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Null objects, null nominal anaphora and antilogophoricity[1]

Abstract: This paper discusses null objects (NOs) in Ibero-Romance. European Portuguese (EP) has both definite and indefinte NOs, but Castillian Spanish (CSpanish) only allows NOs when the antecedent is a bare plural nominal or a mass noun. The paper argues that these differences are related to the distribution of bare nominals in each language and proposes that the same underlying mechanism is at the root of indefinite and definite object drop, namely a rootless [$_{nP}$ *n*] proform. [$_{nP}$ *n*] denotes a contextually salient property, its possible interpretations being derived by general type-shifting operations. In CSpanish, the property denoted by [$_{nP}$ *n*] is interpreted as a restrictive modifier of the predicate and the relevant variable is bound under VP level Existential Closure. Focusing on EP, there are striking similarities between definite NOs and other types of nominal anaphora, including epithets. In particular, like epithets, NOs are subject to an *Antilogophoricity Constraint*. This affinity between NOs and epithets constitutes a case in favor of the idea that the NO is a base-generated nominal. The difference with respect to CSpanish lies in the possibility of interpreting the null nominal by a choice function, a function maps a property onto an entity that has the property.

Keywords: Null objects; nominal anaphora; epithets; anti-logophoricity

1 Introduction

This paper focuses on null objects in European Portuguese (EP) and Castillian CSpanish (CSpanish). Unagreed with zero objects have been analyzed as variables (Huang 1984; Raposo 1986; Campos 1986), as *pro* (Galves 1989; Kato 1993; Farrell 1990), as topic drop (Erteschik-Shir et al. 2013), as DP or argument ellipsis (Cyrino 1994, 1997, 2001, 2017; Takahashi 2006, 2007, 2008b; Landau 2018), and as instances of null *n*P anaphora (Hoji 1998; Tomioka 2003; Raposo 1998, 2004; Kato and Raposo 2005; Dvořák 2015; Ruda 2017; Barbosa 2019). Currently, the predominant analyses are the latter two.

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The argument ellipsis (AE) analysis, by contrast, treats null objects as an ellipsis phenomenon derived either (i) by PF-deletion of a full-fledged DP (Cyrino 1994, 1997, 2017; Takahashi 2008b; Landau 2018); (ii) by an LF operation that copies the content of the antecedent onto a literally empty nominal (Oku 1998; Kim 1999; Saito 2007); (iii) or by External Merge after Transfer to the interfaces (Landau 2023a,b).

The null *n*P proform analysis assumes that the null object is a base generated nominal [$_{nP}$ ∅] and is contextually interpreted. This approach goes back to Tomioka (2003), who observed that all of the languages that allow discourse pro-drop (i.e., languages that lack agreement morphology altogether and yet allow any argument to be null) have (robust) bare NP arguments. He suggested that what underlies discourse pro-drop is the fact that languages (almost) universally allow phonologically null NP anaphora/ellipsis.

(1) John bought one book. I bought five [$_{\text{NP}}$ —]

(2) [$_{\text{DP}}$ [$_{\text{D}}$ five] [$_{\text{NP}}$ ∅]]

In a language that lacks determiners or licenses a null D, this operation will give rise to phonologically unrealized arguments. In languages in which D is necessarily present and overt, a remnant D will always show up so this process will never give rise to a silent argument.

Tomioka (2003) relates the semantic diversity of Japanese null arguments to the inherent semantic flexibility of full-fledged bare NPs in Japanese. He proposes that the different uses of full-fledged NPs are derived from one basic meaning, a property (type $< e, t >$), and their semantic differences are the result of general (independently needed) type-shifting operations, namely Existential Closure ((3)) and type-shifting to an individual (4).

(3) Existential Closure (Heim 1982): ∃-closure
For any $P \in D < e, t >$
∃-closure$(P) = \exists x.P(x)$

(4) Type shifting of a predicate to an individual (Partee 1987): *Iota*
For any $x \in D, P \in D < e, t >$
$\iota(P) = \iota x.P(x)$ = the unique x such that $P(x)$

He suggested that Japanese *pro* is a null NP whose descriptive content is pragmatically retrieved and showed that the same semantic tools that are used to interprete full NPs are used to interprete *pro*.

A concrete exemplification of Tomioka's analysis can be found in Kurafuji (2019: 5). Consider the following Japanese example:

(5) a. *A. Ken-wa zibun-no kuruma-o arat-ta.*
Ken-TOP self-GEN car-ACC wash-PAST
A: 'Ken washed his car(s).'
b. *B. Erika-mo ∅ arat-ta.*
Erika-also wash-PAST
B: 'Erika washed (her/his/a) car(s) too.'

(5-b) can be interpreted in different ways, as indicated in the English translation. In Tomioka's system, the sloppy definite reading is derived as follows. In the situation in which (5-b) is uttered, the property λy[car (y) & own (x,y)] is salient, so the zero argument is interpreted as denoting this property. Since the predicate requires an object of type *e*, the property is type-shifted to *e* via Iota-closure, resulting in ιy[car (y) & own (x, y)]. After the variable x is replaced by the denotation of Erika, the sloppy reading is obtained. (5-b) also has the indefinite sloppy reading 'Erika also washed some car of hers'. This reading arises when the variable introduced by the salient property is bound under existential closure (rather than by Iota), yielding the interpretation $\exists y$[car (y) & own (Erika, y) & wash (Erika, y)]. The strict interpretation is obtained in similar ways from the salient property λy[car (y) & own (Ken, y)]. When the property λy[car (y)] is salient, the reading $\exists y$[car (y) & wash (Erika, y)] is obtained by existential closure.

Takahashi (2008a) discusses data involving QPs that are problematic for Tomioka's proposal, but Kurafuji (2019) addresses this problem and proposes a solution that is based on the idea that the base-generated empty nominals are interpreted by choice-functions, where a choice function f is a function that maps a property onto an entity that has the property (Reinhart 1997; Kratzer 1998; von Heusinger and Kempson 2004). It can be regarded as a type-shifter that yields an indefinite interpretation when under the scope of $\exists$ or a specific/definite interpretation when free (the reader is referred to Kurafuji (2019) for the details of the formal analysis).

The existence of a nearly semantically empty NP that is generally available has been independently posited by Panagiotidis (2002, 2003) as well as Elbourne (2005), who propose to unify this default item with 'one' in English. They suggest that this is precisely the category that occurs in pronouns, regarded as determiners that have an index and an NP slot (Postal 1966). In Elbourne (2005)'s perspective, this is a kind of default NP the meaning of which is 'entity' or 'individual', and is translated as $[\lambda x :\in D_{<e>}.x \in D_e]$ (a property that is trivially true of any individual in the domain).

