

# Nominal Intervention and the Extended PERSON Domain

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## 1. Introduction

The relationship between pronouns and other nominal expressions has been the subject of extensive investigation in the semantic literature on reference. But within syntax, the discussion of how pronouns overlap with or diverge from *lexical DPs* (also called full DPs) has been more limited, focusing primarily on structure: Are pronouns contained within less functional structure than lexical DPs (e.g., Cardinaletti & Starke 1999)? Is there less lexical structure inside pronouns, or is it present, albeit silently (e.g., Patel-Grosz & Grosz 2017)?

In this paper, we explore the possibility that featural distinctions in the PERSON domain may capture some of the overlaps and distinctions between these classes. If person distinctions within a pronoun system (first vs. second, local vs. third) are represented featurally (Noyer 1991, Bonet 1991, and others), then personal pronouns might also, as a class, be distinguished from lexical DPs in this way. One influential line of thinking assimilates pronouns to lexical DPs, dispensing with a PERSON feature that characterizes all pronouns (Forscheimer 1953, Benveniste 1956). But more recent work has argued that such a featural distinction is needed to account for the morphological or interpretive properties of some pronouns (Béjar 2003, Pancheva & Zubizarreta 2018, Sichel & Wiltschko 2021).

We provide a syntactic argument for a featural distinction between personal pronouns and other nominal expressions, as well as for a featural identity between them. Our argument is based on Sierra Zapotec pronouns, which exhibit an intervention effect involving pronominal cliticization.<sup>1</sup>

- (1) a. *pro* > *DP*  
Blenh<sup>4</sup>=ba<sup>3</sup><sub>1</sub> t<sub>1</sub> be<sup>2</sup>ku'=nh<sup>4</sup>.  
carry.COMP=3.HU dog=DEF  
'S/he carried the dog.' (FSR, SLZ1051-s, 1)
- b. *DP* > *pro*  
\*Blenh<sup>4</sup>=eb<sup>4</sup><sub>1</sub> Xwanh<sup>2</sup>=a<sup>4</sup> t<sub>1</sub>.  
carry.COMP=3.AN Juana=DEF  
Intended: 'Juana carried it (an animal).' (FSR, SLZ1051, 7:30)

While subject pronouns can cliticize when the object is a lexical DP, as in (1a), an object pronoun cannot cliticize across a subject lexical DP, as in (1b).

The basic argument is a simple one. We argue that the intervention effect in (1) parallels another constraint on pronominal cliticization in Sierra Zapotec. The Gender–Case Constraint (GCC) prohibits object cliticization based on the object's animacy as well as the subject's animacy (Foley &

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<sup>1</sup> We use Sierra Zapotec as a cover term for several mutually intelligible Zapotec varieties from the southeastern Sierra Norte region of Oaxaca, Mexico. This paper's original data comes from speakers from the towns of Santiago Laxopa, San Sebastián Guiloixi, and Santa María Yalina.

Toosarvandani, to appear). If the syntactic mechanism responsible for the GCC makes reference to the animacy features of pronouns, then the intervention effect in (1) must also operate on a featural basis. In particular, pronouns and lexical DPs must share some featural content (a feature that we call  $\delta$ , to resonate with D), while pronouns must bear some featural content that lexical DPs do not, which we identify as  $\pi$  (Béjar 2003, Sichel & Wiltschko 2021). On this approach, the featural specifications of lexical DPs and pronouns brings them closer together, and also distinguishes them.

## 2. When pronouns (do not) cliticize in Sierra Zapotec

Both the subject and object can be clitic pronouns (2a) or lexical DPs (2d). While the subject can cliticize when the object is a lexical DP (2b), pronominal cliticization is not allowed across a lexical DP (2c).

