just like first and second person. A third person independent pronoun, however, cannot be accompanied by a clitic.

- (18) (Nhu shtahs? 'Who is sleeping?')
- a. Shtahs leba'.
 sleep.CONT 3.HU
 'S/he is sleeping.' (FA/RM, GZYZ051, 55:02)

- b. *Shtahs=**ba'** leba'.
 sleep.CONT=3.HU 3.HU (FA/RM, GZY054, 25:35)

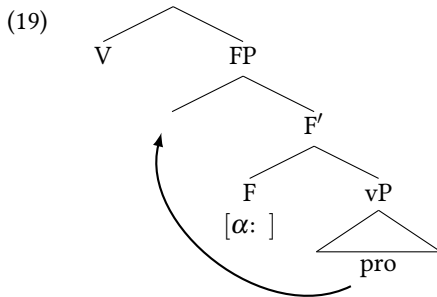
Third person pronouns raise at least two general questions. First, why is an independent pronoun grammatical without a clitic, unlike the doubling that is obligatory in local persons? Second, why is doubling impossible in the third person? There are answers to both questions in the morphological parallelism between independent and clitic pronouns in the third person. If the independent pronoun contains a clitic that has not moved, then they will not be able to co-occur: they are one and the same element.

But why, then, can the clitic contained within an independent pronoun fail to move? On a theory of movement as pure greed, this is not expected. If pronouns are greedy, they have no choice but to move.

4 AN ATTRACTION THEORY

Third person shows us, then, that not all clitic pronouns have to move in Sierra Zapotec. We take this to mean that, when a pronoun does move, its movement is motivated, first and foremost, by requirements of a functional head. These go beyond any needs the pronoun itself may or may not have. This, then, is why a clitic is obligatory in local persons, even if an independent pronoun also appears. The needs of the functional head must be satisfied. Of course, if a pronoun can fail to move, as in the third person, then this must be supplemented by an account of how the functional head's requirements can still be satisfied in this case. But for now, the most immediate point is that, from the perspective of a theory of pronoun movement as attraction, the fact that a pronoun can fail to move is not surprising.

Concretely, following Sichel (2001, 2002), we take there to be a functional head that probes its domain for some features, likely ϕ -features (person, number, gender); when it finds a matching pronoun, it causes it to move.



This accounts for the asymmetry between clitics and independent pronouns in

local persons. While a clitic can occur without an accompanying independent pronoun (20a), an independent pronoun is always accompanied by a clitic (20b).

- (20) a. V=pro neutral, cf. (7) and (8)
b. V*(=pro) pro non-neutral, cf. (15) and (16)

In other words, for local persons, pronoun movement is obligatory because it is required by a functional head. It also explains why, once movement of the clitic is triggered by this head, there is no need for the independent pronoun to move: the independent pronoun has no needs of its own that would be satisfied via movement.

This makes pronoun movement directly parallel to wh-movement, where the case for attraction by a functional head (specifically, C) is particularly clear. In many languages, it is not sufficient that a constituent question contain a wh-phrase: a wh-phrase must also move into clause-initial position.

- (21) a. What_{t1} will the student send t₁ to who?
b. *Will the student send what to who?

To the extent that the choice of which wh-phrase actually moves is determined by the syntax of the probe, it follows that no additional requirements are associated with the wh-phrases themselves.

The case for pronoun movement as attraction by a functional head is trickier, though, for a number of reasons. First, it is not the case that all pronouns are free to remain in situ as long as another constituent satisfies the functional head: clitics, for example, must always move. While this is not inconsistent with a theory in which a probe is associated with a movement trigger, it implies that the motivation for pronoun movement as attraction must be sought elsewhere, in the domain of non-clitic pronouns. Second, the identity of the attracting head is less clear than in wh-movement. The ultimate attachment of clitics to a prosodic host obscures, to some extent, the syntax of the attracting probe. And, third, because the identity of the attracting feature(s) is less clear: it must be a feature that can distinguish, for instance, pronouns from full DPs.

