

# Revisiting Montalbetti Effects: New evidence from Brazilian Portuguese, Spanish and English

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## 0 Roadmap

- Overview of the O(vert) P(ronoun) C(onstraint) and how it applies (primarily looking at Spanish, Section 1) or fails to apply in B(razilian) P(ortuguese) (Section 2)
- Arguments in favor of recasting the OPC, traditionally tied to the availability of null pronouns in a given language, as a mere side effect of semantic and syntactic differences between pronouns within and across languages, without any direct reference to the availability of null pronouns.
  - Section 3: New evidence relating differences in gender inflection, diminutive marking, and animacy restrictions in the pronominal domain to cross-linguistic differences in OPC effects
  - Section 4: OPC-like effects in a language with no null pronouns
- Section 5: Go beyond the OPC to rethink BP's classification as a (consistent?/partial?/non?) null-subject language more generally
- Section 6: Summary/Conclusion

# 1 Overview of the Overt Pronoun Constraint

The Overt Pronoun Constraint is formalized in Montalbetti (1984) as follows:

(1) **The O(vert) P(ronoun) C(onstraint)**

Overt pronouns cannot link to formal variables iff the alternation overt/empty obtains.

- Main consequence of the OPC in languages that allow null subjects, e.g. Spanish: quantificationally bound overt subject pronouns are illicit.
- That is, (2) has only the the non-bound reading when an overt pronoun is used, but both readings are available with a null pronoun.
- When the overt pronoun is not in the scope of a quantifier as in (3), no such restriction holds.

(2) [Toda persona]<sub>i</sub> cree que ella<sub>\*i/j</sub> /  $\emptyset_{i/j}$  es inteligente.  
Every-FEM person.FEM thinks that she /  $\emptyset$  is intelligent  
“Every person thinks that she is intelligent.”

(3) María<sub>i</sub> cree que ella<sub>i/j</sub> /  $\emptyset_{i/j}$  es inteligente.  
María thinks that she /  $\emptyset$  is intelligent  
“María said that she is intelligent”.

Sensitivity to the OPC has also been reported in many other unrelated languages that allow null subjects:

- **Japanese** (Okuma 2015a):

(4) Daremo-ga<sub>i</sub> kare-ga<sub>\*i/j</sub> /  $\emptyset_{i/j}$  kuruma-o katta to i-tta.  
Everyone-NOM he-NOM /  $\emptyset$  car-ACC bought that say-PAST  
“Everyone said that he bought a car”.

(5) Taro-wa<sub>i</sub> kare-ga<sub>i/j</sub> /  $\emptyset_{i/j}$  itibanda to omotteiru  
Taro-TOP he-NOM /  $\emptyset_{i/j}$  best that think  
“Taro thinks that he is the best”.

- **Turkish** (Çınar and Çakır 2019):

(6) Herkes<sub>i</sub> onun<sub>\*i/j</sub> /  $\emptyset_{i/j}$  kazanacağını düşünüyor  
Everybody s/he-GEN /  $\emptyset$  win-FN-3SG-ACC think-PROG  
“Everybody thinks that s/he will win”.

- (7) **Merve**<sub>i</sub>**onun**<sub>i/j</sub> /  $\emptyset$ <sub>i/j</sub> kazanacağını düşünüyor  
 Merve she /  $\emptyset$  win-FN-3SG-ACC think-PROG  
 “Merve thinks that she will win”.

- Because the OPC applies across a wide variety of null subject languages of different types, it has been taken to apply universally in languages that robustly allow null subjects.

## 2 The OPC and Brazilian Portuguese

- If the OPC indeed applies universally to languages with null subjects, and a given language X does not obey the OPC, then this suggests X does not truly license null subjects.
- A particular instance of this argument has been used to support the claim that Brazilian Portuguese, which has been reported not to obey the OPC (8), does not truly license null subjects (Ferreira 2000, 2004, Roberts 2019, a.o.).