Combining these proposals with the idea that nouns are formed by merging a root with a categorizer, Dvořák (2015), Ruda (2017) and Barbosa (2019) suggest that a plausible candidate for the null proform is an *n* that lacks a syntactically projecting restricting property. On the assumption that nouns start the derivation as category neutral roots that combine with a categorizing *n* head (Marantz 2001), the possibility arises that this item minimally consists in the categorizing head *n*: it corresponds to an *n* that

doesn't merge with a root[2]. Dvořák (2015) explores the role of rootless *n* in her treatment of the generic null object in Czech, and so does Ruda (2017), in her study on missing objects in English, Polish and Hungarian. In their view, grammatical Gender (*u*Gender) is marked on *n* (Lowenstamm 2008), so the structure of *n*P is as follows:

(6) $[_{nP}\ [_{n}\ u\text{Gender}\ ]\ ]$

When such a rootless *n*P is merged under an overt D bearing an index [cf. Elbourne (2005)], an overt pronoun is obtained. Whenever *n*P is bare or when it is selected by functional material lacking phonetic content, a null Number or Classifier head, or even a null D (depending on the language and the context), we get a null argument.

(7) a. $[_{\text{NumP}}\ [_{\text{Num}}\ \emptyset\ ]\ [_{nP}\ \emptyset\ ]]$
b. $[_{\text{DP}}\ [_{\text{D}}\ \emptyset\ ]\ [_{nP}\ \emptyset\ ]]$
c. $[_{\text{DP}}\ [_{\text{D}}\ \emptyset]\ [_{\text{NumP}}\ [_{\text{Num}}\ \emptyset\ ]\ [_{nP}\ \emptyset\ ]]]$

*n*P denotes a contextually salient property, or, in the absence of one, it is interpreted by default as the property 'entity' [cf. Marantz (2013)].

CSpanish and EP differ from each other in interesting ways concerning the availability of object drop and, as argued in Raposo (1998), these differences are related to the distribution of bare nominals in each language. In spite of the differences between the two languages, I argue that what is at the heart of object drop in both of them is property (nominal) anaphora.

I start by examining CSpanish, where objects can only be dropped when their antecedent is a bare plural or a bare mass noun. Drawing on Laca (2013), I claim that at the root of the zero indefinite object is an element of category *n*P and of semantic type $< e, t >$. It denotes a contextually salient property that composes with the verbal predicate by predicate modification. Since the property argument does not instantiate/saturate the predicate, the variable introduced by the verbal predicate ends up bound by predicate(event)-level existential closure.

Then I focus on EP definite null objects (DNOs). These have the following properties:[3]

1. They allow sloppy and strict readings.
2. The antecedent of a DNO that is contained in an embedded clause selected by a propositional attitude or communication verb cannot be a matrix subject:

2 In effect, the idea that *n* = 'entity' by default can already be found in Marantz (2013).

3 Other languages with DNOs that have some features in common with EP DNOS are Hebrew (Erteschik-Shir et al. 2013; Landau 2018), Polish (Ruda 2017) and BP (Cyrino 1994, 1997).

(8) *O João$_k$ disse que a Maria não conhece $\phi_{*k/i}$ pessoalmente.*
the João said that the Maria not know ø personally
'João said that Maria doesn't know him in person.'

3. They display animacy effects (Costa and Duarte 2003). Corpus investigations revealed higher frequencies of DNOs with inanimate antecedents (Schwenter 2014; Castro et al. 2017; Rinke et al. 2018).

I review these properties in light of the different analyses that have been proposed in the literature and I conclude that they do not easily accommodate properties 2 and 3. However, under close inspection, unquestionable cases of nominal anaphora do indeed display these properties. The first case I will look at is a particular type of Noun Incorporation (NI) used to express nominal arguments that are backgrounded old information (Type III NI (Mithun 1984)). The second case are epithets in object position.

The affinities between DNOs and epithets have already been addressed by Huang (1991). In particular, property 2 is true of both. These affinities fit in well with the hypothesis that the null object is a base generated null nominal with the default interpretation '(the) entity'. Narahara (1991) and Dubinsky and Hamilton (1998) have shown that epithets are subject to an *Antilogophoric Constraint* that requires the referent of its antecedent to be distinct from the individual whose speech and thoughts are being reported. I argue that the same *Antilogophoric Constraint* applies to EP DNOs, a fact that explains a range of subtle differences in status of sentences with DNOS with animate antecedents.

Sells (1987: 14) observes that R-expressions are also subject to antilogophoricity and proposes the following principle:

(9) Sells's *Antilogophoricity Principle* (1987b:14)
Any reference to an individual bearing a discourse role must be syntactically expressed by a pronominal.

This means that only pronominal forms have the option of being anaphoric to an individual bearing a discourse role. In the case of a logophoric pronoun, association between the pronoun and a role-bearing individual is obligatory; an ordinary pronoun may or may not be associated with a role-bearing individual.

I propose that it is this restriction (or any other version thereof) that accounts for the properties of DNOs. In the division of labor between the option for using a pronoun or an empty object, only the former will be capable of referring back to the individual whose speech and thoughts are being reported. This approach has the added advantage of potentially explaining the (quantitative) animacy effects found with DNOs in corpus studies.

Finally, I argue that the null object in EP also minimally consists in an *n*P lacking a root. It denotes a contextually salient property whose possible interpretations are derived via choice-functions, which yield an indefinite interpretation when under the scope of ∃ or a specific/definite interpretation when free.

2 Indefinite Argument Drop in CSpanish

While EP has null objects interpreted as definite (10-a), CSpanish only has indefinite argument drop (IAD)[4]. The CSpanish counterpart to (10-a) requires the presence of the clitic (10-b). (11), by contrast, is fine, as originally noted by Campos (1986).

(10) a. Portuguese

Este casaco é bem barato. Não queres comprar ϕ ?
this coat is very cheap not want-2SG to-buy
'This coat is very cheap. Don't you want to buy it?'

b. CSpanish

*A: ¿Comiste el pastel? B: No, no *(lo) comi.*
A: eat.PAST.2SG the cake B: no, not (it) eat.PAST.1SG.
A: 'Did you eat the cake?' B: 'No, no *(lo) comi.'

(11) CSpanish (Campos 1986)

A: ¿Compraste regalos? B: Si, compré ϕ.
A: buy.PAST.2SG presents B: yes buy.PAST.1SG

A: 'Did you buy presents?' B: 'Yes, I did '

IAD can only have a bare nominal as antecedent. When an indefinite determiner introduces the direct object, the determiner may not be omitted

(12) *A: ¿Compraste algunos regalos? B: *Si, compré. / Sí, compré algunos.*
A: buy.PAST.2SG any presents B: yes buy.PAST.1SG / yes, buy.PAST.1SG some
A: 'Did you buy presents?' B: * 'Yes, I bought '. / 'Yes, I bought some.'

4 The term *Indefinite Argument Drop* was originally introduced by Giannakidou and Merchant (1997) in their analysis of a somewhat similar phenomenon in Greek.

Thus, in CSpanish, there is a very clear correlation between the availability of a zero object and the occurrence of a bare nominal in argument position.[5] These correlations are discussed by Laca (2013). She shows that bare plurals (BPLs) in CSpanish are restricted to occur in post-verbal position and take obligatory narrow scope with respect to negation and other scope bearing elements. She argues that they are basically $< e, t >$-type expressions that denote properties, as previously proposed by Dobrovie-Sorin and Laca (1998) and McNally (2004).

