Agree, agreement dissociation and subject ellipsis
Towards a new characterization of the Null Subject Parameter*

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Abstract: This paper offers a new characterization of the Null Subject Parameter (NSP). I contend that the NSP must be modeled referring to two main properties of the *Agree*/agreement systems: (i) presence/absence of abstract *Agree*, and (ii) presence/absence of *agreement dissociation* at PF. The first property results in the division between radical argument ellipsis languages of the Japanese type and consistent null subject languages of the Spanish type, including languages like Central Trentino, i.e., languages with some obligatory clitic subjects but with rich agreement and free inversion. The second property results in the division between consistent null subject languages and consistent non-null subject ones. The agreement dissociation hypothesis also accounts for the partial null subject type, which characterizes languages like Brazilian Portuguese that have impoverished agreement expansion at PF (perhaps, only for number features). From a theoretical point of view, this study focuses on the agreement dissociation property showing why abstract *Agree* cannot guarantee subject ellipsis even in those perplexing cases in which it produces enough agreement distinctions at PF. The reason is that only an expanded agreement morpheme adjoined to the T^0 node can serve as a licit antecedent for ellipsis of a subject D^0 head at PF. Therefore, the theory derives the bimorphemic principle in Koeneman and Zeijlstra (2021) without further ado, i.e., the observation that null subject properties correlate with a bimorphemic T^0 node expressing tense and agreement separately.
Keywords: Null Subject Parameter, ellipsis, Agree, agreement dissociation, null subjects

to Mary A. Kato
with love and deep admiration

1. Introduction

The Null Subject Parameter (NSP) can be plausibly conceived of as the theory of all predictable aspects of grammatical variation in the realm of subject realization across languages. A strong intuition is that there is a correlation between agreement richness in verbal morphology and the productive occurrence of null subjects (Taraldsen 1978). The intuition seems to receive preliminary confirmation from the empirical observation that agreement morphology in the verbal systems of, say, English and Spanish has an impact on the realization and distribution of subjects. As is well-known, Spanish is a language in which person and number information is explicitly realized in verbal morphology. Typologically, we say that the language is a *consistent* null subject language,

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not only because pronominal subjects are productively dropped but also because lexical subjects freely invert concerning the position of the verb.[1]

(1) a. *Nosotros* *cantamos.*
we sing.1PL
'We sing.'
b. *Cantamos.*
sing.1PL
c. *Cantamos* *nosotros.*
sing.1PL we

As is also well-known, English only allows for the pronominal subject to be explicitly realized in preverbal position as in (1a). Notably, this correlates with the fact that English also has a very impoverished verbal morphology paradigm.[2]

Yet, it was soon realized that the empirical landscape is much more complex. There are languages without morphological agreement at all that license argument dropping not only of their subject arguments but almost of any of their verbal arguments. Japanese is a paradigmatic instance of this linguistic type, the radical argument ellipsis type. But there is more, North Italian dialects, for instance, have enough agreement information expressed in their verbal systems, allow for subject inversion, but even so, some of their subjects must be explicitly realized as clitics. And other languages seem to have a good number of verbal distinctions (e.g., German) but do not show any of the relevant properties of null subject languages. Finally, there are many languages in which the realization and distribution of subjects do not correspond to any of the other types. These are partial null subject languages, of which Brazilian Portuguese is a paradigmatic case.[3]

Many attempts to make sense of this apparent linguistic chaos have been made in the last 50 years, especially, in the generative tradition. Several old and recent findings confirm that the expression of agreement is still crucial to make the relevant typological distinctions. The main aim of this study is to show that this is indeed the case and that all the linguistic types mentioned so far can be captured in purely morphosyntactic terms once the agreement architecture of languages is properly decomposed and analyzed. As I argue here, we must first make a proper distinction between the syntactic activity of abstract *Agree* (Chomsky 2000, 2001), which relates probes and goals in the usual way, i.e., valuing unvalued ϕ-features, and the morphological consequences of such an abstract operation across languages. As we will see, languages without (mandatory) *Agree* trigger radical argument ellipsis properties (e.g., Japanese).[4] Now, in the realm of languages that

[1] Throughout this paper, I use the Leipzig glossing rules and the following abbreviations: ACC: accusative; CL: clitic; COMP: complementizer; DAT: dative; DOM: differential object marking; FUT: future; GEN: genitive; IND: indicative; INF: infinitive; IPFV: imperfective; NOM: nominative; PFV: perfective; PL: plural; PASS: passive; PST: past; PRS: present; SG: singular; TH: thematic vowel, TOP: topic.

[2] The relevance of subject inversion as a key property of consistent null subject languages was noticed by many during the Government and Binding era, especially, by Rizzi (1982), who argued that subject inversion explains, among other aspects of the NSP, why *that*-trace effects are avoided in consistent null subject languages. On the controversial nature of *that*-trace effects as a crucial ingredient of the NSP, see Camacho (2013).

[3] Of course, this does not exhaust the complexities attested intra- and cross-linguistically. For instance, even in consistent non-null subject languages like English subjects can be dropped under specific discourse and morpho-phonological conditions. See Weir (2012) for an analysis of this type of subject deletion in English and references.

[4] As noted by an anonymous reviewer, claiming that languages without *Agree* indeed exist forces to a serious revision of some *Agree*/Case systems like the one proposed by Chomsky (2000, 2001), according to which *Agree* is a precondition for abstract Case. In this view, *Agree* must exist in every human language. There are, however, alternative

do make use of syntactic *Agree* further distinctions related to their agreement systems must be made. Concretely, abstract *Agree* alone cannot guarantee subject ellipsis (i.e., *Agree* is just a necessary condition for elision, not a sufficient one). Null subjects of the Spanish type are licit only if, in addition to syntactic *Agree*, T^0 and agreement are properly dissociated at PF. The best way to account for this situation is conceiving of null subjects under the light of a theory of ellipsis.[5]

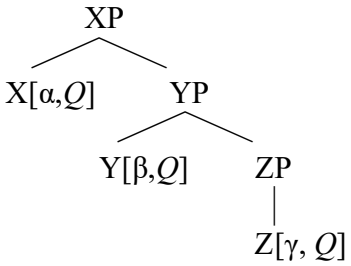
Therefore, in what follows, I discuss how the presence or absence of *Agree*, on the one hand, and the presence or absence of agreement dissociation, on the other hand, derive the main parametric options regarding the NSP. In Section 2, I introduce some background assumptions regarding ellipsis and morphological dissociation in the framework of Distributed Morphology. In section 3, I present the theory in Saab (2008, 2016, 2020) to account for the distinction between radical argument ellipsis languages (Japanese) and consistent null subject languages (Spanish). A more in-depth case study on an inconsistent null subject language like Central Trentino is also discussed in this section, since it is clear to me that inconsistent null subject languages are crucial when it comes to evaluating different approaches to the NSP. Sections 4 and 5 discuss consistent non-null subject languages and partial null subject languages, separately. The final picture discussed in Section 6 is an articulated theory of the NSP entirely derived from the *Agree*/agreement systems of natural languages and their interactions with other well-known morphological processes (Case determination, cliticization, impoverishment and so on).