- (2) a. *pro* > *pro*  
 Blenh<sup>4</sup>=ba<sup>3</sup><sub>1</sub>=b<sub>2</sub><sup>4</sup>                      t<sub>1</sub>    t<sub>2</sub>.  
 carry.COMP=3.HU=3.AN  
 ‘S/he carried it (an animal).’ (FSR, SLZ1051-s, 3)
- b. *pro* > *DP*  
 Blenh<sup>4</sup>=ba<sup>3</sup><sub>1</sub>                      t<sub>1</sub>    be<sup>2</sup>ku’=nh<sup>4</sup>.  
 carry.COMP=3.HU                      dog=DEF  
 ‘S/he carried the dog.’ (FSR, SLZ1051-s, 1)
- c. *DP* > *pro*  
 \*Blenh<sup>4</sup>=eb<sup>4</sup><sub>1</sub>                      Xwanh<sup>2</sup>=a<sup>4</sup>    t<sub>1</sub>.  
 carry.COMP=3.AN    Juana=DEF  
 Intended: ‘Juana carried it (an animal).’ (FSR, SLZ1051, 7:30)
- d. *DP* > *DP*  
 Blenh<sup>4</sup>                      Xwanh<sup>2</sup>=a<sup>4</sup>    be<sup>2</sup>ku’=nh<sup>4</sup>.  
 carry.COMP    Juana=DEF    dog=DEF  
 ‘Juana carried the dog.’ (FSR, SLZ1051-s, 2)

When cliticization is not permitted, the object is instead realized as a strong pronoun in canonical argument position:

- (3) Blenh<sup>4</sup>                      Xwanh<sup>2</sup>=a<sup>4</sup>    leb<sup>4</sup>.  
 carry.COMP    Juana=DEF    3.AN  
 ‘Juana carried it (an animal).’ (FSR, SLZ1051-s, 6)

We call this prohibition on pronominal cliticization the *Lexical DP Blocking (LDB)* effect:

- (4) *Lexical DP Blocking (LDB)*  
 An object pronoun cannot cliticize when the subject is a lexical DP.

The LDB is only relevant for pronouns in the third person. Local person pronouns do not permit cliticization in object position even when the subject cliticizes (as described below).

There is no simple phonological or morphological explanation for the LDB. Pronominal cliticization in Sierra Zapotec involves syntactic movement and is motivated by formal considerations. It is, for instance, subject to island constraints like the Coordinate Structure Constraint.

- (5) a. Ts-ja-wia                      [le’    nha’    xna’=a]                      taw=a’.  
 CONT-AND-visit    3.EL    and    mother=1SG    grandmother=1SG  
 ‘S/he and my mother went to visit my grandmother.’
- b. \*Ts-ja-wi=e’                      [t<sub>1</sub>    nha’    xna’=a]                      taw=a’.  
 CONT-AND-visit=3.EL                      and    mother=1SG    grandmother=1SG  
 (Sichel & Toosarvandani 2020a: 111)

In addition, pronominal cliticization is only possible when there is functional structure present in the clause. In nonverbal predications, for instance, where this structure is plausibly missing, pronominal cliticization is prohibited.

- (6) a. Bene' skwel **leba'**.  
 person school **3.HU**  
 'S/he is a teacher.'  
 b. \*Bene' skwel=**ba'**.  
 person school=**3.HU** (Sichel & Toosarvandani 2020a: 110)

Following Anagnostopoulou (2003) and many others, we take pronominal cliticization to be dependent on the syntactic mechanism responsible for featural covariation, i.e., Agree. For a pronoun to cliticize, it must first Agree (as a goal) with a functional head (the probe) in some features.

We will argue below that this Agree mechanism is also responsible for the LDB. In particular, we will argue that it is an intervention effect arising from the locality condition on Agree (i.e., Attract Closest). The motivation for this approach comes from a parallel between the LDB and another constraint on object cliticization.

Sierra Zapotec realizes a four-way animacy distinction in third person pronouns: elder humans (EL) vs. non-elder humans (HU) vs. animals (AN) vs. inanimates (IN). In one variety, an elder object pronoun cannot cliticize when the subject is human (7b), though a human object pronoun can cliticize when the subject is elder (7a).

- (7) a. 3.EL > 3.HU  
 Wkwell=e'₁=be'₂ t₁ t₂.  
 kick.COMP=3.EL=3.HU  
 'He kicked him.'  
 b. 3.HU > 3.EL  
 \*Wkwell=be'₁=e'₂ t₁ t₂.  
 kick.COMP=3.HU=3.EL  
 Intended: 'He kicked him.' (Avelino Becerra 2004:33–35)

More generally, object cliticization is forbidden whenever the animacy of the object exceeds the subject's on an intuitive hierarchy of animacy.<sup>2</sup>

- (8) *Gender–Case Constraint (GCC)*  
 An object clitic pronoun cannot exceed a subject clitic pronoun on the animacy hierarchy, i.e., EL > HU > AN > IN.