As property-denoting expressions, BPLs and bare mass nouns cannot combine with the verbal predicate, which requires an e-type argument. One way of solving the mismatch is by interpreting the property argument as a restrictive modifier of the predicate. There are different implementations of this semantic operation[6], but all of them share the idea that the property argument does not instantiate/saturate the predicate; hence, the variable introduced by the verbal predicate ends up bound by predicate(event)-level existential closure. This accounts for the obligatory narrow scope of bare nouns. Thus, the predicate *comprar regalos* ends up being interpreted as follows in Laca (2013)'s analysis.

(13) a. comprar regalos
b. λx $\exists$y REGALOS (y) $\wedge$ (x COMPRAR y)

Laca extends this analysis to the empty nominal in IAD. First, she presents evidence that IAD may appear inside a strong island, which is an indication that it is not derived by movement:

(14) a. *Puros estoy segura de que no conozco a nadie que fume.*
Cigars am sure of that not know.1SG to nobody that smoke.
'(As for) cigars I'm sure I don't know anybody who smokes them'
b. *Periódicos hay un comerciante en el barrio que vende.*
newspapers has a shopkeeper in the neighborhood that sells
'(As for) newspapers, there is a shopkeeper in the neighborhood who sells them.'
(Laca 2013: Ex. (29),12-13)

5 Greek shows a similar correlation between IAD and bare nominals (Giannakidou and Merchant 1997).
6 One commonly adopted implementation, known as "semantic incorporation", is due to Geenhoven (1996). This is the approach adopted by Dobrovie-Sorin and Laca (1998) in their analysis of CCSpanish and Romanian BPLs and bare mass nouns. Yet another implementation is the Existential type-shift mode of composition (Cohen and Erteschik-Shir 2002). Existential type-shift is a rescue operation that is available for the resolution of type-mismatches such as those created by a property denoting expression in argument position. Laca (2013) adopts this view. Somewhat similar implementations include the operation *Unification* in Farkas and de Swart (2003) and *Restrict* in Chung and Ladusaw (2003).

Then she suggests that the zero object in (11) is an element of category N/NP and of semantic type $< e, t >$ (somewhat like the clitic *en/ne* in Catalan, Italian and French). One piece of evidence that supports this view is that even when the previously mentioned element is a weak indefinite, the semantic antecedent for the null nominal is only the nominal descriptive content:

(15) *María trajo diez libros, y Pedro también trajo ø.*
María brought ten books and Pedro also brought ø
'Maria brought ten books and Pedro also brought books/some books.'
(Laca 2013: Ex.(31), p.13)

In (15), the null nominal is interpreted as the salient property 'libros'. Here I adopt Laca's (2013) analysis. I assume that the empty object is a rootless *n* that denotes a contextually salient property.

3 Definite null objects (DNOs) in EP

In this subsection, I address DNOs in EP. These have been shown to display the following properties (Raposo 1986, 2004; Costa and Duarte 2003):

1. Strict and sloppy readings
   In (16) below the null object can be understood as referring either to Maria's earrings or to her mother's earrings.

   (16) *A Maria pôs os brincos na estante, mas a mãe guardou ø no cofre.*
   the Maria put.PAST.3SG the earrings on.the shelf, but the mother kept ø in.the safe
   'Maria put her earrings on the shelf, but her mother put them in the safe.'

   The availability of the sloppy interpretation characterizes discourse pro-drop (see above) and is a stable crosslinguistic characteristic feature of DNOs in EP (Costa and Duarte 2003), BP (Cyrino 2017) and Hebrew (Erteschik-Shir et al. 2013; Landau 2018) .
2. The antecedent of a DNO that is contained in an embedded clause selected by a propositional attitude or a communication verb cannot be a matrix subject:

   (17) a. **O João*$_i$ *disse que a Maria não conhece ø*$_i$ *pessoalmente.*
   the João said that the Maria not know ø personally
   'João said that Maria doesn't know him in person.'
   b. [Speaking of Peter$_k$ ...]

O João$_i$ disse que a Maria não conhece $\phi_{k/*i}$ pessoalmente.
the João said that the Maria not know ø personally
'João said that Maria doesn't know him (=Peter) in person.'

In (17), the embedded object EC may refer only to someone whose reference is fixed in discourse, outside of the entire sentence, but not to the matrix subject. Similar effects obtain in BP (Cyrino 2017) and have been described for Chinese and Korean (Huang 1984, 1991).

3. DNOs preferably occur with inanimate antecedents (Costa and Duarte 2003). *Corpus* investigations revealed higher frequencies of DNOs with inanimate antecedents (Schwenter 2014; Castro et al. 2017; Rinke et al. 2018). Similar effects obtain in BP (Cyrino 2017), Hebrew (Erteschik-Shir et al. 2013) and Polish (Ruda 2017). This feature, however, is not categorical - DNOs with animate antecedents do occur - and can best be described as a tendency.

This set of properties (particularly properties 2 and 3) casts doubt on an analysis of DNOs as pronouns and this is the reason why early analyses of DNOs proposed that they are variables bound to a null topic (Huang 1984; Raposo 1986). However, this hypothesis predicts that DNOs should be sensitive to strong islands, a prediction that is not quite confirmed. In fact (Raposo 2004) revises his previous claim that DNOs in EP obey strong islands and provides the following judgements:

(18) a. Topic: those important documents
?Eu informei a polícia da possibilidade de o Manel ter
I informed the police of.the possibility of the Manel have.INF
guardado ø no cofre da sala de jantar.
kept ø in.the safe of.the room of dinner
'I informed the police of the possibility that Manel has kept ø in the safe in the dining room.'

b. Topic: a cake
?Conheço o rapaz que trouxe ø agora mesmo da
know.1SG the boy that brought ø now just from.the
pastelaria.
bakery
'I know the boy that brought ø from the bakery just now.'
(Raposo 2004: Ex. (11), p.46)

Moreover, Rinke et al. (2018) found examples of DNOs inside strong islands in spontaneous oral speech in EP. Likewise, DNOs in BP are known for occurring inside strong islands and so are DNOs in Hebrew (Erteschik-Shir et al. 2013), Polish (Ruda 2017)

and Chinese (Audrey Li 2014). These facts indicate that the DNO is not an A-bar bound trace.

3.1 Raposo (1998, 2004)

Raposo (1998, 2004) explores the possibility that DNOs are cases of null NP anaphora under a null D. He observes that, in EP, bare nouns are allowed in a wider range of contexts than in Spanish. In particular, they may appear as objects of subject experiencer predicates, with a generic interpretation:

(19) a. *A Maria detesta cenouras.*
the Maria hates carrots
'Mary hates carrots.'
b. *Odeio café.*
hate.1.SG coffee
'I hate coffee.' Portuguese

(20) a. *María detesta *(las) zanahorias.*
Maria hates *(the) carrots
'Maria hates carrots.'
b. *Odio *(el) café.*
hate.1.SG *(the) coffee
'I hate coffee.' Spanish

For Raposo (1998), these contrasts between CSpanish and Portuguese are related to those concerning the (un)availability of definite zero objects. In particular, he claims that EP, unlike Spanish, has a null Definite Determiner, so that (19-a) is analysed as in (21):

(21) A Maria detesta [$_{DP}$ [$_{D_{def}}$ ø] [$_{NP}$ cenouras]]

A null object construction such as (22) is an instance of a null NP embedded under a null D:

(22) a. Mostrei aquele quadro à Maria e a Cristina mais tarde mostrou [ø] à Alexandra.
b. [mostrou [$_{DP}$ [$_{D_{def}}$ ø] [$_{NP}$ ø]] à Alexandra]
Raposo (1998: 209)

This approach has a lot in common with Tomioka's null NP proform analysis. In particular, it reinforces the generalization that there is indeed a correlation between the occurrence of bare nouns and the availability of (non-agreed with) zero arguments. This analysis contrasts with that of Cyrino (2017) for BP, Takahashi (2008b) for Japanese

and Landau (2018) for Hebrew. These authors argue that DNOs in these languages are derived by AE, i.e., ellipsis of full fledged DPs. In the next subsection I examine the predictions of the two approaches.