Despite these difficulties, it seems that a unified theory of movement, one that includes pronoun movement, is within reach. In the next section, we continue to develop the empirical motivation for pronoun movement as attraction, returning in Sections 6–7 to some of the challenges we have mentioned above.

5 INTERVENTION EFFECTS AND THEIR REPAIR

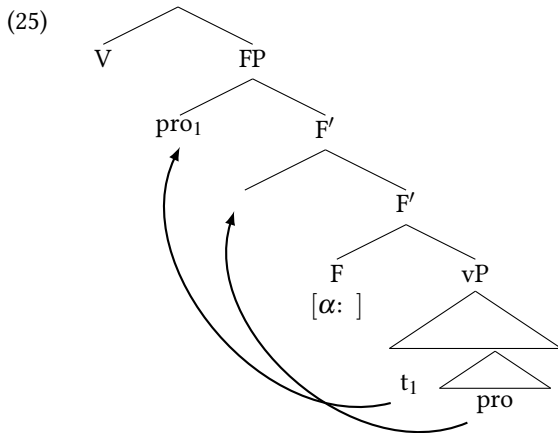
The same pronouns can also appear in object position, though object cliticization depends on the type of subject. It is permitted if the subject has also cliticized.

- (22) a. $\text{Betw}=\mathbf{a}'=\mathbf{b}$.
hit.COMP=1SG=3.AN
'I hit it.' (RM, GZYZ011-s, 20)
- b. $\text{Bdel}=\mathbf{ba}'=\mathbf{b}$.
see=3.HU=3.AN
'S/he hugged it.' (RM, GZYZ012-s. 23)

But regardless of person, an object cannot cliticize across a full DP subject, as in (23a) and (24a), or onto such a subject, as in (23b) and (24b).

- (23) a. $*\text{Bdel}=\mathbf{a}'$ Maria (neda').
hug.COMP=1SG Maria 1SG
Intended: 'Maria hugged me.' (FA/RM, GZYZ051, 1:06:00)
- b. $*\text{Bdel}$ Juan= \mathbf{a}' (neda').
hug.COMP Juan=1SG 1SG
Intended: 'Juan hugged me.' (FA/RM GZYZ051, 1:07:40)
- (24) a. $*\text{Bdel}=\mathbf{b}$ Maria.
hug.COMP=3.AN Maria
Intended 'Maria hugged it.' (FA/RM, GZYZ012, 24:55)
- b. $*\text{Bdel}$ Maria= \mathbf{b} .
hug.COMP Maria=3.AN
Intended: 'Maria hugged it.' (FA/RM, GZYZ013, 4:40)

This pattern resembles the typical locality effect expected under a theory of attraction: the object cannot be attracted before the subject.



This locality calculation, familiar from wh-movement in multiple questions,

presupposes that both are attracted by the same probe. Since the subject is closest to the probe, it must move first (Attract Closest). Only then, with the intervening pronoun out of the way, can the object move (Richards 1997, a.o.). A purely greed-based theory of movement, on the other hand, has no account of this intervention effect. A pronoun’s need to occupy a certain syntactic position should interact in no way with its hierarchical position relative to other related constituents.

To derive the ungrammaticality of (23) and (24) from this logic of intervention, a full DP must be able to count, in the first place, as an intervener for the attraction of a pronoun. In other words, a full DP must satisfy the needs of the probe, even though it does not itself undergo movement as a result. Sichel and Toosarvandani (2020) provide an analysis of this intervention, showing how the probe is specified so that it can Agree with both pronouns and full DPs (see Preminger 2019 for related ideas).

Importantly, when an object pronoun cannot be attracted, it is not ungrammatical: the clitic instead attaches to *le*.

- (26) Blenh Maria **leba**’
 hold.COMP Maria **3.HU**
 ‘Maria held her/him.’ (FA/RM, GZYZ016, 45:50)

This repair for intervention shows, once again, that a non-moved pronoun does not cause the derivation to crash, and suggests that pronouns, in general, do not have a movement-inducing property.