- (8) [**Toda** **pessoa**]<sub>i</sub> acha que **ela**<sub>i/j</sub> /  $\emptyset$ <sub>i/??j</sub> é inteligente  
 Every-FEM person.FEM thinks that she /  $\emptyset$  is intelligent  
 “Every person thinks that she<sub>i/j</sub> is intelligent.”

- The OPC being inactive in BP has been linked to its hypothesized status as a partial, rather than consistent, null-subject language under Holmberg’s (2005) tripartite classification system.
- Under this and related analyses, the only 3P null subjects in BP are:
  - i) null inclusive generic pronouns like ‘one’ in English.
  - ii) licensed by a c-commanding controller in a higher clause.
- For more on this requirement in BP specifically see Rodrigues (2002, 2004), Sheehan (2006), Modesto (2000, 2008), Holmberg, Nayudu and Sheehan (2009), Barbosa (2019), Nunes (2008, 2019), Roberts (2019) and many others.
- Thus, under these approaches, BP does not generally license null subjects in the same sense as languages like Spanish (barring a very restricted set of contexts), and thus the overt/empty alternation does not truly obtain.
  - The lack of OPC effects in BP lends empirical support to this view, then (under the standard definition wherein the OPC applies universally in languages that robustly allow null subjects).

- Nonetheless, I will depart from the view that (non)sensitivity to OPC effects can tell us anything definitive about a language’s classification as an NSL:
- First, there exist a number of structural and semantic differences between Spanish and BP overt 3rd-person (non-clitic) pronouns that can be used to independently explain their differing behaviors with respect to the OPC (section 3).
- Second, there are pronoun competition effects in English that directly parallel Montalbetti effects in OPC-obeying languages (section 4).

### 3 Structural differences between Spanish and BP

#### 3.1 Extending Kučerová (2018)

I will adopt Kučerová’s (2018) analysis of gender inflection on Italian DPs, in order to make claims about DP structure on the basis of the interpretation of gender.

- Her analysis proposes that animate-denoting DPs without inherent gender on the root, e.g. *il bambin-o* “the boy”, *la bambin-a* “the girl”, start in the derivation as

(9) [DP [D GEN:–] [nP [n GEN:– √]]

- Then, the unvalued gender on D and on n match via downward-seeking Agree.
- As n is unable to value D, D then gets gender valued from context when the phase is sent to be labeled at the CI interface.
- The contextually supplied value, which corresponds to conceptual gender (see Ackerman 2019) of an animate individual, is then associated to n via the existing link between D and n.
  - Assuming only phase heads are labeled at the interface, only D may be labeled there (likely also for semantic reasons, (see Kučerová 2018)).
- I suggest extending this proposal to overt pronouns with the same properties as *il/la bambin(o/a)*, namely obligatory animacy and an obligatory conceptual gender reading (i.e. the value for gender must correspond roughly to the perceived gender of a person being referred to).

### 3.2 Gender conflict and resolution

- A notable difference between BP and Spanish pronouns arises when the purely syntactic gender of a pronoun's linguistic antecedent conflicts with the conceptual gender of the person being referred to.
    - Only BP (10, 12) (and not Spanish, (11), (13)) may resolve the mismatch in favor of arbitrary syntactic, rather than conceptual, gender:
- (10) [Uma pessoa/criatura que acha que os amigos só pensam n- -ela]<sub>i</sub>, é o João  
a-FEM person.FEM/creature.FEM that thinks that the friends only think on her is the John.  
“A person/creature who thinks his friends only think about him (lit. ‘her’) is John.”
- (11) \*[Una persona/criatura que cree que sus amigos sólo piensan en ella]<sub>i</sub>, es Juan<sub>i</sub>.  
a-FEM person.FEM/creature.FEM that thinks that his/her/their friends only think on her is John  
Intended: “A person/creature who thinks that his friends only think about him is John”.
- Corpus examples (Davies 2016–, Davies & Ferreira 2016–):
- (12) [As pessoas]<sub>i</sub> não percebem que [elas mesmas]<sub>i</sub> acabam “contaminando” o ambiente com seu mau humor  
the-PL person.FEM-PL NEG perceive that 3P-FEM-PL same-FEM-PL end-up contaminating the environment with their bad mood  
“People don’t perceive that they themselves end up “contaminating” the atmosphere with their bad mood.”
- (13) ¡[Cuántas personas]<sub>i</sub> piensan que [ellos mismos]<sub>i</sub> no son responsables!  
howmany-PL person.FEM-PL think that 3P-MASC-PL same-MASC-PL NEG are responsible-PL  
‘How many people think that they themselves are not responsible!’
- These data suggest that gender on BP pronouns may contradict known conceptual gender in favor of syntactic agreement with the arbitrary gender features of the antecedent
  - Meanwhile, gender on Spanish pronouns must correspond to the conceptual gender of an animate individual.
  - This aligns with the fact that 3P (non-clitic) pronouns are almost always animate in Spanish (as well as European Portuguese), but readily used with inanimate referents in BP (Barbosa, Duarte, and Kato 2005).