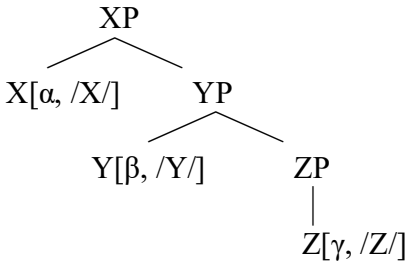
2. Verbal morphology and the dissociated agreement parameter

I assume the Distributed Morphology framework (cf. Halle and Marantz 1993 and, in particular, Embick 2000, 2007; Embick and Noyer 2001; Arregi and Nevins 2001, and Harley 2014, among many others). The main thesis is separationism, i.e., the thesis that narrow syntax only combines abstract morphemes, provided by the pre-syntactic lexicon entirely made of bundles of formal features and roots. Phonetic content is added to those morphemes at the PF interface that connects syntax to the language production systems. There is, then, a procedure to construct Saussurean signs using the information that abstract syntax produces and relating this information to a list of ordered vocabulary items stored in the PF component. Such a procedure is called Vocabulary Insertion (VI). I assume a replacive view of VI (Embick 2015 and references therein), according to which abstract terminal nodes enter the syntax with a variable, called *Q* in Halle (1991), which is replaced by a phonetic matrix at PF. This is schematically illustrated with the following two trees:

theories, like the dependent Case theory, according to which *Agree* is not a precondition for Case valuation (see, among others, Marantz 1991; Preminger 2014, and Baker 2015). As for Japanese, Saito (2007) suggests that its entire Case system can arguably be derived without using syntactic *Agree*. He suggests a system in which while genitive and nominative are contextual cases, dative and accusative are inherent and, consequently, dependent on thematic assignment. At any rate, Saito is not explicitly committed to the claim that the language lacks *Agree* entirely.

[5] Other theories of null subjects also conceive of the null subject parameter in terms of ellipsis or deletion. A first suggestion in the minimalist era can be found in Holmberg (2005), in which he conjectures that first and second-person null subjects in Finish are derived by ellipsis of the well-known type, like VP-ellipsis (see Holmberg 2005: 557). Roberts (2010b) and the papers contained in Biberauer et al. (2010) defend more articulated views in deletion terms, but not exactly in terms of ellipsis. Space reasons prevent comparison with the present proposal. Crucially, the theory I favor subsumes many of the most important aspects of the NSP under the general theory of ellipsis. Finally, Duguine (2013, 2014) constitutes an interesting theory of null subjects in terms of phrasal ellipsis. I refer the reader to Saab (2020) for a criticism of Duguine's ellipsis approach.

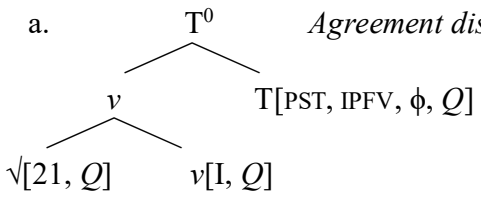
(2) a. 

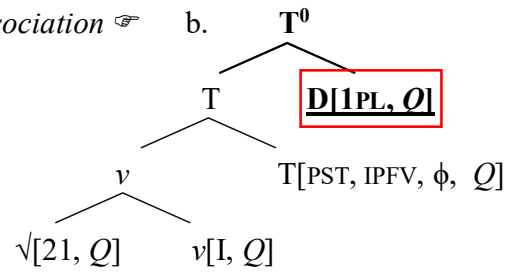
b. 

Yet, the morphological reality of human grammars is by far more complex. As observed by many, if this was the actual picture, then we would expect a perfect syntax-morphology match (see among many others Embick 2015). This is falsified by, say, the presence of "ornamental" or dissociated morphology at PF. Assuming that there are no agreement feature projections in the syntax (Chomsky 2000, 2001), the bimorphemic nature of the T^0 node in languages like Spanish, illustrated in (3), would remain unexplained. In effect, in addition to the realization of the T^0 node through the insertion of the *-ba* form, Spanish also requires insertion of an independent agreement node for the first-person plural, *-mos*.

(3) *Trabaj-á-ba-mos*.
work-TH-PST.IPFV-1PL
'We worked.'

In this regard, it must be the case that a rule of morphological dissociation oversees the adding of this extra morphological piece of agreement post-syntactically. Concretely, after head movement from $\sqrt{}^0$ to T^0 (choose your favorite theory of head movement), we obtain the step in (4b). The rule of agreement dissociation introduces an agreement morpheme based on the person and number information encoded in the T^0 node, which, by assumption, obtained its own ϕ specification through an application of abstract *Agree*. A crucial assumption is that the agreement node pertains to the category D(eterminer):[6]

(4) a. 

Agreement dissociation ☞ b. 

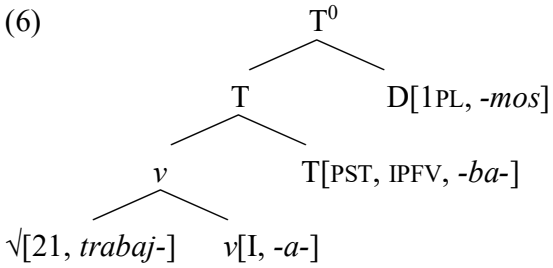
[6] As usual, the symbol $\sqrt{}^0$ stands for a root head. I am assuming that roots are mere indexes in the syntax. For instance, in (4), the number 21 stands for such an index. I remain neutral regarding the phrasal status of roots, i.e., whether they are non-projected or projected heads. In any case, roots need to be categorized through specific functional heads. In (4), the head v^0 serves this categorization aim, verbalizing this particular root. In Spanish, verbalizing heads of this type also encode conjugation diacritics. Spanish has three conjugation classes. In our example, the number I stands for the first conjugation feature. Finally, through this paper, I use ^{0} as a superscript for morphosyntactic words, but nothing for subwords (see footnote 8 for relevant definitions).

Then, VI proceeds to add phonological information to the terminal nodes in (4b). This requires consulting the list of vocabulary items at PF. Here is an oversimplified set of the relevant vocabulary items for the relevant nodes:

(5) Partial set of Vocabulary Items:
a. T[PST, IPFV] ↔ -ba-
b. Agr[1PL] ↔ -mos
c. *v*[I] ↔ -a-
d. √21 ↔ trabaj-

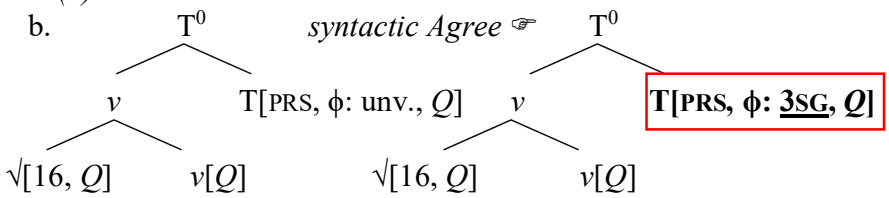
After VI, the resulting picture is approximately as follows (I am omitting linearization statements):

(6)



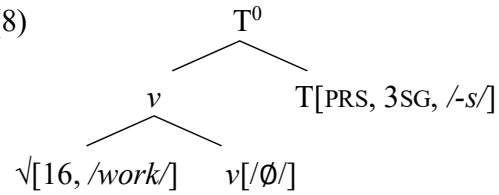
Now, let's briefly compare this situation with English. In this case, there is no agreement dissociation, but only an application of abstract *Agree* relating the subject and T^0, which, after the said application, receives its ϕ values:

(7) a. *(S)he works.*
b.



Next, VI proceeds to insert the relevant vocabulary items into the terminal nodes:

(8)



In sum, both English and Spanish share the same syntactic derivation as far as subject *Agree* is concerned but differ in how PF manipulates the syntactic output of *Agree*. As already observed, agreement dissociation is, then, the crucial difference between the two languages. Based on this brief sketch, I conjecture that there is room for what I will call the *Dissociated Agreement Parameter*, which I informally formulate along the following lines:

(9) The Dissociated Agreement Parameter: In dissociated agreement languages, T^0 is expanded by an additional Agr node at PF.