6 PROBES IN THE ABSENCE OF CLITICIZATION

We have argued for a theory of pronoun movement based on attraction. This was motivated by certain patterns of subject cliticization and intervention for object cliticization in Sierra Zapotec. But such a theory is also committed to explaining how the probe is satisfied when there is no apparent cliticization.

There are at least three environments where there is no cliticization, and yet the derivation succeeds: (i) predicate nominals, (ii) intervention by a full DP, and (iii) coordination. Such gaps in the syntax of cliticization may initially appear as exceptions, challenging a theory of pronoun movement as attraction. However, if they can be understood in terms of the syntax of probing, these gaps may turn out to present the strongest evidence in favor of a theory of pronoun movement as attraction. Greed would have nothing to say about such gaps.

We consider each of these environments in turn, attributing them to one of two conditions involving the probe and its interaction with potential goals. Either the probe is completely absent in the environment where there is no cliticization or something interferes with the probing mechanism, so that cliticization becomes impossible.

6.1 PREDICATE NOMINALS

In null copular constructions with a nominal predicate, pronouns fail to cliticize, for both local and third persons.

- (27) (Bi llinh dzonhu?’ ‘What do you do?’)
- a. Bene’ skwel **nada**’.
 person school **1SG**
 ‘I am a teacher.’ (RM, GZY054-s, 3)
- b. *Bene’ skwel=**a**’.
 person school=**1SG** (RM/FA, GZY054, 30:02)
- (28) (Bi llinh dzonh Maria?’ ‘What does Maria do?’)
- a. Bene’ skwel **leba**’.
 person school **3.HU**
 ‘S/he is a teacher.’ (FA/RM, GZYZ054, 32:50)
- b. *Bene’ skwel=**ba**’.
 person school=**3.HU** (FA/RM, GZYZ054, 32:50)

It seems likely that, in these derivations, there is simply no probe. If the head that attracts pronouns is part of the extended verbal projection, this functional structure could simply be missing in null copular constructions.

6.2 THE REPAIR FOR INTERVENTION

As we saw above, when the subject is a full DP, there is no cliticization and an object pronoun can only appear as an independent pronoun.

- (29) a. Dzike Maria=**nh neda**’.
 love.CONT Maria=DEF **1SG**
 ‘Maria loves me.’ (FSR, SLZ008-s, 7)
- b. Blenh Maria **leba**’.
 hold.COMP Maria **3.AN**
 ‘Maria held her/him.’ (FA/RM, GZYZ016, 45:50)

A theory of attraction must answer two questions: First, how is the probe satisfied when the subject does not cliticize? Second, when the subject does not cliticize, why can the object not cliticize either?

One approach to the first question would build on the decomposition of attraction into Agree and a separate displacement mechanism. If Agree was a prerequisite for displacement, then the probe’s requirements could be stated as a need to Agree, rather than a need to trigger movement. This would mean that, in (29a–b), the probe could, in fact, Agree with and be satisfied by the higher full DP. This would just never lead to movement: a full DP in subject position can

never be doubled by a clitic.

- (30) *Bdel=e' **Pedro** bidao' nhi.
 hug=3.EL **Pedro** child this
 'Pedro hugged this child.' (FA/RM, GZYZ014, 24:18)

In this respect, full DPs behave just like third person pronouns — compare (30) to (10)–(11) above — a point we will be returning to.

For the second question, some additional assumptions must be installed to derive why cliticization of the object is blocked when the subject does not cliticize. One possibility is that the probe, after Agreeing with a full DP, is no longer able to Agree with the object. Cliticization of the object would then be blocked. Nothing then precludes the appearance of an independent pronoun, which, if we are correct, has no checking needs of its own.