- Consider the following examples in the context where the speaker is referring to a sword, which is syntactically feminine in both languages:

- *Brazilian Portuguese*

(14) Ela é muito perigosa.  
 she is very dangerous  
 “She is very dangerous.”

- *Spanish*

(15) \*Ella es muy peligrosa.  
 she is very dangerous  
 Intended: “She is very dangerous.”

- As Spanish 3P subject pronouns always pick out the conceptual gender of an animate individual, we argue they’re derived in the same way as *il/la bambin(o/a)*, and thus are full DPs.

- The only difference is that the root for the Spanish pro-DPs is something like *EL-*

- The same does not hold for BP, so we posit BP pronouns to be structurally smaller than DPs, perhaps NumP’s.
- Since these proforms have no D layer, gender cannot be contextually valued at the interface and is thus valued in the narrow syntax
- What of sentences like (16) then?

(16) Ele foi pra casa.  
 He went to home  
 “He went home”.

- Possible solution: gender as an ‘edge-linker’ i.e. a feature that links extended verbal projection with the left periphery (e.g. Sigurðsson 2019)
- In Sigurðsson’s account, pronouns with no lexical content copy the gender features of an antecedent syntactically present in the C domain.

### 3.3 Diminutive data

- More support for a smaller-than-DP structure in BP comes from diminutives.
- Déchaine and Wiltschko (2002): pro-DP's cannot take modification.
- BP pronouns are like nominals in the language in being able to take diminutives, while Spanish pronouns are not:

(17) *Brazilian Portuguese*

- a. café > cafe-zinho, flor > flor-zinha  
coffee > coffee-DIM, flower > flower-DIM  
“coffee > little coffee, flower > little flower”.
- b. ele > ele-zinho, ela > ela-zinha  
he > he-DIM, she > she-DIM  
“he > little he, she > little she”.

– Taken from social media, caption of a puppy eating a birthday cake:

- (18) Ø teve bolo pra elezinho sim  
Ø had cake for him-DIM yes  
“yes, there was cake for this little guy.”

(19) *Spanish*

- a. café > cafe-cito, flor > flor-cita  
coffee > coffee-DIM, flower > flower-DIM  
“coffee > little coffee, flower > little flower”.
- b. él > \*el-cito, ella > \*ella-cita  
he > he-DIM, she > she-DIM  
Intended: “he > little he, she > little she”.

- The task that remains is to relate the structural differences argued for above to the observed OPC effects (or lack thereof) in Spanish and BP.

### 3.4 Spanish: OPC is active

- Following my extension of Kučerová's (2018) analysis to Spanish pro-DP's *él* and *ella*, I have assumed that these pronouns, like *il bambino*, are valued for gender via association with the conceptual gender of a particular animate individual at the interface.
- Thus, *él* and *ella* make poor binders for quantified DP's like *toda persona* ('every person'), as this expression, while syntactically gendered, does not correspond to a binary conceptual gender (i.e. 'person' refers neither to a man nor a woman) nor does it pick out a particular animate individual.
- Although *toda persona* makes a crashingly bad binder for *ella* (see (2), repeated below (20)), what about a quantified DP that is specified for conceptual gender, like *toda niña*?