Foley & Toosarvandani (to appear) call this restriction a Gender–Case Constraint (GCC), by analogy to the Person–Case Constraint (PCC) which prohibits cliticization of object pronouns on the basis of a person hierarchy (Perlmutter 1971, Bonet 1991). Building on a line of work on the PCC initiated by Anagnostopoulou (2003), they take the GCC to arise from the intervention-based locality condition on Agree.

The parallel between the LDB and the GCC is not at all obvious. In the LDB, a lexical DP subject is able to intervene for object cliticization, even though it does not itself move, unlike in the GCC. While this may, at first, seem surprising, it should not actually matter if movement is decomposed into an Agree operation followed by Merge, with an intervention-based locality condition constraining Agree, not Merge (Chomsky 2000). From this perspective, these patterns are unified by the properties of the higher

<sup>2</sup> There is variation within Sierra Zapotec in how strictly the hierarchy is obeyed. In (7), we present data from the Yalálag variety, whose GCC conforms completely to the hierarchy. The other data in the paper comes from the Laxopa, Guiloixi, and Yalina varieties, which exhibit a weaker form of the GCC (see Foley & Toosarvandani, to appear).

argument, which determines, in both cases, whether the lower argument can move (for the LDB, whether the higher argument is a lexical DP and for the GCC, its location on a conceptual hierarchy of animacy). This suggests that the same core computational mechanism underlies both the LDB and the GCC, with their superficial differences arising from the specific properties of the goals involved. As we show next, to capture the parallel between the LDB and GCC, this mechanism makes reference to their featural representation.

### 3. The featural representation of (pro)nominals

We suggest that all nominals, including lexical DPs and pronouns, are specified for a PERSON feature, which we call  $\delta$ . In addition, all and only personal pronouns are further specified with at least a  $\pi$  feature (Béjar 2003). These features stand in a structured relationship: the presence of  $\pi$  asymmetrically requires the presence of  $\delta$ .

- |     |                       |                    |
|-----|-----------------------|--------------------|
| (9) | a. <i>Lexical DPs</i> | b. <i>Pronouns</i> |
|     | $\delta$              | $\delta$           |
|     |                       |                    |
|     |                       | $\pi$              |
|     |                       | ⋮                  |

PERSON is thus implicated in both the sameness of pronouns and lexical DPs, and in the difference between them.

We take these categories to have semantic content, and we outline a plausible semantics for PERSON which can naturally accommodate its extension to  $\pi$  and  $\delta$ . We start with a familiar semantics for local PERSON, as in (10a–b), in which SP and PA are privative features which denote one-place predicates which combine intersectively (e.g., Heim & Kratzer 1998). Both refer to discourse roles: the speaker of the speech situation or another participant in that situation.

- (10) a.  $[[\text{SP}]]^c = \lambda x : x \text{ is SPEAKER}(c) . x$   
 b.  $[[\text{PA}]]^c = \lambda x : x \text{ is a participant in the conversation of SPEAKER}(c) . x$

Sichel & Wiltschko (2021) propose that the semantics of  $\pi$  is likewise defined in terms of discourse roles. They argue that  $\pi$  describes potential discourse participants: individuals who are possible discourse subjects, or in other words, potential interlocutors who can talk and be talked to.

- (11)  $[[\pi]] = \lambda x : x \text{ is a potential participant in a conversation} . x$

In this system, all PERSON features refer to the participation of an individual in discourse (whether spoken or signed). Given this semantics, SP asymmetrically entails PA (their LOCAL), which in turn asymmetrically entails  $\pi$  (their PERSON), an arrangement which they call the Person Sphere. The Person Sphere stretches up to include Discourse Referents ( $\text{DR}_N$ ), the class of individuals which can be talked about and includes discourse subjects: i.e.,  $[[\text{SP}]] \subset [[\text{PA}]] \subset [[\pi]] \subset \text{DR}_N$ . This inclusion relation between the two outer layers places the relationship between  $\text{DR}_N$  and  $\pi$  on a continuum which extends from SP to non-pronominal DPs.

Returning to the LDB in Sierra Zapotec, we are committed to all personal pronouns bearing  $\pi$ , since all object pronominal clitics are affected by a lexical DP subject in the same way. No object pronoun, whatever its animacy, can cliticize when the subject is a lexical DP. Since this holds also for animate and inanimate pronouns whose referents cannot plausibly be characterized as potential discourse subjects, we are faced with the challenge of incorporating the behavior of animate, and especially inanimate, pronouns into this characterization of  $\pi$ . One possibility would be to expand the denotation of  $\pi$  to include both discourse subjects (who talk) and discourse objects (who are talked about). While this would admit non-human referents, it would undercut the basis for Sichel & Wiltschko's analysis of a pejorative effect which arises when pronominal demonstratives are used to refer to humans.