Given the centrality of the notion of *dissociated morpheme* in my explanation of the NSP, it is useful to have a preliminary idea of what type of objects these morphemes are and which function or functions they serve in the morphological derivation (see Embick 1997 and Embick and Noyer 2001, 2007):

(10) Dissociated morphemes:

i. They are inserted at PF, hence they are relevant to pronunciation but are not present in syntax prior to Spell-Out and Morphology. In other words, dissociated morphemes are not bona fide syntactic entities; they are purely morphological.

ii. As purely morphological entities, they can interact in morpho-phonological processes affecting other morphological pieces in a certain local domain (e.g., other inflectional affixes, clitics, etc.).

iii. The addition of nodes in this way introduces one kind of syntax–morphology mismatch, in the sense that there are more positions in the morphological (PF) structure than there are in the syntactic structure.

iv. Dissociated morphemes may reflect (or not) certain syntactic properties (or configurations) but do not in any sense contribute these properties to syntax (i.e., syntactic *Agree*).

v. Dissociated morphemes are not interpreted at LF, since they are inserted only at Spell-Out.

Now, as suggested in Saab (2008, 2020), dissociated agreement is a necessary condition for consistent null subject languages of the Spanish type. The idea is independently developed much more explicitly in a recent paper by Koeneman and Zeijlstra (2021), although in other terms. At any rate, the idea is the same: there is a generalization regarding null subject languages according to which for the *pro*-drop linguistic type to arise the T^0 node must be (at least) bimorphemic as far as the tense and agreement morphemes are concerned.[7] As far as I can tell, this observation has been overlooked in the vast literature on the NSP. As I said, I contend that the best theory to explain it is the theory of ellipsis. As we will see in Section 4, the reason is the following: an agreement morpheme can serve as antecedent for deletion of a pronoun; the T^0 node by itself is not a licit antecedent regardless of the putative presence of number and person features. Now, it is worth mentioning that the type of ellipsis involved in the derivation of null subjects is *morphological head ellipsis*, a PF operation that relates two heads in a certain locality relation. In this case, these heads are the pronominal subject and the agreement morpheme in T^0. Two important corollaries follow from this conception of the NSP: (i) valuation of ϕ-features through syntactic *Agree* is a necessary condition for null subject licensing and identification, but not a sufficient condition, i.e., morphological dissociation is also required, and (ii) morphological dissociation also requires

[7] It is important to insist that it is the morphosyntactic word T^0 that is bimorphemic in the favored sense and not the subword T (see footnote 8 for relevant definitions).

morphological richness to meet well-known conditions on identity in ellipsis, i.e., a dissociated morpheme will not serve as an antecedent for subject ellipsis if it is impoverished with respect to certain features (crucially, person; see Martins and Nunes 2021 and section 5 below).

3. Null subjects in syntax and morphology

According to Saab (2022), ellipsis reduces to deletion of the *Q* variables that instruct VI. In this view, ellipsis is literally the absence of vocabulary insertion. The type of objects that can be subject to ellipsis are phrases or heads. Phrases are elided in the narrow syntax through syntactic identity and licensing (although other relevant semantic or pragmatic properties could also be at play), whereas PF only elides heads, concretely, morphosyntactic words in the word ontology of Embick and Noyer (2001). Crucially, subwords (i.e., terminal nodes dominated by a given X^0) cannot be elided independently of X^0 (see the Subword Deletion Corollary below). The distinction between phrasal and head ellipsis is amply corroborated by different phenomena in different languages, from well-known phrasal ellipses of various kinds (TP-ellipsis, NP-ellipsis, *v*P-ellipsis and so on) to ellipsis of phrasal or head copies left by syntactic movement. The locality conditions that license *Q*-deletion depends again on the locus of the relevant ellipsis. In the syntax, syntactic locality conditions apply (selection or c-command, for instance), whereas at PF the locality conditions for morphological head ellipsis are the same as the conditions for affixation (i.e., adjacency or immediate locality). In the realm of null subjects, the phrasal vs. head ellipsis distinction is at the heart of the distinction between a radical argument ellipsis language (e.g., Japanese) and a consistent null subject language (e.g., Spanish). What I have just said is schematized as in the following figure:

(11)

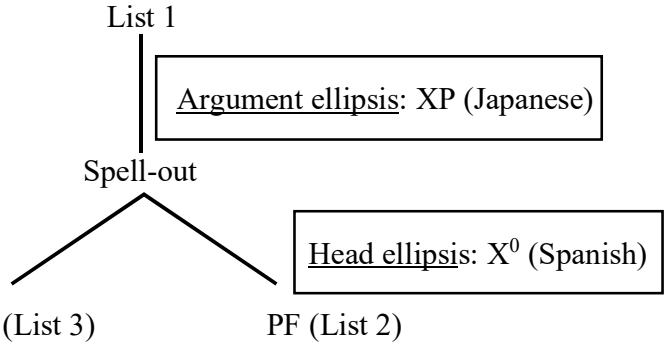


Figure 1. Syntactic and morphological ellipsis

In the following two subsections, I briefly discuss each case in turn. A more detailed discussion on radical and consistent null subject languages can be found in Saab (2020).

3.1. Consistent null subject languages as a case of morphological ellipsis

Consider first null subject languages of the Spanish type. As already advanced, these are languages in which the elided arguments are heads eliminated in the morphology through head ellipsis, a type of ellipsis that obeys morphological locality conditions. The operation is defined as follows:[8]

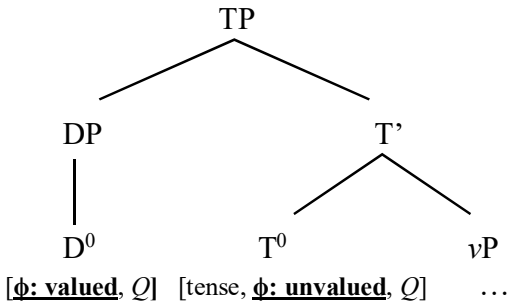
[8] Here are the relevant associated definitions of *morphosyntactic word* and *subword*:

(i) At the input to Morphology, a node X^0 is (by definition) a *morphosyntactic word* (MWd) iff X^0 is the highest segment of an X^0 not contained in another X^0.
(ii) A node X^0 is a *subword* (SWd) if X^0 is a terminal node and not an MWd.

(12) Head Ellipsis (under *Q*-deletion):
Given a morphosyntactic word MWd, delete every *Q*-feature contained in MWd if and only if:
(i) There is an identical antecedent contained in a morphosyntactic word MWd',
(ii) MWd is adjacent or immediately local to MWd'.

Null subjects of the Spanish type instantiate a case of head ellipsis in the morphology under strict adjacency. To get the gist of the proposal, suppose then that null subjects are pronominal DPs that move to Spec,TP in the syntax and syntactically agree with T^0 through an application of the operation *Agree* that values the unvalued and uninterpretable ϕ-features of the T^0 node using the ϕ-features of the subject:

(13)



This assumption requires some clarifications. Overt subjects of consistent null subject languages do not seem to use the Spec,TP position, at least not productively. According to the literature, this follows from formal properties related to the T^0 head. In languages like English, i.e., a consistent non-null subject language, T^0 requires filling the Spec,TP position, a requirement that, by assumption, boils down to an EPP feature encoded in T^0. Because of this requirement, most subjects in English, in particular, referential ones, are preverbal and have all the properties related to A-movement properties. There is consensus, gained in the last decades, that consistent null subject languages do not have this type of T^0 head and that overt subjects, unlike languages like English, have A'-properties. (among others, Barbosa 1995; Ordóñez 1997; Alexiadou and Anagnostopoulou 1998; Kato 1999, and Saab 2008). However, Holmberg (2005), Saab (2008, 2016) and Roberts (2010a), among others, have proposed that null subjects are weak pronouns, in the sense of Cardinaletti and Starke (1999), which are merged in the Spec,TP position. As we will see, the two observations regarding the syntactic distribution of overt and null subjects are not incompatible.