(20) [Toda persona]<sub>i</sub> cree que ella<sub>\*i/j</sub> es inteligente.  
Every-FEM person.FEM thinks that she is intelligent  
"Every person thinks that she is intelligent."

(21) [Toda niña]<sub>i</sub> cree que ella<sub>?i/j</sub> es inteligente.  
Every-FEM child-FEM thinks that she is intelligent  
"Every girl thinks that she's intelligent".

- To the extent that (21) is still bad with the bound reading, we may be able to attribute this to our assumption that Spanish gendered 3P (non-clitic) pronouns are valued for gender through association with a particular individual of known conceptual gender
- Although *toda niña* corresponds to a conceptual gender, it does not pick out a particular individual.

### 3.5 BP: OPC is inactive

In Brazilian Portuguese, unlike in Spanish, we see no strong contrast between examples like (22) and (23):

(22) [Toda pessoa]<sub>i</sub> acha que ela<sub>i/j</sub> /  $\emptyset$ <sub>i/??j</sub> é inteligente  
Every-FEM person.FEM thinks that she /  $\emptyset$  is intelligent  
"Every person thinks that she<sub>i/j</sub> is intelligent."

(23) [Toda menina]<sub>i</sub> acha que ela<sub>i/j</sub> /  $\emptyset$ <sub>i/??j</sub> é inteligente  
Every-FEM child-FEM thinks that she /  $\emptyset$  is intelligent  
"Every girl thinks that she<sub>i/j</sub> is intelligent."

- This is what we expect given that we have argued BP pronouns needn't correspond to a conceptual gender interpretation.
- So far we have shown that, merely by making use of structural differences in overt pronouns, we **can** account for the differences in OPC effects in Spanish and BP without reference to null (subject) pronouns.

## 4 OPC-like effects in English

- Is there evidence to suggest we may actually **need** to avoid reference to null pronouns in our formulation? **Yes:**
- In English, many speakers strongly prefer singular 'they' over other 3P singular pronouns like 'he' and 'she' in the exact same contexts where the OPC applies in NSLs, i.e. in the scope of a quantifier (Bjorkman 2017, Conrod 2019, Konnelly & Cowper 2020):

(24) [Every young person]<sub>i</sub> thinks that {she<sub>?i/j</sub>'s / they<sub>i/j</sub>'re} intelligent.

- While this use of 'they' is famously associated with epicene (i.e. gender-neutral) contexts, many speakers (including me) disprefer the pronouns 'he' and 'she' in all bound-variable contexts, even when the quantified antecedent corresponds to a specific conceptual gender (Bjorkman 2017, Conrod 2019, Konnelly & Cowper 2020).
- Bjorkman (2017): "Indeed, some English speakers not only allow 'they' as a bound variable in quantificational contexts, but actually require it, even with antecedents like 'every boy' or 'no woman'."
- Aside: It's also true that many people allow both singular 'they' and a gendered pronoun in these contexts without a clear preference.
  - This could be due to the fact that use of singular 'they' (including in bound-variable contexts) is a change in progress (Conrod 2019, Konnelly & Cowper 2020)
  - The acceptance of both 'they' and a gendered pronoun here may reflect one intermediate stage as a new preferred form for this context gains traction across the population.

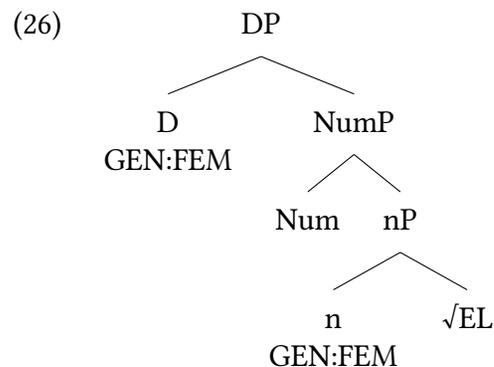
(25) [Every young woman]<sub>i</sub> thinks that {she<sub>?i/j</sub>'s / they<sub>i/j</sub>'re} special. (*Some speakers*)

- Insofar as English singular pronouns *he* and *she* are dispreferred to *they* when bound by epicene quantified DPs, and also dispreferred (albeit to a lesser extent) even with non-epicene quantified antecedents, the judgments are a near-exact parallel with the Spanish judgments.
  - That is, 'he' and 'she' align with *él* and *ella* in being the less preferred bindees in *all* bound-variable contexts, but the contrast is strongest with gender-neutral antecedents e.g. 'every person'.