3.2 Evaluating the two approaches: AE *versus* base-generated null nominal proform

Both the AE and the null proform analyses have the potential to handle the availability of sloppy interpretation (see the discussion surrounding Japanese example (5-b)). On the other hand, Property 2, on the surface, appears to favor the AE analysis. Consider the structure of (17-a) under AE:

(23) **O João$_i$ disse que a Maria não conhece ~~o João$_i$~~ pessoalmente.*
the João said that the Maria not know ~~o João$_i$~~ personally

(23) violates Condition C. However, the picture is more complicated than this, as there are cases in which there is c-command and yet a null object is fine [cf. (24) and (25)].

(24) ?*A criança adoeceu$_i$ só depois de a mãe ter ido buscar ø$_i$*
the child got.sick only after of the mother have.INF gone fetch ø
à escola.
at.the school
'The child got sick only after her mother went to pick her up at school.'

(25) *Essa prato$_i$ exige que o cozinheiro acabe de preparar*
that dish demands that the cook finish.SUBJ.3SG of prepare.INF
ø$_i$ na mesa.
ø in.the table
'That dish demands that the cook finishes preparing it at the table.'
(Kato et al. 2023: 343)

Even though (24) might not be considered entirely perfect for some speakers, it is far better than (23); (25) is fine.[7]

Adopting a DP ellipsis analysis of DNOs in BP, Cyrino (1994, 1997, 2017) and Cyrino and Lopes (2016) attribute the ungrammaticality of the BP counterpart to (23) to the Condition on Parallelism or Identity Condition (Fiengo and May 1994), which ensures the 'recoverability' of silent material in ellipsis. On this account, a null object

7 I thank Jairo Nunes (p.c.) for drawing my attention to (25), which is mentioned in Kato et al. (2023: 343). There, the example is reported to be OK in BP, but ungrammatical in EP. However, I happen to find the example OK in EP..

would not be able to take a matrix subject as an antecedent without violating Parallelism, unless the subject is a derived subject. This account might work for the contrast between (23) and (24) (*adoecer* 'get sick' is an unaccusative verb) but would fail in the case of (25). Moreover, examples in which parallelism doesn't obtain are indeed not difficult to find. Consider (26):

(26) *Se esse remédio$_i$ te faz mal, não tomes ø$_i$.*
if that medicine CL.2SG does harm not take ø
'If that medicine harms you, don't take it.'

Thus, contrary to appearances, the facts under discussion are also not fully accounted for under the AE analysis.

As for Property 3, the animacy restriction, it is not easily accounted for under either analyses. Cyrino (2017) proposes that AE in BP is licensed by a low aspectual head and that animate DPs raise higher than non-animate DPs, so they cannot be ellided. The remaining cases of animate object drop in BP are due to different mechanisms: nominal ellipsis, in the case of indefinite null objects, and topic drop. Thus, maintaining the AE approach is done at the cost of abandoning the idea that object drop can be analysed in a uniform way.

Yet another problem is that, under this analysis, examples such as (24) can only be analysed as instances of Topic Drop. This would mean that the null object in (24) has the status of an A-bar bound trace. The trouble, however, is that this context doesn't exhibit strong cross-over effects, as shown in (27):

(27) (Speaking of the child ...)

pro$_i$ *adoeceu só depois de a mãe ter ido buscar ø$_i$ à*
pro got.sick only after of the mother have.INF gone fetch ø at.the
escola.
school

'She got sick only after her mother went to pick her up at school.'

To my ear, there is no significant difference in status between (27) and (24). Note in addition that the null object in these examples is buried inside an adjunt island, a context that generally does not allow extraction (28-b):

(28) a. *A Maria visitou o museu só depois de ter conhecido*
the Maria visited the museum only after of have.INF met
o curador.
the curator
'Maria visited the museum only after having met the curator'.

b. *$Quem_i$ *foi que a Maria visitou o museu depois de*
who was.it that the Maria visited the museum after of
ter conhecido t_i*?*
HAVE.INF met t_i

Finally, there are examples that are problematic for the AE analysis. Consider (29):[8]

(29) a. *O João apanhou morangos e disse à Maria para levar ø.*
the João picked.up strawberries and said to-the Maria to take
'João picked up strawberries and asked Maria to take them.'

b. *O João apanhou poucos morangos, e disse à Maria para*
the João picked.up few strawberries and said to-the Maria to
levar ø.
take
'João picked up few strawberries and asked Maria to them'

(29-b) doesn't have the reading predicted under AE, namely that João asked Maria to take few strawberries. It is only acceptable under the E-type interpretation ('João asked Maria to take the strawberries he picked up'). This interpretation is easily derived under the assumption that the empty object denotes a salient property closed under Iota.

Working within an AE approach, Landau (2023b) shows that QP objects that denote genuine generalized quantifiers cannot be null in Hebrew and other languages. The following EP example, adapted from Landau (2023b), shows that this restriction is operative in EP:

(30) *O João apanhou todos os morangos, mas a Maria não*
the João pick.PAST.3SG.up all the strawberries, but the Maria not
levou ø.
take ø.
'John picked up all the strawberries, but Maria didn't take them.'

(30) is fine under the E-Type interpretation. Now consider (31):

(31) *O João apanhou todos os morangos, mas a Maria não*
the João pick.PAST.3SG.up all the strawberries, but the Maria not
levou ø. #Levou a maior parte.
take.PAST.3SG ø take.PAST.3SG the most part
'John picked up all the strawberries, but Maria didn't take them all. She only took the most part.' $*\neg > \forall$

8 This type of example is originally discussed in Tomioka (2014).

(31) sounds incoherent, and this is so because the continuation forces the QP to be interpreted under the scope of negation. This means that the silent object cannot denote a generalized QP. Landau (2023b) proposes that this restriction is due to the following constraint on AE:

(32) Only *e*-type arguments can be the target of AE.

He then proposes an explanation for this constraint that is based on the idea that AE does not arise by simple PF deletion, but by External Merge of a full-fledged DP after transfer to PF (Landau 2023a).