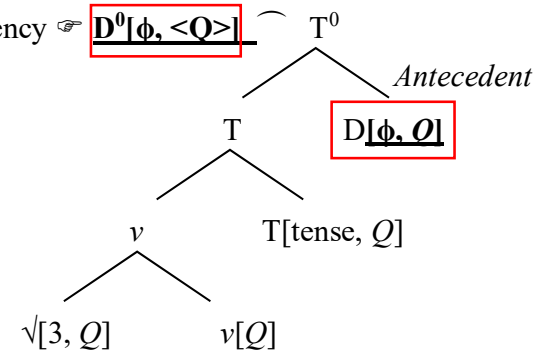
Now, at PF, a dissociated morpheme is added to the T^0 node using the inflectional information encoded in the T^0 node itself. Once linearization takes place, the conditions for *Q*-deletion at PF are met and the *Q* feature encoded in the pronominal subject is consequently deleted (<*Q*> = *Q*-deletion; ⁀ = linearization statement):[9]

[Embick and Noyer 2001: 574]

[9] An anonymous reviewer suggests that the head ellipsis theory could plausibly explain unagreement patterns like

(i) *Los* *estudiantes* *trabajamos.*
DET.M.PL students work.1PL
'We students work.'

(14) Null subjects as head deletion under adjacency ☞ **D^0[ϕ, <Q>]** ⌒ T^0



This is explicit enough and does not require further elaboration (the ideas are developed in detail in other places). However, as stated, the theory is not yet a theory for consistent null subject languages, since it does not offer any account for other well-known properties of this linguistic type; in particular, it is not clear why subject ellipsis as defined for D^0 in (14) correlates with free inversion (cf. (1c)) or with the absence of A-movement properties of lexical subjects. Put differently, what is missing is a theory of EPP/predication. The simpler solution is exploiting agreement dissociation along the following lines:

(15) The Dissociated Agreement Parameter and EPP checking: In dissociated agreement languages, T^0 is expanded by an additional *Agr* node at PF. If a language *L* dissociates person, then *L* satisfies the EPP by this application of morphological dissociation.

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in which the third-person plural subject triggers first-person plural agreement on the verb. As the translation above shows, in English, the same construction requires a definite D^0 head with first-person plural features. The reviewer, then, conjectures that head ellipsis could derive (i) from sentences like (ii) by deleting the pronoun *nosotros*:

(ii)	*Nosotros,*	*los*	*estudiantes,*	*trabajamos.*
	we	DET.M.PL	students	work.1PL
	'We, the students work.'			

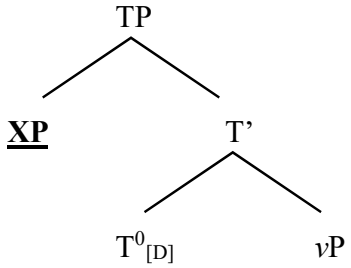
This putative correlation between unagreement and null subject properties was already noted by Ordóñez (1997). Yet, Saab (2008, 2013) and Höhn (2016) have shown that the correlation is falsified by the facts, since many consistent null subject languages do not present unagreement (in the Romance realm, Portuguese or Italian, for instance). In addition, there are also good reasons to reject the idea that unagreement can be connected to appositive structures like the one exemplified in (ii) (see the abovementioned works). For instance, while an appositive DP like (iii) is perfectly grammatical, its putative counterpart with subject deletion is fully ungrammatical, as illustrated in (vi):

(iii)	*Yo,*	*el*	*estudiante*	*que*	*conocés,*	*te*	*amo.*
	I	DET.SG.PL	student	that	know.2SG	CL.ACC.2SG	love.1SG
	'I, the student you know, love you.'						
(iv) *	*El*	*estudiante*	*que*	*conocés*	*te*	*amo.*	
	DET.SG.PL	student	that	know.2SG	CL.ACC.2SG	love.1SG	

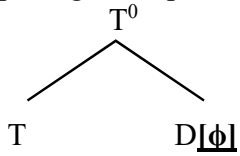
Thus, languages can satisfy a formal requirement in T^0 either by externally or internally merging an XP in Spec,TP, or by morphologically expanding T^0 by the adding of person dissociation.[10]

(16) Two ways of EPP checking:

a. Syntactic XP merge



b. Morphological expansion at PF



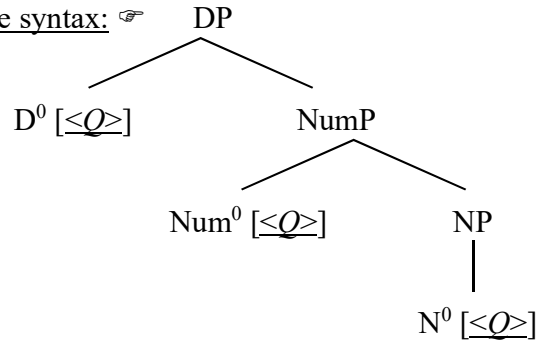
Now, free inversion follows straightforwardly. If EPP checking is resolved by person agreement dissociation, then lexical subjects in null subject languages are free to occur in different A or A'-positions across the clausal spine (including Spec,TP for weak pronouns at least). Put differently, agreement dissociation only requires an instance of *Agree* in the syntax, not *Agree* plus EPP checking. Consequently, there is no need for Spanish to fill Spec,TP mandatorily. Typically, preverbal subjects of null subject languages show A'-properties, perhaps because of an additional operation of topicalization, and postverbal ones remain within the *v*P area. English subjects, instead, typically A-move to Spec,TP for EPP satisfaction. Unlike other theories of EPP checking and subject distribution and realization (e.g., Barbosa 1995; Ordóñez 1997; Alexiadou and Anagnostopoulou 1998, and Kato 1999, among others), my approach conceives of agreement morphemes as pure morphology with no impact in the syntax or at LF (see the list in (10) again). I have compared the approaches with more detail elsewhere, but as far as I can tell, both approaches are compatible with the empirical landscape. Central Trentino and North Italian dialects in general are perhaps the clearest piece of evidence in favor of the present approach to the NSP. I discuss Central Trentino in Section 3.3.

3.2. Radical argument ellipsis languages as syntactic DP-ellipsis

Next, consider languages of the Japanese type. I conceive of paradigmatic null arguments in these languages as cases of argument ellipsis in the syntax. In terms of the theory under consideration here, phrasal ellipsis reduces to *Q*-deletion of the *Q*-features contained in each terminal node, as illustrated in the following tree:

[10] There are many ways in which this situation can be understood. For instance, it could be the case that languages with agreement dissociation require more stringent locality conditions for EPP satisfaction. This does not mean that T^0 cannot attract XPs through EPP features, but that this mechanism is not enough to satisfy the selectional properties of T^0 at PF. In the theory I favor, there is no incompatibility in using Spec,TP in null subject languages. Indeed, as shown in (13), I assume that weak pronouns use this position, although it is not clear to me what motivates this movement or whether overt subjects can also use the same position. The consensus gained in the last decades is that null subject languages do not require movement to Spec,TP for EPP reasons. I think that the two structures in (16) can then be reduced to a locality issue in selectional properties of functional head. Both English and Spanish require that a D-feature be associated to the T^0 head. English satisfies this requirement at the phrasal level (i.e., a DP in Spec,TP is enough to meet the subcategorization properties of T^0), while Spanish satisfies the same requirement at the head level at PF (i.e., a D^0 head is merged with the T^0 node).