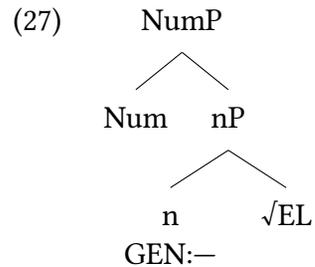
- These close parallels between English and Spanish judgments in Montalbetti / BV contexts suggests a structural parallel between English *he/she* and Spanish *él/ella*
- Following the line of reasoning used in the last section, I propose that *she & he* are pro-DP's, as Spanish *él & ella*, while *they* corresponds to a structure smaller than DP (e.g. NumP), like *ele & ela* in BP, which are like singular *they* in that they do not obligatorily take a gender that corresponds to the known conceptual gender of a particular individual.
- My argument in favor of a structure smaller than DP for singular *they* is shared by a number of works centered on bound variable pronouns:
- Bjorkman (2017) follows Déchaine and Wiltschko's (2015) analysis for bound variable pronouns in assuming that pronouns may be realized as pro-DP's in their referential use, and in their bound variable use are realized as some structure smaller than a full DP
  - (see also Déchaine & Wiltschko (2002): DP pronouns are inherently referential and semantically incompatible with bound-variable readings)

#### 4.1 Summary of proposals for BP, English, Spanish

- So far, I've proposed the following pro-DP for English 'she' & Spanish 'ella' (after labeling has occurred):



- And the following structure for all 3P Brazilian Portuguese pronouns and English singular *they*:



## 5 Beyond the OPC

- We have accounted for the differences in OPC sensitivity between BP, supposedly a partial NSL, and Spanish, a so-called consistent NSL, using only a structural difference in the languages' overt pronouns.
- **Can we also account for the rest of BP's deviance from the so-called 'consistent' NSLs in the same way?**

### 5.1 Avoid Pronoun

- One major difference between BP and the so-called canonical NSLs lies wrt the Avoid Pronoun Principle (Chomsky 1981). Barbosa, Duarte & Kato (2005) argue that BP gradually lost the Avoid Pronoun Principle (and subsequently saw much higher rates of overt pronouns), while European Portuguese, a hypothesized CNSL, retains Avoid Pronoun.
- In order to examine the status of Avoid Pronoun in BP, I will be adopting Patel Grosz & Grosz's (2017) formulation of Avoid Pronoun, *Minimize DP!* which I take to be an extragrammatical/pragmatic constraint à la *Minimize Restrictors!* (Schlenker 2005).

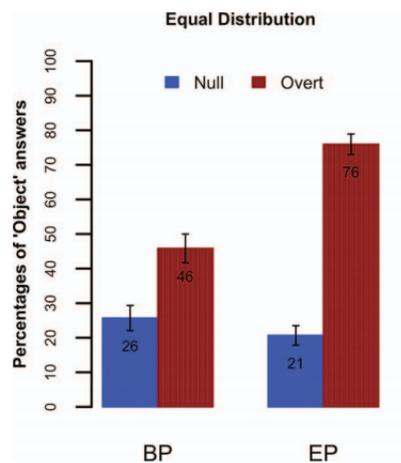
(28) *Minimize DP!*

An extended NP projection  $\alpha$  is deviant if  $\alpha$  contains redundant structure, i.e. if

- there is an extended NP projection  $\beta$  that contains less syntactic nodes than  $\alpha$ ,
- $\beta$  is grammatical and has the same denotation as  $\alpha$  (= Referential Irrelevance), and
- using  $\alpha$  instead of  $\beta$  does not serve another purpose (= Pragmatic Irrelevance)

- Assuming that the zero form is structurally reduced in both languages, e.g. a minimal 1-node *nP* (Barbosa 2019)
  - Then the overt pronouns exceed the null forms in structural complexity in both BP (by 1 node) and Spanish (by at least 2 nodes)
- This is problematic if BD&K are correct that BP has lost Avoid Pronoun entirely. However, this does not appear to be the case.