This analysis predicts that extraction from the (silent) full-fledged DP should be possible. In fact, the general consensus in the literature is that extractability is the better indication of ellipsis (i.e., the presence of full-fledged structure at LF). The following examples, taken from Tomioka (2014), compare NP ellipsis with 'one' anaphora:

(33) *Ellipsis* versus *'one' anaphora*

a. At the museum, who did you see many portraits of, and who did you see just a few of?

b. *?At the museum, who did you see a large portrait of, and who did you see a small one of?
(Tomioka 2014: ex.(12a,b))

While ellipsis is compatible with sub-extraction, 'one' anaphora isn't. Now consider EP:

(34) a. *No museu, de que pintores é que viste mais quadros e de que pintores é que viste só alguns?*
at.the museum of which painters is.it that see.PAST,2SG more paintings and of which painters is.it that see.PAST,2SG only some?
'At the museum, which painters did you sell more pictures of and which painters did you see just a few of?'

b. *No museu, de que pintores é que viste mais quadros? *E de que pintores viu ø ela?*
at.the museum of which painters is.it that seePAST,2SG more paintings? And of which painters see.PAST,3SG ø she
'At the museum, which painters did you sell more pictures of? And which painters did she see just a few of?'

(34-b) shows that a null object is incompatible with sub-extraction, unlike NP-ellipsis. This constitutes an argument against the presence of a full-fledged DP in LF. For this reason, I conclude the AE is not the right analysis for EP null objects. By contrast, the parallelism with 'one' anaphora with respect to sub-extraction constitutes a point in favor of the null *n*P proform approach.

Even though properties 2 and 3 above may appear to be prima facie problems for the *n*P proform analysis, the fact is that, under close inspection, unquestionable cases of nominal anaphora do indeed display these properties. I will discuss these next. The first case I will be looking at is a particular type of Noun Incorporation (NI), used to express nominal arguments that are backgrounded old information [Type III NI (Mithun 1984)]. The second case are epithets in object position.

3.3 Type III NI (Mithun 1984)

There are NI languages in which an incorporated noun (IN) is used productively for discourse purposes, e. g., as a means to express backgrounded old information (Type III NI in (Mithun 1984)). Baker et al. (2005: 145) quote the following example from Mapudungun, attributed to Harmelink (1992: 135).

(35) Mapudungun

Kiñe kelluwen rëtre-ke-ø-y pali ñi tripalwe pële
one team push-HAB-30-IND.3SG ball 3.POSS goal toward
kangelu ingkawen katrütu-pali-ke-y.
her side intercept-ball-HAB-3SG

'One team pushes the ball toward their goal, and the other side tries to intercept it.'

Interestingly, when the antecedent is found in the same sentence as the IN, functioning as the subject of a higher clause, a coreferential interpretation is not accepted.

(36) *#Ti ullcha domo pe-fi-y ti ayü-domo-le-chi wentru.*
the young woman see-30-IND.3SG the love-woman-STAT-ADJ man
'The young woman saw the man who loved the/that woman (Baker et al. 2005: 146)

This is strongly reminiscent of Property 2 of DNOs.

Another feature of object drop in EP/BP that can also be found in cases of NI is sensitivity to animacy restrictions. The literature on NI indicates that inanimate nouns are more likely to incorporate than animate or human nouns (Mithun 1984). As happens in the case of DNO in EP, the animacy restriction is best described as a tendency and is not categorical.

The fact that Type III NI has features in common with DNOs suggests that nominal (= property) anaphora is the mechanism underlying DNOs. Since there is no evidence in favor of incorporation (the NO can be a Small Clause subject) I do not assume that *n*

incorporates. The set of properties that DNO and IN have in common follows from the fact that they instantiate nominal anaphora rather than from incorporation per se.

3.4 DNOs, epithets and antilogophoricity

Under the base-generated null nominal approach, in the absence of a contextually salient property, the null *n* is interpreted as the default property 'entity'. In this light, examples (17-a) and (17-b) above, repeated below as (37-a,b), are predicted to have the interpretations in (38-a,b), respectively:

(37) a. *O João$_i$ disse que a Maria$_j$ não conhece ø$_{*i}$ pessoalmente.*
the João said that the Maria not know ø personally

b. [Speaking of Peter$_k$ ...]
O João$_i$ disse que a Maria$_j$ não conhece ø$_k$ pessoalmente.
the João said that the Maria not know ø personally

(38) a. João said that Maria doesn't know **the entity** in person.

b. [Speaking of Peter ...] João said that Maria doesn't know **the entity** in person.

In (38-a), the expression 'the entity' cannot refer to either João or Maria, but it may refer to a contextually salient entity (38-b). This finding suggests that, with respect to choice of antecedent, DNOs have features in common with nominal anaphora.

In this context, it is relevant to look at epithets, which are paradigmatic cases of nominal anaphora. As a matter of fact, the similarities between DNOs and epithets have already been described in the literature by Huang (1991) and, more recently, Liu (2004). Huang (1991) points out that epithets in English have the following set of properties:

1. They may not be A-bound (under circumstances to be examined below)

   (39) *John thinks that Mary knows the bastard.

2. They may be A'-bound

   (40) John, I saw the bastard.

3. They need not be A'-bound

   (41) Did you see the bastard?

In Chinese, the same observations hold:

1. Epithets may not be A-bound (under certain circumstances, see below)

(42) **Zhangsan yiwei [zhege bendan hen youqian].*
Zhangsan think this idiot very rich
'*Zhangsan thinks that the idiot is very rich.'

2. They may be A'-bound

(43) *Zhangsan, wo bu xihuan zhege wangbadan*
Zhangsan I not like this bastard
'Zhangsan, I don't like the bastard.'

3. They need not be A'-bound

(44) *wo bu xihuan zhege wangbadan*
I not like this bastard
'I don't like the bastard.'

Huang (1991: 62) states the following:

> Not all these properties of epithets are shared by names and variables. For example, names do not share the second property (compare (20b) [our (43)] with *??John, I like John*). Variables to not share the third property since they must be A-bar bound. On the other hand, the null object in Chinese apparently has all three properties of an epithet: it cannot be A-bound, it can be A-bar bound and it need not have an A-bar binder.

DNOs in EP also share these properties with epithets:

1. They may not be A-bound (under circumstances to be fully described below)

(45) a. *O João$_i$ disse que a Maria não conhece $\phi_{*i/k}$ pessoalmente*
the João said that the Maria not know personally
"João said that Maria doesn't know him.'

b. *O João$_i$ disse que a Maria não conhece o idiota$_{*i/k}$*
the João said that the Maria not know the idiot
pessoalmente.
personally
'João said that Maria doesn't know the idiot personnaly.'

2. They may be A'-bound:

(46) a. *O João$_i$, vi ϕ_i ontem na televisão.*
the João, saw.1SG yesterday on.the TV
'John, I saw yesterday on TV.'

b. *O João$_i$, vi ontem o idiota$_i$ na televisão.*
the João, saw.1SG the idiot yesterday on.the TV
'John, I saw the idiot yesterday on TV.'

3. They need not be A'-bound

(47) [Speaking of João ...]

a. *Vi ø ontem na televisão*
saw.1SG yesterday on.the TV
'I saw him yesterday on TV.'

b. *Vi ontem o idiota na televisão.*
saw.1SG yesterday the idiot on.the TV
'I saw the idiot yesterday on TV.'