(17) Radical DP-ellipsis in the syntax: ☞



Argument ellipsis is confirmed by at least two relevant diagnostics regarding the interpretation of null arguments: (i) presence or absence of sloppy readings, and (ii) presence or absence of quantificational readings. As for the first diagnostic, Oku (1998) has shown that there is a crucial distinction between Japanese and Spanish when it comes to evaluating the availability of null arguments to license sloppy readings. As the following minimal pair shows, only Japanese licenses a sloppy reading of the possessive pronoun contained in the elliptical subject:

Oku's Generalization:
Japanese: strict reading OK, sloppy reading OK

(18) a. *Mary-wa* *[zibun-no* *teian-ga* *saiyo-sare-ru-to]*
Mary-TOP [self-GEN proposal-NOM accept-PASS-PRS-COMP]
omotteiru.
think
'Mary$_1$ thinks that her$_1$ proposal will be accepted.'

b. *John-mo* *[e* *saiyo-sare-ru-to]* *omotteiru.*
John-also [accept-PASS-PRS-COMP] think
Lit. 'John also think *e* will be accepted.'

Spanish: strict reading OK, sloppy reading *

(19) a. *María* *cree* *que* *su* *propuesta* *será* *aceptada.*
Maria believes that her proposal be.FUT accepted
'María believes that her proposal will be accepted.'

b. *Juan* *también* *cree* *que* *e* *será* *aceptada.*
Juan also believes that be.FUT accepted
'Juan also believes that it will be accepted.'

[Oku 1998: 165; *e* = empty]

A more robust diagnostic is the presence of quantificational readings, which, as is well-known, clearly favor ellipsis approaches over pronominal ones since pronouns do not trigger quantificational readings out of the blue. Takahashi (2008, 2014) has provided examples in Japanese like the following one, which proves that, in addition to the normal E-type reading pronouns trigger, a null subject in Japanese can also have a quantificational reading. For instance, in an example like (20b), the null subject can be interpreted both as referring to the same set of wizards (the E-type reading) or to a disjoint set of three wizards (the *Q*-reading):

Quantificational vs. E-type readings:

(20) a. *Sannin-no* *mahootukai-ga* *Taroo-ni* *ai-ni* *kita.*

three-GEN wizard-NOM Taroo-DAT see-to came
'Three wizards came to see Taroo.'

b. [*e*] *Hanako-ni-mo ai-ni kita.*
Hanako-DAT-also see-to came
Lit. '*e* came to see Hanako, too.'

[*e*] = the set of wizards are coincident (E-type reading)
[*e*] = the set of wizards can be divergent (Quantificational reading)

[Takahashi 2014: 93]

In Spanish, as expected, the quantificational reading is impossible:

(21) a. *Tres magos vinieron a ver a Juan.*
three wizards came to see DOM Juan
'Three wizards came to see Juan.'

b. *[e] Vinieron a ver a Pedro también.*
came to see DOM Pedro also
'They also came to see Pedro.'

(Only E-type reading)

On an argument ellipsis analysis, an example like (20b) under the *Q*-reading is roughly represented as shown below, where the numeral is part of E-site:

(22) <*Sannin-no mahootukai-ga*> *Hanako-ni-mo ai-ni kita.*
three-GEN wizard-NOM Hanako-DAT-also see-to came
Lit. '*e* came to see Hanako, too.'

In Spanish, this reading does not obtain because (i) pronouns do not trigger quantificational readings out of the blue, and (ii) Spanish elides pronominal heads, not full phrasal DPs.

(23) <*pronoun*> *vinieron a ver a Pedro también.*
came to see DOM Pedro also
'They also came to see Pedro.'

How can this difference between Spanish and Japanese be accounted for under the present framework? According to Saab (2020), dissociated morphology is, again, the key factor. The idea is that Japanese not only lacks dissociated agreement morphology; it also lacks an obligatory abstract operation of *Agree* for person/number entirely. Furthermore, as shown in Saito (2007), null arguments in Japanese lack abstract Case.[11] Assuming that this is on the right track, I contend

[11] As commented in footnote 4, the theory requires serious revisions of Case theory as conceived of in Chomsky (2000) and subsequent work. One alternative is to appeal to the dependent Case theory, according to which Case is determined not by the *Agree* system but by competition among arguments and specific configurational properties (see, among others, Marantz 1991; Preminger 2014; Baker 2015). Simplifying, in dependent systems what happens to the Case of an argument could dramatically affect what happens to another one. In this respect, an anonymous reviewer wonders: "If a dropped subject does not have Case, does this mean that the object should be able to get the unmarked (NOM) Case (rather than the dependent (ACC) Case) when the subject is dropped? If this prediction is indeed made, it is clearly falsified by the facts." I think that the reasoning is correct, but a lot depends on different implementations of the dependent Case theory. At any rate, recall also from footnote 4 that according to Saito (2007) there are reasons to think that accusative and dative cases are uniformly inherent in Japanese, i.e., they are not dependent cases.

that the lack of abstract Case in the syntax does not produce any conflict in the syntax, since Case is triggered by well-formedness conditions at PF, i.e., the Case Filter. In terms of the theory developed here, we can assume that a caseless DP is subject to *Q*-deletion in the syntax and that this is enough to prevent a Case Filter violation at PF. This is locally determined by the computational system: a caseless DP is automatically elided in the syntax by local inspection internal to the DP structure. Of course, as usual, this requires that certain discourse conditions apply in the language to recover the missing information. Now, by assumption, caseless DPs of the Japanese kind are impossible in *Agree* languages since abstract Case information is required for the realization of morphological agreement (see Bobaljik 2008). I refer the reader to Saab (2020) for further details.

3.3. Inconsistent null subject languages

The *Q*-deletion approach predicts that some "null" subjects in consistent null subject languages must be pronounced for morphological well-formedness conditions. For instance, subwords cannot be deleted if the MWd containing them is not deleted as well. This is called the *Subword Deletion Corollary* in Saab (2008). Here is an informal formulation.

(24) Subword Deletion Corollary (informal): Every terminal node contained in a non-elliptical MWd is subject to Vocabulary Insertion.
(A non-elliptical MWd is a MWd to which head ellipsis has not been applied.)

North Italian dialects confirm this point. Consider the case of Central Trentino, as described in Casalicchio and Cordin (2020). This language has two typical consistent null subject language properties: (i) free inversion of referential subjects, and (ii) (enough) rich agreement. As for the first property, it is illustrated in this minimal paradigm, in which the DP *el Mario* can occur both in preverbal position, as in (25a), and in postverbal one, as in (25b).

(25) a. *El Mario el magna.*
the Mario he-eats
b. *Magna el Mario.*
eats the Mario
'Mario eats.'