Another possibility is that both denotations are, in principle, available, and languages choose which they encode. Béjar (2003) suggests a finely-articulated hierarchy of such semantic categories, with particular languages restricting the semantic range of their  $\pi$ . On this interpretation, the Person Sphere is to be understood extensionally, as defining a structured range of semantic categories, to which linguistic expressions such as SP, PA,  $\pi$ , or  $\delta$  would be mapped. While the semantic categories and the relations which define them would be universal, languages vary in terms of where they place  $\pi$ : immediately above discourse subjects, in which case  $\pi$  would be restricted to potential interlocutors, or slightly higher, in which case it may also include non-potential interlocutors, as in the Zapotec animate and inanimate pronominal categories.

An independent way in which  $\pi$  might be distinguished from  $\delta$  in a language like Sierra Zapotec involves the concrete-abstract distinction. If  $\pi$  only describes concrete entities (Sichel & Wiltschko 2021), an inanimate pronoun should not be able to refer to abstract entities such as propositions, as in (12).

- (12) Q: E<sup>1</sup> nhezd<sup>4</sup>=u<sup>4</sup> wxe<sup>2</sup> ye<sup>2</sup>lha'a<sup>2</sup> bi<sup>24</sup>zanh<sup>4</sup>=a<sup>4</sup>?  
 Q STAT.know=2SG tomorrow POT.arrive sister=1SG  
 'Do you know that my sister is arriving tomorrow?'  
 A: Nhezd<sup>24</sup>=a'(\*=nh)<sup>4</sup>.  
 STAT.know=1SG=3.IN  
 'I know (it).' (RM, GZYZ096, 2:00)

Either way, a discourse-role semantics for  $\pi$  within the structure of the Person Sphere seems feasible.

The denotation of  $\delta$  is less clear. Since all nominals must bear this feature, its meaning must encompass both pronouns and lexical DPs. Sichel & Wiltschko's Person Sphere includes an outer layer associated with the broadest class of referential nominals, subsuming both pronouns and referential lexical DPs. Semantically, this layer corresponds to the class of discourse objects, i.e. the individuals which can be referred to by a nominal. But in Sierra Zapotec, it is not just referential expressions which prohibit object cliticization, but all lexical DPs, including quantificational ones.

- (13) a. Ts-ja<sup>2</sup>-se'e<sup>2</sup>-naw<sup>23</sup> to<sup>4</sup>to<sup>4</sup> bi<sup>2</sup>dao<sup>2</sup> **leb**<sup>24</sup>.  
 CONT-AND-PL-follow every child **3.AN**  
 'Every boy chased the dog.' (RM, GZYZ083, 1:40)  
 b. \*Ts-ja<sup>2</sup>-se'e<sup>2</sup>-naw<sup>2</sup>=b<sup>4</sup><sub>1</sub> to<sup>4</sup>to<sup>4</sup> bi<sup>2</sup>dao<sup>2</sup> t<sub>1</sub>.  
 CONT-AND-PL-follow=**3.AN** every child (RM, GZYZ083, 1:45)

For this reason,  $\delta$  cannot be tied to reference as directly as Harley & Ritter's (2002) REFERRING EXPRESSION or Béjar & Kahnemuyipour's (2017) *d* features are. Instead, it must be tied to a semantic property which holds of both referential and quantificational nominals, and does not hold of other linguistic categories, such as adjectives and verbs. Our modified semantics for  $\delta$  can incorporate quantificational DPs consistent with the extensional interpretation of the Person Sphere.

Baker (2003:94–189) identifies *individuation* as the property unique to nominals (following Geach 1962 and others). Whereas all lexical categories have “criteria of application,” determining whether an individual is a member of the class denoted by the expression, nominals have an additional “criterion of identity.” This is what makes it possible to individuate entities and determine whether particular individuals are the same thing or not, a precondition for reference tracking as well as for quantification. This is also why only nominals can directly form referential or quantificational expressions. (For adjectives or verbs to serve these functions, additional morphology is usually required.)