- Recent experimental work (Fernandes et al. 2018) indeed suggests that Avoid Pronoun is active in BP, but diminished relative to another canonical NSL (European Portuguese):
- This graph, adapted from Fernandes et al., shows the percentage of times participants selected the matrix object (rather than subject) as the antecedent of the embedded subject in sentences like (30), when the embedded subject was null (blue) or overt (red):



(29)

- (30) O atleta consultou o ortopedista no hospital quando  $\emptyset$ /**ele** regressou da viagem à Itália.  
 The athlete consulted the orthopedist in-the hospital when  $\emptyset$ /**he** returned from-the trip to-the Italy.  
 The athlete consulted the orthopedist in the hospital when he returned from the trip to Italy.

- A large body of experimental and theoretical work conducted in consistent NSLs, where Avoid Pronoun is active, has repeatedly shown that in sentences like (30),
  - The null subject strongly prefers a subject antecedent while an overt subject does *not* for reasons tied to topicality/prominence (Carminati 2002, Alonso-Ovalle et al. 2002, Filiaci et al. 2013, Jegerski et al. 2011, de la Fuente 2015, Keating et al. 2016, Forsythe, Greeson and Schmitt 2019)
- That is, the speaker does not Avoid Pronoun when the antecedent is a non-subject, e.g. an object (the orthopedist)
- In *Minimize DP!* terms: co-reference with matrix object is more likely to override Pragmatic Irrelevance
  - (The speaker has a pragmatic reason to use an overt form)

- Fernandes et al's experimental results (30) clearly show that Brazilian Portuguese is still sensitive to *Avoid Pronoun / Minimize DP!*, albeit to a lesser extent than a consistent null subject language
  - Brazilian parsers are still more likely to interpret the overt subject contrastively (e.g. as referring to something other than the previous subject referent), but the contrast is less dramatic than in European Portuguese
- I thus propose the following addendum to *Minimize DP!*:
 

(31) Competition between pronominal forms under *Minimize DP!* is graded such that the strength of the preference for  $\beta$  over  $\alpha$  is proportional to the difference in number of nodes between  $\beta$  and  $\alpha$ .
- If *Minimize DP!* is indeed graded, we can also reduce the relatively higher rate of overt pronouns in Brazilian Portuguese (approx. 60%, Barbosa, Duarte and Kato 2005) vs. European Portuguese and Spanish (approx. 20% for EP, BDK 2005)
  - Similar rates in Spanish: 21% for Madrid Spanish (Enríquez 1984)
  - approx. 22% for Mexico City Spanish (Lastra and Butragueño 2015)
- The higher rate in BP relative to EP, Spanish can be related to the fact that the pressure to opt for a null form is stronger in languages with structurally more complex overt pronouns.
- Mayol (2011) also argues that priming effects contribute to quantitative differences between language varieties.

## 5.2 What about PNSL-hood?

- In addition to the quantitative differences there a number of qualitative differences BP null subjects and those in CNSLs.
- These differences have been attributed to BP's hypothesized status as a partial null-subject language, or PNSL (Holmberg 2005, Holmberg, Nayudu, & Sheehan 2009, Roberts 2010, Roberts 2019, Barbosa 2019, and others).
- In these analyses, the crucial difference between partial null subject languages (e.g. BP, Finnish, Marathi) and consistent null subject languages (Spanish, EP, Greek, many more) is that there is a D(efiniteness) feature present in T in the CNSL's but absent in the partial null subject languages
- The presence/absence of a D-feature in T has several consequences for the partial vs. consistent null subject languages.
- In CNSL's, the D-feature provides a definite interpretation to null subjects
  - Thus, definite, referential null subjects are freely permitted in all appropriate discourse conditions (see Frascarelli 2007).