[Safir 1986: 336]

Regarding morphological richness, the three regular conjugations show a pattern of what looks like a systematic syncretism between the third-person singular and the third-person plural. The rest of the paradigm morphologically distinguishes each person and number. As an illustration, I provide the following table containing the conjugations for present, imperfect past and future of the indicative mood of the regular first conjugation, but this syncretism extends to the other regular conjugations and the irregular forms (see Casalicchio and Cordin 2020 for an in-depth description):

*Table 1: Regular verbs - I conjugation (-*àr*), Central Trentino*

	Present indicative	Imperfect past indicative	Future indicative
1SG	cant*o*	cantav*o*	canter*ò*
2SG	te cant*i*	te cantav*i*	te canter*ài*
3SG	el/la cant*a*	el/la cantav*a*	el/la canter*à*
1PL	cant*én*	cantav*en*	canter*èn*
2PL	cant*é*	cantév*e*	canter*é*
3PL	i/le cant*a*	i/le cantav*a*	i/le canter*à*

[Casalicchio and Cordin 2020: 174, cap. 8]

A certain amount of verbal agreement syncretism is not a rarity in the realm of more consistent null subject languages. For instance, most Latin American varieties of Spanish have lost the informal pronoun for the second-person plural *vosotros* 'you$_{inf}$' and, consequently, the verbal ending for this person and number is also absent in the verbal paradigm (e.g., *vosotros cantaís* 'you$_{inf}$ sing'). As a result, these grammars only use *ustedes* 'you' for all second-person plurals, which, as is well-known, is syncretic with the third-person plural. The following table illustrates this situation for three regular tenses of the first conjugation of the verbal paradigm of Rioplatense Spanish. Note that, in addition to the syncretism between second-person and third-person plural, the imperfect past also shows a syncretism between the first-person singular and the third-person singular, reducing the morphological distinctions of the verbal paradigm to only four in this part of the paradigm.[12]

*Table 2: Regular verbs - I conjugation (-*ar*), Rioplatense Spanish*

	Present indicative	Imperfect past indicative	Future indicative
1SG	cant*o*	canta*ba*	cantar*é*
2SG	cantá*s*	canta*bas*	cantará*s*
3SG	cant*a*	canta*ba*	cantar*á*
1PL	canta*mos*	cantába*mos*	cantar*emos*
2PL	canta*n*	canta*ban*	cantará*n*
3PL	canta*n*	canta*ban*	cantará*n*

Yet, Rioplatense Spanish, like other Latin American varieties, is a consistent null subject language in exactly the same way as Peninsular Spanish, the dialect with more verbal distinctions. Now, when we compare Rioplatense Spanish and Central Trentino, we see that the latter has obligatory proclitic subjects for both third-person singular and plural and for second-person singular (there are other obligatory enclitic subjects). The clitic system in Trentino is very complex, not only because it contains some important gaps depending on the person involved but also because it makes distinctions in proclitic and enclitic positions. The following three tables, taken from the descriptive grammar of Central Trentino of Casalicchio and Cordin (2020), illustrate these two aspects of the pronominal paradigm:

[12] Probably, the same syncretism between first and third- person singular is also obtained in the present and future tenses. However, it is opaqued by additional morpho-phonological rules. See Alcoba (1999) for a proposal along these lines.

Table 3: First person free pronouns and clitics

	1SG free	1SG proclitic	1SG enclitic	1PL free	1PL proclitic	1PL enclitic
subject	mi	//	nte	nói/noialtri	//	te
direct object	mi	me	me	nói/noialtri	ne	ne
Dative/indirect object	a mi	me	me	a nói/a noialtri	ne	ne
P + indirect object	con mi	//	//	con nói/con noialtri	//	//

[Casalicchio and Cordin 2020: 84, chapter 5]

Table 4: Second person free pronouns and clitics

	2SG free	2SG proclitic	2SG enclitic	2PL free	2PL proclitic	1PL enclitic
subject	ti	te	t	vói/voialtri	//	te
direct object	ti	te	te	vói/voialtri	ve	ve
Dative/indirect object	a ti	te	te	a vói/a voialtri	ve	ve
P + indirect object	con ti	//	//	con vói/con voialtri	//	//

[Casalicchio and Cordin 2020: 84, chapter 5]

Table 5: Third person free pronouns and clitics

	3SG free masc.-fem.	3SG proclitic masc.-fem.	3SG enclitic masc.-fem.	3PL free masc.-fem.	3PL proclitic masc.-fem.	3PL enclitic masc.-fem.
subject	élo - éla	el/l – la/l	lo – la	lóri - lóre	i - le	i - le
direct object	élo/lu - éla	lo/l – la/l	lo - la	lóri - lóre	i - le	li/i - le
dative/indirect object *a* object	a élo/lu - á ela	ghe/gh	ghe - gh	a lóri - a lóre	ghe - gh	ghe - gh
indirect object *de/da*/partitive object	de élo/lu - de éla	en/n/ne	n/ne	de lóri - de lóre	en/n/ne	n/ne
P + indirect object	con élo/lu – con éla	//	//	con lóri - con lóre	//	//

[Casalicchio and Cordin 2020: 85, chapter 5]

The following examples show the basic distribution of clitic subjects in Central Trentino, both in proclitic and enclitic positions:

(26) a. *Vènionte?*
come.1SG.CL
'Should I come?'

b. *Te vègni con mi.*
you.CL come with me

'You come with me.'

c. *Vègnet con mi?*
come-you.CL with me
'Will you come with me?'

d. *El/la vèn con mi.*
he/she.CL come with me
'He/she comes with me.'

e. *Vègnelo/la con mi?*
comes-he/she.CL with me?
'Will he/she come with me?'

f. *Vegninte con ti?*
come-1PL.CL with you?
'Should we come with you?'

g. *I/le vèn con mi.*
they.CL come with me
'They come with me.'

h. *Vègnei/le con mi?*
come they.CL with me?
'Will they come with me?'

[Casalicchio and Cordin 2020: 86-87]

Any attempt to elide these clitics gives ungrammatical results:

(27) a. **(El) magna.*
he- eats
'He eats.'

b. **(I/le) vèn con mi.*
they.CL come with me
'They come with me.'

c. *Vègne*(i/le) con mi?*
come they.CL with me?
'Will they come with me?'

etc…

Based on the perplexing evidence of the kind discussed in this section, Safir (1986) proposes to dissociate the *pro*-drop parameter from free inversion, for which he stipulates a different parametric option. In his view, North Italian dialects are non-null subject languages with free inversion. This is an unwanted result both for conceptual and empirical reasons. But the situation does not seem easy to resolve in more contemporary accounts of the NSP, either. For instance, for those who believe that the NSP connects to the pronominal nature of agreement morphemes (Barbosa 1995; Ordóñez 1997; Alexiadou and Anagnostopoulou 1998, and Kato 1999, among many others), the null subject properties of North Italian dialects, in particular, morphological richness and free inversion, are difficult to incorporate into the framework. Kato (1999) is one of the few attempts to account for North Italian dialects under this specific kind of approach. Concretely, she proposes that in languages like Central Trentino, the subject clitic is merged in Spec,VP, position in which it receives its thematic interpretation. Next, the clitic incorporates into T^0 by head adjunction. In her view, the only difference with consistent null subject

languages lies in the clitic or affix nature of the pronominal subject in each case. I agree with Kato's approach to North Italian dialects, but I disagree with her analysis of agreement morphemes as interpretable arguments in languages of the Spanish type. As for Central Trentino, following indeed Kato's approach, I claim that clitic subjects are merged in argument position, Spec,*v*P, and then, they move to Spec,TP. However, unlike Spanish, some of these pronouns in Spec,TP become clitics of the T^0 node. This is enough to explain why they must be pronounced despite the morphological richness in the verbal paradigm of North Italian dialects. A clitic incorporated in T^0 is a subword of a non-elliptical head and, consequently, by the corollary in (24), it must be pronounced. Let us see this aspect of my analysis in more detail. Note first that Central Trentino is like Spanish regarding the presence of agreement dissociation. Recall the formulation of the Dissociated Agreement Parameter in (15):

(28) The Dissociated Agreement Parameter and EPP checking: In dissociated agreement languages, T^0 is expanded by an additional *Agr* node at PF. If a language *L* dissociates person, then *L* satisfies the EPP by this application of morphological dissociation.