We adopt this characterization of nominals, and assume that a nominal implies individuation. It is this feature which determines that DPs, but not adjectives or verbs, intervene for object clitics. However, we see no compelling reason to associate this property with the category N, as Baker does, since it is also associated with pronouns and with deverbal nominalizations, which contain no N. Instead, we associate the individuation property with  $\delta$ , which by hypothesis is found inside all nominals. A linguistically individuated entity corresponds to the notion of discourse referent, or discourse objects (entities that we can talk about), in the outer layer of the Person Sphere. If we understand the outer layer

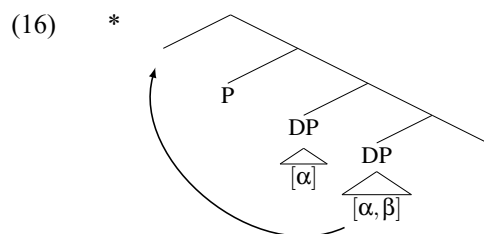
to refer to types of entities, rather than to types of expressions, the characterization of nominals in terms of individuation can also cover the intervention potential of quantificational nominals.

#### 4. A probe activation model of Agree

The incorporation of  $\delta$  introduces a featural asymmetry across nominal classes: pronouns are more specified than lexical DPs, since they bear additional PERSON features. With this specificational asymmetry in place, the two restrictions on pronominal cliticization in Section 2, repeated in (14–15) below, can be understood as following a single pattern.

- (14) *Lexical DP Blocking (LDB)*  
An object pronoun cannot cliticize when the subject is a lexical DP.
- (15) *Gender–Case Constraint (GCC)*  
An object clitic pronoun cannot exceed a subject clitic pronoun on the animacy hierarchy, i.e., EL > HU > AN > IN.

Cliticization of an object pronoun is prohibited when it is more featurally specified than the subject, as schematized in (16).



In the LDB, object cliticization is prohibited when the subject is a lexical DP, which by hypothesis has a subset of the features of a pronoun. In the GCC, pronouns higher on the hierarchy have more features than those lower on the hierarchy (much as first person is more featurally specified than second or third person).

Following Anagnostopoulou (2003), we take these asymmetries to arise from the Agree mechanism. If Agree is a necessary precondition for pronominal cliticization, then a pronoun will be unable to cliticize when a probe does not Agree with it. While there is more than one way of configuring the Agree operation, we adopt a *probe activation* model in order to derive both the LDB and GCC (see Sichel & Toosarvandani 2020b for further details and discussion of alternatives):

- (17) *Probe activation*
- a. **Locality:**  
The probe  $P$  c-commands all goals and Agrees subject to intervention-based locality (i.e., Attract Closest). Thus, it must Agree with the highest goal  $G$  in its domain.
  - b. **Activation:**  
After Agreeing with  $G$ , the probe is “activated” and is able to Agree with another goal  $G'$ , though it is not required to, just in case  $G'$  is not more featurally specified than the probe (i.e.,  $G' \subseteq P$ ).

Agree is subject to intervention-based locality, and so a probe must Agree with the closest goal. After doing so, it can, but need not, Agree with lower goals, as determined by the goals’ properties. For instance, after Agreeing with the subject, a probe is able to Agree with the object. If it is a clitic pronoun, a second round of Agree is mandated, because the clitic pronoun must move. In the probe activation model, such subsequent rounds of Agree are only allowed, according to (17b), if the lower goal is not

more featurally specified than the higher goal. This derives the featural asymmetry, depicted in (16), underlying the LDB and GCC.

## 5. A new perspective on another (pro)nominal interaction

In closing, we turn to a striking parallel between the LDB and one of the restrictions on pronoun movement (OS) in Scandinavian collectively known as Holmberg’s Generalization (HG; Holmberg 1986, 1999). In addition to the effect of the verb’s position (18a–b), OS is blocked across a dative argument (18c), unless the dative is also a pronoun that moves (18d).