Huang (1991) claims that epithets are subject to Condition C and this is the reason why (39), (42) are out. However, Narahara (1991) and Dubinsky and Hamilton (1998) have observed that the Condition C effects are only apparent and that they are attributed not to Condition C but rather to the antilogophoric properties of epithets [cf. also Pica (1994)]. They claimed that their peculiar distribution is due to the following Antilogophoricity Constraint:

(48) *The Antilogophoricity Constraint* (Dubinsky and Hamilton 1998: 689)
An epithet must not be anteceded by an individual from whose perspective the attributive content of the epithet is evaluated.

They base their claim in the following contrasts:

(49) a. *It was said by John$_i$ that the idiot$_i$ lost a thousand dollars.
b. It was said of John that the idiot$_i$ lost a thousand dollars on the slots.

(50) a. *According to John, the idiot is married to a genius.
b. Speaking of John, the idiot is married to a genius.

(51) a. *John told us of a man (who was) trying to give the idiot directions.
b. John ran over a man (who was) trying to give the idiot directions.

(52) a. *Despite an accumulation of slipups, John asked his students to conclude that the idiot could teach.
b. Through an accumulation of slipups, John inadvertently led his students to conclude that the idiot couldn't teach.

The (a) sentences of (49-a), (50-a), (51-a) and (52-a) show that when the non-local antecedent of the epithet is the perspective-bearer, the sentences are ungrammatical.

Turning now to DNOs in EP, the following examples (repeated here from the Section 3.2) show that they are not subject to Condition C.

(53) *A criança adoeceu$_i$ só depois de a mãe ter ido buscar ø$_i$*
the child got.sick only after of the mother have.INF gone fetch ø
à escola.
at.the school
'The child got sick only after her mother went to pick her up at school.'

(54) *Esse prato$_i$ exige que o cozinheiro acabe de preparar*
that dish demands that the cook finish.SUBJ.3SG of prepare.INF
ø$_i$ na mesa.
ø at.the table
'That dish demands that the cook finishes preparing it at the table.'

Therefore, some restriction other than Condition C must explain the ungrammaticality of sentences in which the non-local antecedent of the DNO is the matrix subject (45-a), namely antilogophoricity. In (54) and (53), the matrix subject is not the perspective bearer while in (45-a), it is. Not surprisingly, the null object in (54) and (53) can be replaced by an epithet:

(55) *A criança adoeceu só depois de a mãe ter ido buscar a*
the child got.sick only after of the mother have.INF gone fetch the
pobrezinha à escola.
little.poor at.the school
'The child got sick only after her mother went to pick up the poor girl at school.'

(56) *Esse prato exige que o cozinheiro acabe de preparar*
that dish demands that the cook finish.SUBJ.3SG of prepare.INF
o diabo da coisa na mesa.
the hell of.the thing at.the table
'That dish demands that the cook finishes preparing the hell of the thing at the table.'

Interestingly, Liu (2004) reaches a similar conclusion for the case of Chinese null objects. He proposes that they are antilogophors, even though they are subject to somewhat different discourse role constraints than epithets.

Although a systematic comparison between DNOs and epithets in EP is well beyond the scope of the present paper, the parallelism between the two is real. Dubinsky and Hamilton (1998) state that epithets in English must be disjoint in reference from SOURCE and SELF, in Sells's (1987) sense. Sells (1987: 7) identifies three discourse roles, where SOURCE is defined as "one who is the intentional agent of communication"; SELF is "one whose mental state or attitude the content of the proposition represents" and PIVOT is "one with respect to whose (space-time) location the content of the proposition is evaluated". The following examples, adapted from Dubinsky and Hamilton (1998), show that epithets may bear PIVOT (57) though not SOURCE (58) or SELF (59-a):

(57) a. *Respondi ao João$_i$ [+PIVOT] mal encontrei o idiota$_i$ na reunião.*
answered.1SG to.the João as.soon.as met.1SG the idiot at.the meeting
'I answered João as soon as I met the idiot at the meeting'.

b. *Reconheci o João$_i$ [-PIVOT] mal encontrei o idiota$_i$ na reunião.*
recognized.1SG the João as.soon.as met.1SG the idiot at.the meeting
'I recognized João as soon as I met the idiot at the meeting'.

(58) a. **De acordo com o João$_i$ [+SOURCE], não iremos encontrar o idiota$_i$ na reunião.*
of accord with the João not will.1PL meet the idiot at.the meeting
'According to João, we won't find the idiot at the meeting.'

b. *Falando do João$_i$, tenho a certeza de que não iremos encontrar o idiota$_i$ na reunião.*
speaking of.the João have.1SG the certainty of that not will.1PL meet the idiot at.the meeting
'Speaking of João, I am sure that we won't find the idiot at the meeting.'

(59) a. **Ele [SELF] ouviu de nós que nunca iríamos deixar o idiota sozinho*
he heard from us that never would.1PL leave the idiot alone
'*He heard from us that we would never leave the idiot alone.'

b. *Ele [-SELF] ouviu de nós que em circunstância alguma iremos deixar o idiota sozinho*
he heard from us that in circumstance none will.1PL leave the idiot alone
'He heard from us that under no circumstances would we leave the idiot alone.'

According to Dubinsky and Hamilton (1998), (59-b) is acceptable in contrast to (59-a) because the additional phrase 'under no circumstances' serves to draw the SELF role off the idiot and onto the agent of communication, as originally observed by Sells (1987).

To my ear, parallel sentences with DNOs yield similar judgements:

(60) a. ?*Respondi ao João$_i$ [+PIVOT] mal encontrei ø$_i$ na reunião.*
answered.1SG to.the João as.soon.as met.1SG ø at.the meeting
'I answered João as soon as I met him at the meeting'.

b. *Reconheci o João$_i$ [-PIVOT] mal encontrei ϕ_i na*
recognized.1SG the João as.soon.as met.1SG ø at.the
reunião.
meeting
'I recognized João as soon as I met him at the meeting'.

(61) a. **De acordo com o João$_i$ [+SOURCE], não iremos encontrar ϕ_i*
of accord with the João not will.1PL meet ø
na reunião.
at.the meeting
'According to João, we will not meet him at the meeting.'

b. *Falando do João$_i$, tenho a certeza de que não iremos*
speaking of.the João have.1SG the certainty of that not will.1PL
encontrar ϕ_i na reunião.
meet ø at.the meeting
'Speaking of João, I am sure that we won't meet him at the meeting.'

(62) a. **Ele$_i$ [SELF] ouviu de nós que nunca iríamos deixar ϕ_i*
he heard from us that never would.1PL leave ø
sozinho
alone
'*He heard from us that we would never leave the idiot alone.'

b. *?Ele$_i$ [-SELF] ouviu de nós que em circunstância alguma iremos*
he heard from us that in circumstance none will.1PL
deixar ϕ_i sozinho
leave ø alone
'He heard from us that under no circumstances will we leave him alone.'

The logophoric constraints imposed on epithets can in principle be attributed to their intrinsic evaluative nature. Empty objects, however, do not carry any evaluative meaning, so the question arises of why they should be subject to antilogophoricity. In what follows, I wish to suggest that Sells (1987) offers a possible answer to this question.