That the T^0 node is bimorphemic in the favored sense is clearly illustrated by the co-occurrence of tense and agreement morphemes in, say, the imperfect past. Below, I repeat the paradigm of the imperfect past stressing the decomposition of tense and agreement morphemes:

(29)

		SG		PL
1		*canta-v-o*		*canta-v-en*
		sing-IPFV-1SG		sing-IPFV-1PL
2	*te*	*canta-v-i*		*canté-v-e*
		sing-IPFV-2SG		sing-IPFV-2PL
3	*el/la*	*canta-v-a*	*i/le*	*canta-v-a*
		sing-IPFV-3SG		sing-IPFV-3PL

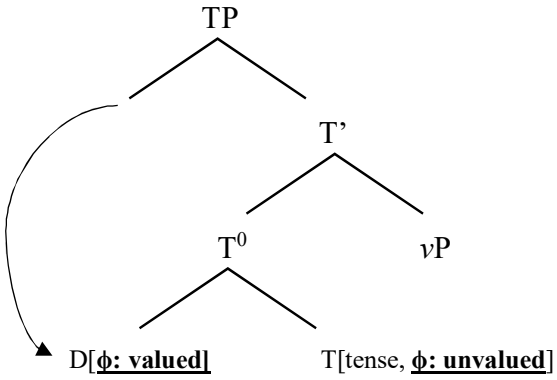
So, there is no doubt that the language expands T^0 by adding an agreement morpheme in the morphology. And there is little doubt, as well, that the feature specification of this dissociated agreement morpheme should license subject deletion by head ellipsis, whose definition I repeat below (cf. (12)):

(30) Head Ellipsis (under *Q*-deletion):
Given a morphosyntactic word MWd, delete every *Q*-feature contained in MWd if and only if:
(i) There is an identical antecedent contained in a morphosyntactic word MWd',
(ii) MWd is adjacent or immediately local to MWd'.

As already observed, the reason why in some cases Central Trentino has mandatory clitic subjects is because they are literal clitics, i.e., subwords of the T^0 node in the morphology. Simplifying the representation in (31) for the illustration's sake, whenever the pronominal subject adjoins to T^0 subject ellipsis becomes impossible because of the Subword Deletion Corollary:[13]

[13] In Cardinaletti and Starke (1999), one central difference between clitics and weak pronouns has to do with their phrasal status. Concretely, clitics are realized as heads and weak pronouns, as phrases. Cardinaletti and Starke provide one crucial diagnostic to distinguish the phrasal status of different types of pronouns. Weak pronouns can occur as

(31)



Even under these circumstances, the language still displays the crucial properties of consistent null subject languages: (i) subject inversion, (ii) (enough) morphological richness, and (iii) morphological EPP checking, etc.

4. Null Subjects and the bimorphemic principle

Languages with some rich agreement but without null subject properties are languages in which T^0 and Agr do not split. Consider German as a case at point, which has at least four agreement distinction in its verbal paradigm, but it is a non-null subject languages in all the relevant respects:

(32)

(ich) arbeit-e	(I) work
(du) arbeit-est	(you) work
(er)/(sie) arbeit-et	(he/she) works
(wir) arbeit-en	(we) work
(ihr) arbeit-et	(you) work
(sie) arbeit-en	(they) work

[Jaeggli and Safir 1989: 28]

The reason why the absence of agreement dissociation blocks subject ellipsis and, more generally, any typical null subject language property is easy to pinpoint under the present framework. In a nutshell, T^0 cannot serve as an antecedent for *Q*-deletion of a pronoun, only Agr, a node of the D type, can serve for *Q*-deletion of another D^0 head. This is the general case for any antecedent in ellipsis: elliptical VPs require VPs as antecedents; elliptical NPs, NPs, and so on. Put differently, there is an antecedence constraint requiring that the elided phrase or head have a

subjects of a predicate coordination, as shown for *egli* in Italian in (ia), a position only available to XPs, not to heads (Cardinaletti and Starke 1999: 169). As the (b) example shows, clitic subjects in Trentino cannot participate in this structural position, leading to the conclusion that they have a head status.

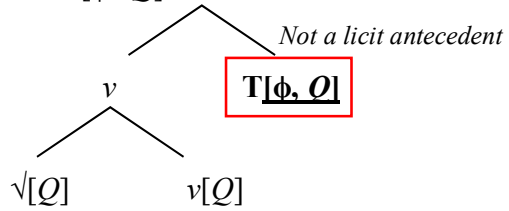
(i)

a.	***Egli***	*mangia*		*della*	*zuppa*	*e* -	*beve*	*del*	*vino.*		*Italian*
	he	eats		of-the	soup	and	drinks	of-the	wine		
b.	****La***	*canta*	*e*	*bala*							*Trentino*
	she	sings	and	dances							

[Cardinaletti and Starke 1999: 166]

category identical phrase or head as antecedent.[14] To see why then T^0 cannot serve as antecedent of D^0, consider again the definition of head ellipsis in (30) and the following tree, which illustrates what I have just said in prose. As the reader can confirm by herself, T^0 alone is not a suitable antecedent for ellipsis of the D^0 head:

(33) German does not license head ellipsis of subjects ☞ $D^0[\phi,\ Q] \frown T^0$



In a very interesting recent paper, Koeneman and Zeijlstra (2021) convincingly show that the above conjecture is correct for a broader sample of languages. Clear cases of unsplit inflection include at least the following three (German is also included in their sample):

Table 6: *English, Dutch and Faroese present and past tense paradigms*

	English		*Dutch*		*Faroese*	
	to talk		danken ('to thank')		døma ('to judge')	
	present	past	present	past	present	past
1SG	talk-Ø	talk-ed	dank-Ø	dank-te	døm-i	døm-di
2SG	talk-Ø	talk-ed	dank-t	dank-te	døm-ir	døm-di
3SG	talk-s	talk-ed/*-eds	dank-t	dank-te/*-tet	døm-ir	døm-di/*-dir
1PL	talk-Ø	talk-ed	dank-en	dank-ten	døm-a	døm-du
2PL	talk-Ø	talk-ed	dank-en	dank-ten	døm-a	døm-du
3PL	talk-Ø	talk-ed	dank-en	dank-ten	døm-a	døm-du

[Koeneman and Zeijlstra 2021: 15]

The clearest evidence in favor of the unsplit thesis comes from the complementary distribution between the T^0 and agreement nodes (e.g., the impossibility of **talk-ed-s* in English), which indicates that tense and agreement compete for the same position. In dissociated agreement languages, this is never the case, as we have already seen. I fully agree with Koeneman and Zeijlstra and adopt this criterion to detect the presence or absence of what I call agreement dissociation. However, I depart from their explanation of the bimorphemic principle. According to them, in I^0 nodes encoding both tense and agreement features, the agreement features cannot be intrinsically valued for reasons of LF interpretability (see their paper for details). Now, since *pro* is, by assumption, a category with unvalued ϕ-features, an *Agree* failure is obtained, ruling out *pro*-drop in languages with unsplit I^0. In my opinion, certain conceptual aspects of the proposal remain problematic. For instance, in a privative system, as the one assumed in Koeneman and Zeijlstra, there is *prima facie* nothing wrong with valuation of *pro* with "nothing". In principle, this would imply a mere pronoun under an assignment function (which is what a pronoun is, after all) without

[14] In principle, it seems reasonable to see this antecedence requirement as deriving from identity. This is particularly clear if grammatical categories are modeled as formal features, but elaborating on this argument will take me too far away from the limits of this paper.

any of the presuppositions associated to ϕ-features. Alternatively, the absence of ϕ-features on *pro* is also perfectly consistent, unless one stipulates that little *pro* must always have ϕ-features. Regarding the agreement features in I^0, unvalued agreement features should lead to default agreement, not to any LF or syntactic crash. Finally, I do not see how a theory formulated in these terms can be extended to inconsistent null subject languages, like Central Trentino. In this respect, their approach seems to inherit the same problem as any theory of little *pro*, at least in this domain. There are other issues that could be raised, but I leave a full discussion of Koeneman and Zeijlstra for another occasion. As far as I can tell, the ellipsis approach to null subjects adopted here accounts for the bimorphemic principle in a simpler and more explicit way.