- (18)
- |    |      |                      |                           |                         |                |                  |                    |                     |
|----|------|----------------------|---------------------------|-------------------------|----------------|------------------|--------------------|---------------------|
| a. | Jag  | kysste <sub>t1</sub> | <b>henne</b> <sub>2</sub> | inte                    | t <sub>1</sub> | t <sub>2</sub> . |                    |                     |
|    | I    | kissed               | <b>her</b>                | not                     |                |                  |                    |                     |
| b. | *Jag | har                  | <b>henne</b> <sub>1</sub> | inte                    | kysst          | t <sub>1</sub> . |                    |                     |
|    | I    | have                 | <b>her</b>                | not                     | kissed         |                  | (Holmberg 1999: 1) |                     |
| c. | *Jag | gav <sub>1</sub>     | <b>den</b> <sub>2</sub>   | inte                    | Elsa           | t <sub>1</sub>   | t <sub>2</sub> .   |                     |
|    | I    | gave                 | <b>it</b>                 | not                     | Elsa           |                  | (Holmberg 1999: 2) |                     |
| d. | Jag  | gav <sub>1</sub>     | <b>henne</b> <sub>2</sub> | <b>den</b> <sub>3</sub> | inte           | t <sub>1</sub>   | t <sub>2</sub>     |                     |
|    | I    | gave                 | <b>her</b>                | <b>it</b>               | not            |                  | t <sub>3</sub>     |                     |
|    |      |                      |                           |                         |                |                  |                    | (Holmberg 1999: 26) |

Can our featural system be extended to account for the dative corner of HG, which parallels the LDB? It seems plausible that OS might be blocked in (18c) if OS is predicated, like pronominal cliticization, on Agree. Because of the activation condition in (17b), Agree with the accusative pronoun would be impossible when the dative argument is a lexical DP: any pronoun is more featurally specified than this lexical DP. While this seems to be a direction worth pursuing, we see three challenges.

First, in Swedish, the intervener for OS is a dative argument, while in Sierra Zapotec, it is the subject. This difference may naturally fall under the locality constraint in (17a). In both languages, there is a probe that interacts with the object pronoun. In Sierra Zapotec, this probe first interacts with the subject, while in Swedish, it first interacts with the dative. Importantly, the intervener in both cases is structurally higher than the direct object. We attribute the intervention of the subject in Sierra Zapotec, a VSO language, to the fact that the subject in this language is lower than it is in Swedish see Adler et al. 2018 for an account of verb initiality in Sierra Zapotec). While the details remain to be fleshed out, we do not consider this to be too serious a challenge.

Second, detaching dative intervention in this way from the broader pattern of HG suggests that it is distinct from the other instantiations of HG. But is it? Besides verb-object interaction, the generalization also extends to particle-object interactions. There are reasons to think that the latter is distinct. While in Swedish the object pronoun always follows the particle, the situation in the other Scandinavian languages is different: in Danish, pronouns and lexical DPs must precede the particle, and in Norwegian, a lexical DP may precede the particle, while a pronoun must. This pattern of variation is unique, and it seems to justify severing particle intervention from HG. If so, the residue of HG is the dependency of weak pronoun movement on verb movement. Such patterns of pronoun-verb dependency are cross-linguistically familiar, and this part of HG may ultimately find its place within the broader cross-linguistic tendency for adjacency between weak pronominals and the verb. While details remain to be fleshed out, a separate analysis for the dative corner of the generalization seems feasible as part of a deconstruction of the broad view of HG presented in Holmberg (1999).

Third, our syntactic reanalysis of the dative corner of HG constitutes an alternative to a family of shape conservation approaches, which apply at PF to preserve the linear order of elements across levels of representation (e.g., Fox & Pesetsky 2005). A possible challenge, in this context, is that further A'-movement of the offending dative in Swedish removes the violation, consistent with order conservation (Holmberg 1999). However, similar movement of the subject in Sierra Zapotec has no such effect (see Sichel & Toosarvandani 2020b for discussion). This might seem to suggest that, while the LDB is not governed by shape conservation, HG is. However, it is also possible that the contrast derives from the different syntax of the interveners (dative vs. subject) with respect to the object, to the probe, and to any intervening phases, in line with Anagnostopoulou’s account (2004) of HG.

## 6. Conclusion

Object cliticization in Sierra Zapotec is subject to a suite of constraints which relate the values of an object pronoun to the values of the corresponding properties of a subject, including the GCC and the LDB. An assimilation of the LDB to the GCC in terms of a feature specification asymmetry highlights the need for a richer PERSON domain. Our claims about  $\delta$  are to a certain extent, therefore, also claims about the overall representation of “nominality,” as a grammatical property with semantic content, which extends to pronominals and non-pronominals alike. It also suggests a novel configuration for Agree, which combines elements of Attraction and elements of Greed: following the first obligatory round, subsequent rounds are optional, determined solely by properties of the object. Coupled with such a theory, we have the beginnings of an understanding of  $\pi$  and  $\delta$  as features that are semantically contentful, morphosyntactically active, and associated with the functional parts of the noun phrase.

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