Sells (1987) showed that R-expressions are also subject to an antilogophoricity constraint[9]. He mentions the following paradigm:

(63) a. *He$_i$ has heard from us that Walter$_i$ will never be allowed to enter the Lodge.

b. He$_i$ has heard from us that under no circumstances will Walter$_i$ be allowed to enter the Lodge.

9 The antilogophoricity constraint of R-expressions is stronger than the one that applies to epithets as it extends to all of the three discourse roles — SOURCE, SELF and PIVOT (Dubinsky and Hamilton 1998).

(64) a. *We told him$_i$ that Walter$_i$ would never be elected.
b. We did our best to tell him$_i$ that Walter$_i$ would never be re-elected.

In each case the pronoun 'he/him' binds the R-expression 'Walter', and yet the expected Condition C violation is inoperative in the (b) cases. Sells (1987) argued that these data may be accounted for if Condition C is subsumed under the antilogophoricity principle stated in (65).

(65) *Sells's antilogophoricity principle* (1987b:14)
Any reference to an individual bearing a discourse role must be syntactically expressed by a pronominal.

This entails that only pronominal forms may be anaphoric to an individual bearing a discourse role. In the case of a logophoric pronoun, association between the pronoun and a role-bearing individual is obligatory, while an ordinary pronoun may or may not be associated with a role-bearing individual.

Under the current analysis, empty objects instantiate *n*; i.e., property anaphora (recall that I have proposed that, in the absence of a contextually salient property, *n* is interpreted as the default property 'entity' or 'individual'). Therefore, what is silent is a 'description', not a pronominal category (note that pronouns have phi-features and bear an index). Independent evidence in favor of the non-pronominal (= non-indexical) nature of the silent object is that it can never be 1st or 2nd person. This means that a null object cannot qualify as a pronoun for the purposes of (65).[10] Antilogophoricity follows from a version of (65) where the relevant discourse roles are SOURCE and SELF (though apparently not PIVOT, a matter that awaits further research).[11]

Thus, in the division of labor between the option for using a pronoun or an empty object, only the former will be capable of referring back to an antecedent bearing SOURCE or SELF. This approach has the added advantage of potentially explaining the (quantitative) animacy effects found with DNOs in corpus studies. In sum, the similarities between DNOs and epithets regarding antilogophoricity constitute a strong argument in favor of the base-generated null nominal analysis.

10 An anonymous reviewer mentions the following example where an epithet may take a first person subject as an antecedent:

(i) I$_1$ never thought that someone as intelligent as you would take this idiot$_1$ seriously.

The epithet in this example is introduced by a demonstrative, an indexical expression. This is probably the reason why (65) can be evaded. In the absence of the demonstrative, the sentence is out.

11 This analysis only holds of unagreed with null objects; agreed with null objects have phi-features and could in principle be analysed as incorporated pronouns. The same observation applies to agreed with null subjects, which behave as pronouns (Barbosa 2019).

Having established that DNOs are subject to antilogophoricity, I will now turn to an assessment of Raposo (2004)'s proposal that the derivation of DNOs involves a null definite D.

3.5 A choice function approach to the null object in EP

As discussed in Section 3.1, Raposo (1998, 2004) relates the availability of DNOs in EP to the occurrence of bare bouns as objects of subject experiencer predicates with a generic interpretation (cf. (19-a), repeated here for convenience) and proposes that EP has a null definite Determiner, so that (66) is analysed as in (67):

(66) *A Maria detesta cenouras.*
the Maria hates carrots
'Mary hates carrots.'

(67) A Maria detesta [$_{DP}$ [$_{D_{def}}$ ø] [$_{NP}$ cenouras]]

A null object construction such as (68) is an instance of a null NP embedded under a null D:

(68) a. *Mostrei aquele quadro à Maria e a Cristina mais tarde mostrou* [$_{ø}$] *à Alexandra.*
showed.1SG that painting to.the Maria and the Cristina more late showed [$_{ø}$] to.the Alexandra
b. [mostrou [$_{DP}$ [$_{D_{def}}$ ø] [$_{NP}$ ø]] à Alexandra]
(Raposo 1998: 209)

In order to assess this proposal, I start by examining BPL objects. In English, BPL objects of subject experiencer predicates like 'hate' are generally taken to indirectly refer to kinds and EP is very similar to English in this regard.[12] Here I adopt Seres's (2020) view that plural nominals with a generic meaning do not refer to kinds directly:"they denote individuals whose sum may be interpreted as maximal and, thus, acquire a generic reading under certain circumstances" (Seres 2020: 124). In languages that use generic definite plurals (Romance), maximality comes as a part of the semantics of the whole nominal phrase (i.e., the DP), while in languages with generic BPLs (Russian

12 The difference between EP and English concerns the preverbal subject position. A bare noun is generally not allowed in preverbal subject position in the consistent null subject languages as opposed to English. This difference can be attributed to the particular status of preverbal subjects in the consistent null subject languages as clitic left dislocated topics (Barbosa 1995, 2008, 2019). See also Laca (2013) for a very insightful discussion of this effect.

and English) it comes as a pragmatic effect or under lexical coercion (as is the case of objects of subject experiencer verbs). Concerning EP, the question that arises is whether this maximality effect is obtained by merging the bare PL with a null D or by resorting to the same strategy as English.

Turning now to NOs, they can be indefinite:

(69) *Preciso de um abre-latas, mas não há meio de encontrar.*
need.1SG of a can-opener but not has means of find.INF
'I am looking for a can-opener, but I can't find one.'

In (69) the antecedent for the null object is a singular indefinite, precisely the context that doesn't allow a null object in CSpanish. This shows that positing a null D_{def} doesn't suffice to account for the differences between EP and CSpanish regarding zero objects.

One approach that has the potential to capture the ambivalent nature of NOs as definites and indefinites can be found in Kurafuji (2019). Recall that Kurafuji proposed that NOs in Japanese are best analysed as base-generated empty nominals. As discussed in Section 2, when a noun phrase that has a property as its semantic content combines with a verbal predicate, there is a type mismatch. One way of solving the mismatch is by interpreting the property argument as a restrictive modifier. This is the mode of composition used for CSpanish null objects. Another way of solving the type mismatch is by resorting to a choice function, a function which takes a non-empty set and yields an element of this set (von Heusinger and Kempson 2004).

Kurafuji (2019) argues that the base-generated empty nominals in Japanese are interpreted by choice functions. In particular, he assumes that null arguments in Japanese have an internal structure represented as in (70), where f is a (Skolemized) choice function (f_{x_n} stands for a Skolemized choice function with n individual arguments and f_{x_0} corresponds to an unSkolemized choice function). The null NP ø denotes a contextually salient set of individuals.

(70) $[f_{x_{n(0\leq n)}}[_{NP}\ \text{ø}\ ]]$ where ø is of type $< e, t >$
and f of type $< (e_1, <, ..., < e_n,) < e, t >, (>, ..., >,)e >$
(Kurafuji 2019: Ex. 7, p.7)

Kurafuji illustrates his analysis with the Japanese examples already discussed in Section 1 (repeated here with indices).