6.3 COORDINATION

Coordination is another context where cliticization may fail to take place without ill consequences. When a third person pronoun is conjoined with a full DP, cliticization is impossible, as in (31a), due to the Coordinate Structure Constraint. Instead, it surfaces inside the coordination, supported by *le* (31b).²

- (31) a. *Ts-ja-wi=e' [t₁ nha' xna'=a] taw=a'.
 CONT-AND-visit=3.EL and mother=1SG grandmother=1SG
 Intended: 'S/he and my mother went to visit my grandmother.'
 (RM/FA, GZYZ052, 57:32)
- b. Ts-ja-wia [le' nha' xna'=a] taw=a'.
 CONT-AND-visit 3.EL and mother=1SG grandmother=1SG
 (RM/FA, GZYZ052, 56:25)

But then, what satisfies the probe in the grammatical coordination in (31b)? It might seem that the lack of attraction here can somehow be related to the not fully pronominal nature of this coordination. As we saw in (30) above, full DPs can never be doubled by a clitic in postverbal position.

But cliticization can also fail with a fully pronominal coordination, as in (32a). Thus, the same question arises: What satisfies the probe in this grammatical coordination?

² There appears to be some variation within Sierra Zapotec in the nominal coordination strategies that are available. All speakers allow for a comitative-like structure with *lhenh*, but some also allow nominals to be coordinated with the clausal coordinator *nha'*. Here, we report the facts involving just the latter.

- (32) a. Bzenh [le' nha' leba'] bel.
 COMP.catch 3.EL and 3.HU fish
 'S/he (elder) and s/he (non-elder) caught fish.'
 (FA/RM, GZYZ087, 23:15)
- b. Be-se'e-zenh=e' [le' nha' leba'] bel.
 COMP-PL-catch=3.EL 3.EL and 3.HU fish
 'S/he (elder) and s/he (non-elder) caught fish.'
 (FA/RM, GZYZ087, 17:20)

As (32b) shows, cliticization is not impossible; cliticization that realizes the pooled features of the entire coordination is also possible. (The expected resolution for the combination of elder and non-elder human is elder human.) Cliticization as in (32b) is expected under a theory of attraction, even if it is unclear why coordination should enable the doubling of third person pronouns, otherwise prohibited, as seen above.

The availability of cliticization in (32b) offers a way of understanding its absence in (32a), as well as in (31b). While doubling is never permitted for bare third person pronouns, they still exhibit an alternation between the presence and absence of a clitic pronoun, controlled by discourse context (neutral vs. non-neutral), as in (10)–(11) above. The same alternation could be responsible for the optionality in (32a–b), though this would happen to produce doubling when the third person pronouns are coordinated (for reasons that are still unclear). In other words, apparent non-attraction with third person coordinations is simply a product of how the probe interacts with third person arguments in general.

Some evidence for this idea comes from non-third person coordinations. When one coordinate is a local person pronoun, clitic doubling of the entire coordination becomes obligatory.

- (33) a. *Bzenh [lhe' nha' leba'] bel.
 COMP.catch 2SG and 3.HU fish
 'You and s/he caught fish.' (RM/FA, GZYZ088, 1:25)
- b. Bzenh=**lhe** [lhe' nha' leba'] bel.
 COMP.catch=2PL 2SG and 3.HU fish
 'You and s/he caught fish.' (RM/FA, GZYZ088, 1:30)

The absence of cliticization with coordinated third person pronouns in (32a) can be attributed, then, to the absence of cliticization with bare third person pronouns. This reduces one problem to another, but then it highlights the question of how the functional head's requirements are satisfied in this context.

7 A FINAL CONTEXT WITHOUT CLITICIZATION

In our original enumeration of contexts without cliticization, we did not include non-neutral environments where a third person subject bears narrow focus. Recall that, in this context, there is no cliticization: only an independent pronoun is possible.

- (34) (Nhu shtahs? ‘Who is sleeping?’)
- a. Shtahs **leba**’.
 sleep.CONT **3.HU**
 ‘S/he is sleeping.’ (FA/RM, GZYZ051, 55:02)
 - b. *Shtahs=**ba**’ **leba**’.
 sleep.CONT=**3.HU 3.HU**
 Intended: ‘S/he is sleeping.’ (FA/RM, GZYZ054, 25:35)

This context poses the same fundamental challenge for a theory of attraction as the three earlier contexts: How are the probe’s requirements satisfied when there is no cliticization? It is somewhat more difficult, though, because merely changing the size of focus seems unlikely to affect the presence of the probe or how it is able to Agree.