- However, because the D-feature gives a definite reading, null inclusive generic (indefinite) subjects (akin to English ‘one’) are illicit
  - Instead, an overt form is required.

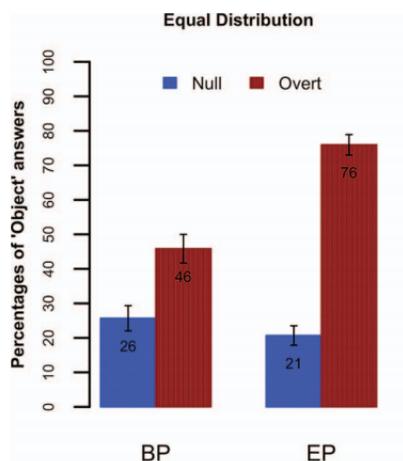
(32) In the PNSL’s, null subjects are only licensed in the following contexts:

- When the subject is a generic pronoun corresponding to English ‘one’.
- When the subject is controlled by a c-commanding antecedent in a higher clause.

- Can we reduce these properties to mere consequences of the structural differences in overt pronouns?
- Maybe not. But these properties may not actually be adequate for defining BP as a PNSL after all:
- Regarding (32a), there are cases of generic inclusive 3P null subjects even in BP’s closest ‘consistent’ NSL relative, EP:
- Martins & Nunes (to appear) report the following sentence as grammatical in European Portuguese, in a scenario where a physical therapist addresses a patient:

(33) Meu querido, isto aqui é assim:  $\emptyset$  deitou,  $\emptyset$  pagou.  
 My dear, this here is like-so:  $\emptyset$  laid-down-3S,  $\emptyset$  paid-3S  
 “My dear, this is how it is: once one has laid down, one must pay”.

- Regarding (32b), recall experimental results from Fernandes et al. (34) that suggest that BP parsers are able to interpret a null embedded subject as referring to a non c-commanding antecedent (matrix object) over a quarter of the time:



(34)

(35) O atleta consultou o ortopedista<sub>i</sub> no hospital quando  $\emptyset_i$  regressou da viagem à Itália.  
 The athlete consulted the orthopedist in-the hospital when  $\emptyset$  returned from-the trip to-the Italy.  
 The athlete consulted the orthopedist in the hospital when he returned from the trip to Italy.

- Additionally, the following example from Holmberg, Nayudu and Sheehan (2009) also suggests that the role of a c-command controller is not entirely clear:

(36) O Zé<sub>i</sub> convenceu os meninos<sub>j</sub> que  $\emptyset_{i+j}$  tinham que ir embora.  
 the Zé convinced the kids that  $\emptyset$  had to go away  
 ‘Zé convinced the kids that they had to go away’.

- So we may be able to do away with the classification of Brazilian Portuguese as a partial null subject language.
- Even if not, one possibility is that changes in overt pronoun structure (i.e. loss of a D-layer) preceded/triggered the larger-scale change in the NSP (i.e. loss of D-feature in T).

## 6 Concluding Remarks

- I have shown that the Overt Pronoun Constraint can and should be reduced to a side effect of structural and semantic differences in pronouns between and across languages.
  - Thus, the OPC should not be used to weigh in on whether a given language allows null subjects.
- BP does not show OPC effects because the pronouns are structurally reduced such that they make suitable bound variables.
- English and Spanish show OPC effects with ‘he’ and ‘she’ because these pro-DP’s make poor bound variables.
- The lack of a D layer in BP overt pronouns may explain the deviance of BP from typical consistent null subject languages
- If we can indeed reduce the differences between BP and NSLs like Spanish to the presence/absence of a D-layer, we have potentially reduced a meso-parameter to a micro-parameter:
  - Using the Biberauer et al’s (2014) definitions of parameter hierarchy,
    - \* in which a mesoparameter applies to all functional heads of a given naturally definable class
    - \* and a microparameter applies to a small subclass of functional heads
- This potentially places us in a better position to address the questions of how the acquisition process and other diachronic changes led BP to diverge from other NSLs like EP and Spanish.

## 7 Acknowledgments

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