(71) a. *A. Ken$_2$-wa zibun$_2$-no kuruma-o arat-ta.*
Ken-TOP self-GEN car-ACC wash-PAST
A: 'Ken washed his car(s).'

b. *B. Erika$_3$-mo ø arat-ta.*
Erika-also wash-PAST
B: 'Erika washed (her$_3$/his$_2$/a) car(s) too.'

The indefinite/sloppy-like, sloppy and strict readings are represented as in (72-a), (72-b) and (72-c), respectively.

(72) a. [$_{IP}$ Erika$_3$ f[ø] washed] $\sim\sim>$ $\exists f$[CH(f)$\wedge$ WASH(f(CAR))(erika)]
b. [$_{IP}$ Erika$_3$ f_3[ø] washed] $\sim\sim>$ $\exists f$[CH(f)$\wedge$ WASH(f_{erika}(CAR))(erika)]
c. [$_{IP}$ Erika$_3$ f_2[ø] washed] $\sim\sim>$ $\exists f$[CH(f)$\wedge$ WASH(f_{ken}(CAR))(erika)]
Kurafuji (2019: Ex. 9, p.7)

In (72-a) the choice function picks out an arbitrary member of a set of cars. This derives the indefinite/sloppy-like interpretation. In (72-b), the function f_{erika} picks out a member which has a relation to Erika. According to Kurafuji (2019: 8), "since ownership is salient in this context, a member of the cars owned by Erika is picked out". When index 2 is assigned to f, the strict reading obtains.

Scope facts support this approach. Choice functions are commonly used to represent indefinite NPs in LF for reasons of scope behavior (Reinhart 1997; Winter 1997; Kratzer 1998). Kurafuji shows that null arguments in Japanese can have intermediate scope readings, like indefinites. Similarly, Landau (2023b) contends that a choice functional analysis of missing objects with indefinite antecedents in Hebrew explains their peculiar scopal properties.

Turning to EP, there is some indication that a null object with an indefinite antecedent may exhibit scope ambiguity with negation, as shown by the following examples adapted from Kurafuji (2019: 10). When uttered out of the blue, the most natural interpretation for the second sentence in (73) is 'Erika ended up by not bringing any dish to the party.'

(73) *A Ann trouxe um prato para a festa, mas a Erika acabou por não*
the Ana brought a dish for the party, but the Erika ended.up by not
trazer ø.
bringing
'Ana brought a dish for the party. Erika ended up by not bringing <a dish>.'
Adapted from Kurafuji (2019: Ex. 14, p.10)

However, Kurafuji observes that an appropriate context makes the specific reading of the null argument accessible:[13]

– Context:
Ann, Brenda, Cindy, and Erika were expected to bring something to eat to a party. Before the party, they discussed what to bring, and agreed that pizza, pasta, salad,

13 Kurafuji's original example didn't contain an infinitival clause. It strictly obeyed parallelism. Here, the example has been slightly altered so as to control for a potential confound, namely the possibility of analysing (73-b) as a case of V-stranding VP analysis [see Cyrino and Matos (2016) and references cited there.

and sandwiches were indispensable. They decided who would bring which dish, and each of them was assigned a specific dish to bring.

(74) *A Ann trouxe um prato para a festa, mas a Erika acabou por não*
the Ann, brought a dish to the party, but the Erika ended by not
trazer ø. Era pizza.
bringing ø. was.3SG pizza.
'Ana brought a dish to the party. Erika ended up by not bringing <a dish>. It was pizza.'
Adapted from Kurafuji (2019: Ex. 16, p.10)

Under Kurafuji's choice functional approach, the logical representations for the two possible readings of the second sentence in (73) and (74) are (75-a,b). (75-a) corresponds to the narrow scope reading of the choice function variable in (73) and (75-b) corresponds to the wide scope interpretation in (74).

(75) a. $\neg\exists(f)[\text{CH}(f) \wedge \text{BRING}(f(\text{DISH}))\ (\text{erika})]$
b. $\exists(f)[\text{CH}(f) \wedge\neg\text{BRING}(f_{erika}(\text{DISH}))\ (\text{erika})]$
(Kurafuji 2019: Ex. 15, p.10)

In view ot the ability of missing objects in EP to be interpreted as having ambiguous scope with respect to negation, I suggest that a choice function approach is on the right track. In the spirit of Ruda's (2017) proposal for Polish null objects, I suggest that the null object in EP minimally consists of an *n* lacking a root. By hypothesis, it denotes a contextually salient property and is interpreted by choice functions, which yield an indefinite interpretation when under the scope of $\exists$ and a definite interpretation when free. In the present paper, I leave the question open of whether the null object has internal structure, with functional material above *n*P signalling the choice function variable, as proposed by Kurafuji (2019) for Japanese null arguments. I leave this issue for future work along with a more systematic examination of the scope properties of NOs in EP.

4 Concluding remarks

In this paper, I have examined null objects in CSpanish and EP and I have presented arguments in support of Ruda's (2017) hypothesis that the same underlying mechanism is at the root of indefinite and definite (non-agreed with) object drop, namely a base-generated rootless *n*P proform. Under this view, what underlies object drop is property (type $< e, t >$) anaphora, as originally proposed by Tomioka (2003), who argued that (non-agreed with) null arguments denote properties whose descriptive content is

pragmatically retrieved, their possible interpretations being derived by general type-shifting operations.

CSpanish only has zero objects when the antecedent is a BPL or a mass noun, while EP has both indefinite and DNOs, a contrast that is arguably related to the properties of bare nominals in each language (Raposo 1998, 2004). In the spirit of Laca (2013), I have proposed that zero objects in CSpanish are interpreted as restrictive modifiers of the verbal predicate, falling under the scope of VP-level existential closure.

EP null objects, by contrast, are interpreted by choice functions. Focusing on the properties of DNOs in EP, I have shown that there are striking similarities between them and other types of nominal anaphora, including epithets. This point has already been made by Huang (1991) for the case of Chinese. The novel observation made here is that DNOs in EP share with epithets the fact that they are subject to an *Antilogophoricity Constraint* that requires the referent of their antecedent to be distinct from the individual whose speech and thoughts are being reported (Dubinsky and Hamilton 1998). I have related this restriction to the *Antilogophoricity Principle* posited by Sells (1987), according to which reference to an individual bearing a discourse role must be syntactically expressed by a pronominal. In the division of labor between the option for using a pronoun or an empty object, only the former will be capable of referring back to the individual whose speech and thoughts are being reported. This approach has the added advantage of potentially explaining the (quantitative) animacy effects found with DNOs in *corpus* studies and constitutes a strong argument in favor of the idea that nominal anaphora is at the root of zero objects.

This doesn't necessarily mean that (non-agreed with) DNOs are predicted to share the same anti-logophoric properties crosslinguistically. As already mentioned, Liu (2004) shows that null objects in Chinese are subject to antilogophoricity even though the patterns found differ from those of epithets. For the case of Japanese, Yashima (2015) claims that overt third-person pronouns are, in fact, epithets. If true, this might have consequences for the patterns observed with null objects. Further research into the antilogophoric properties of null objects crosslinguistically is needed in order to clarify these questions. Another issue that is left for future research is whether the choice function f is syntactically represented in the internal structure of the projection containing the rootless *n*P.

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