One possibility is that, in this case, a pronoun is in fact attracted, though it is not pronounced in the higher position.

- (35) [FP ⟨pro⟩ F ... pro ...]

This does not seem so improbable on its face. With local person pronouns in non-neutral clauses, cliticization that doubles a strong pronoun is obligatory.

- (36) (Nhu yega’an? ‘Who is going to stay?’)
- a. Yega’an=**o**’ **lhe**’.
 stay.POT=**2SG 2SG**
 ‘You are going to stay.’ (FA/RM, GZYZ051, 53:34)
 - b. *Yega’an **lhe**’.
 stay.POT **2SG** (FA/RM, GZYZ054, 22:47)

For third person pronouns, too, there could be attraction. The clitic would simply be invisible, presumably because of morphological idiosyncrasies of the language. However, there is no easy out along these lines, since independent third person pronouns do not behave identically to doubled local pronouns. An independent local person pronoun in non-neutral contexts does not block cliticization across it.

- (37) Betw=**a**’₁=**ba**’₂ **neda**’₁ t₂.
 hit.COMP=1SG=**3.HU 1SG**

‘I hit her/him.’

(FA/RM, GZY051, 1:10:25)

This obviation of intervention by clitic doubling is familiar from other languages, such as Greek and Spanish (see Anagnostopoulou 2006 for an overview). If third person independent pronouns in non-neutral contexts had the same underlying analysis, we would expect them also not to intervene for object cliticization. But this is not the case.

(38) *Blhe’e=**b**₂ **leba**’₁ t₂.see.COMP=**3.AN 3.HU**

Intended: ‘S/he saw it.’

(FSR, SLZ1050, 1:00)

The presence of intervention in (38) suggests that an independent third person pronoun is not doubled by a null clitic.

There is a different possibility. As we saw in Section 6.2, when the subject is a full DP, no cliticization is possible. Whatever allows full DPs to satisfy the probe without moving might also permit third person pronouns in non-neutral contexts to satisfy the probe without movement. In other words, when a third person pronoun bears a narrow focus, it would behave just like a full DP in the relevant respects. This requires a more detailed analysis of the pronominal inventory in Sierra Zapotec, and in particular of the differences between local and non-local pronouns. But we have already seen some suggestive evidence that such an account could be on the right track. Third person pronouns are morphologically compositional, comprised of a formative *le* and a clitic pronoun. If *le* is a D head that embeds a clitic pronoun, making it inaccessible to the probe, and if the requirements of the probe can be satisfied via Agree, this larger DP constituent could satisfy the probe, just like a full DP can.

8 CONCLUSION

A theory of pronoun movement grounded in attraction has several empirical advantages over a theory based purely on greed. For Sierra Zapotec, it can explain the requirement for clitic doubling in local persons; it can explain why cliticization fails in certain environments, when a probe is plausibly absent; and, it is consistent with some third person pronouns not needing to move. More generally, attraction offers an explanation for the observed alternations between clitic and independent pronouns, whereas a theory stated purely in terms of greed only dictates that a clitic move when one is present.

Nevertheless, there are several details that this account leaves out. These center around the third person and the relationship between pronominal and non-pronominal arguments: Why do third person independent pronouns behave like full DPs for the purposes of cliticization? And how is this to be understood within a theory of nominal classes? Specifically, are third person pronouns full

DPs, whereas local person pronouns are not? Another detail involves the shared intervention behavior of third person pronouns and full DPs: Why do they both intervene for cliticization (when they do not move)? And how is this compatible with a theory of attraction?

One promising approach to resolving this second set of questions, which we hinted at above, would build on a decomposition of attraction, with Agree serving as a prerequisite for movement. The locality considerations typically associated with attraction could then be attached to the Agree component, creating space for a constituent to disrupt the movement of other constituents even when it does not itself move. Since the constituents involved in these interactions in Sierra Zapotec are all (various kinds of) third person arguments, a fuller account along these lines would likely also have to resolve the first set of questions above. Both tasks we will leave for the future.

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