5. Number dissociation and partial null subject languages

Martins and Nunes (2021), Kato et al. (2023), and Martins (2023) argue that morphological impoverishment plays a crucial role in null subject licensing. In a nutshell, null subject licensing must refer to abstract features and not to surface realization. If we compare Brazilian Portuguese and European Portuguese from this perspective, we see that the two languages differ with respect to the abstract specification of their ϕ-sets, not necessarily in the surface realization of their vocabulary items. Consider the following table, in which, even when the surface form of pronouns and agreement inflection is the same in both languages, their underlying features representation is not in almost all the slots of the paradigm. For instance, European Portuguese encodes third-person singular in the pronouns *ele/ela*, whereas Brazilian Portuguese does not. The general observation is that both the pronominal and agreement systems in Brazilian Portuguese are impoverished when compared to the same systems in European Portuguese. There is only one perfect coincidence, namely, the full feature defectivity encoded in the pronoun *a gente*, an issue to which I will come back at the end of this section.

Table 7: Morphological specifications for person and number and verbal agreement in Portuguese

Nominative pronouns	**Morphological specification for person and number**				**Surface form of dançar 'dance'**	
	EP		BP		Indic. Present	Indic. Imperfect past
	Pronoun specification	Agreement inflection	Pronoun specification	Agreement inflection		
nós 'we'	[P/N: 1.PL]	[P/N: 1.PL]	[P/N: 1]	[P/N: 1]	*dança**m os***	*dançáva **mos***
EP *tu* 'you.SG'	[P/N: 2.SG]	[P/N: 2.SG]			*dança**s***	*dançava**s***
eu 'I'	[P/N: 1.SG]	[P/N: 1.SG]	[P/N: SG]	[P/N: SG]	*danç**o***	*dança**va***
%BP *tu* 'you.SG'			[P; N]	[P:*u*, N:*u*]	*dança*	*dança**va***
você 'you.SG'	[P:2; N:SG]	[P:2; N:SG]	[P; N]	[P:*u*, N:*u*]	*dança*	*dança**va***
ele/ela 'he/she'	[P:3; N:SG]	[P:3; N:SG]	[P; N]	[P:*u*, N:*u*]	*dança*	*dança**va***
a gente 'we'	[P/N]	[P:*u*, N:*u*]	[P/N]	[P:*u*, N:*u*]	*dança*	*dança**va***

vocês 'you.PL'	[P:2; N:PL]	[P:2; N:PL]	[P; N:PL]	[P:*u*; N:PL]	*dança**m***	*dança**m***
eles/elas 'they.MASC/FEM'	[P:3; N:PL]	[P:3; N:PL]	[P; N:PL]	[P:*u*; N:PL]	*dança**m***	*dança**m***

[adapted from Martins and Nunes 2021: 178, Table 2]

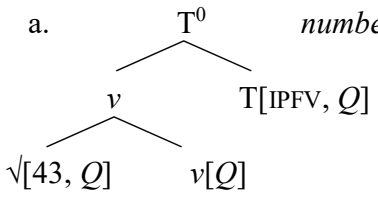
Moreover, the above table shows that, at least in principle, both languages dissociate T^0 and agreement (look at the segmentation of person and tense in the past, for instance). The Agr node is also realized by different rules in each language. Crucially, Brazilian Portuguese only specifies person for the first-person plural *-mos*:

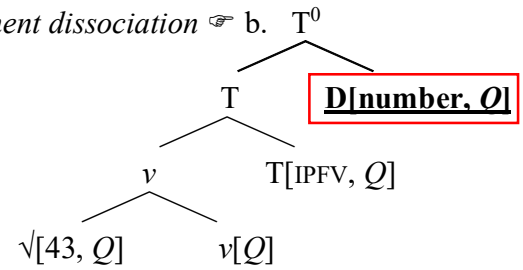
Table 8: Correspondence rules for the morphological realization of verbal agreement inflection

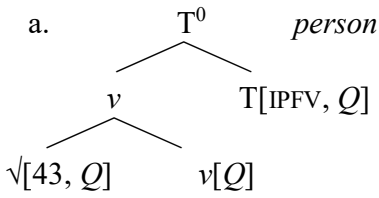
EP	**BP**
a. [P/N:1.PL] ↔ {-mos}; [N:PL] ↔ {-m}	a. [P:1] ↔ {-mos}; [N:PL] ↔ {-m}
b. [P/N:1.SG] → {-o} / IND.PRS ____ → {-i} elsewhere.	b. [N:SG] → {-o} / IND. PRS ____ → {-i} / IND.PFV.PST ____
c. [P/N:2.SG] → {-ste} / IND.PFV.PST ____ → {-s} elsewhere.	c. ∅ elsewhere.
d. ∅ elsewhere.	

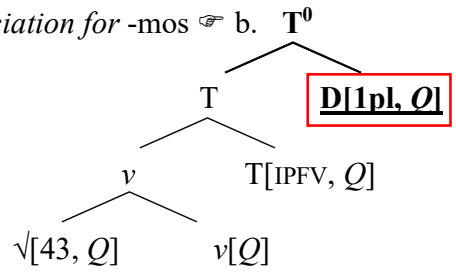
[Martins and Nunes 2021: 178, Table 3]

In the spirit of the works by Kato, Martins and Nunes mentioned above, I will then assume that Brazilian Portuguese is underspecified for person features in most of its verbal agreement paradigm. In the present framework, this implies that the language only dissociates number, not person, except for the form *-mos*, which, as in Martins and Nunes (2021), I take to be a dissociated morpheme for person (and perhaps number):

(35) a. 

number agreement dissociation ☞ b. 

(36) a. 

person agreement dissociation for -mos ☞ b. 

As far as I can tell, these assumptions are enough to capture the main properties of this partial null subject language (and other related ones), in particular:

(A) It explains why only a minimal elliptical ϕP, i.e., an extended projection for a third person pronoun, is by far the most productive null subject in the language: either expletive subjects (37), existential/generic subjects (38) or bound variable subjects (39):

(37) a. *Tá chovendo.*
is raining
'It is raining.'

b. *Tem novidade.*
has news
'There is news.'

c. *Parece que vai chover.*
seems that goes rain.INF
'It seems that it is going to rain.'

(38) a. *Aqui pode fumar.*
here can.3SG smoke.INF
'You/one can smoke.'

b. *Aqui conserta sapatos.*
here repairs shoes
'One repairs shoes.'

(39) a. *Ninguém acha que [ϕP] é estúpido.*
nobody thinks that is stupid
'Nobody$_i$ thinks that he$_i$ is stupid.'

b. *O João disse que [ϕP] comprou um carro.*
The John said that bought.3SG a car
'John$_i$ said that he$_i$ has bought a car.'

[Kato 1999: 5]

(B) It also explains the different degree of grammaticality noticed by Martins and Nunes (2021) (see also Kato et al. 2023). As the following examples show, the ellipsis of second or third-person singular, like in (40), is considered strongly ungrammatical. First-person singular is still considered degraded but a bit better, like in (41). Now, the ellipsis of *nós*, illustrated in (42), is perfect.

(40) **Eles pensam que [Ø não quer reclamar].*
they think that not want.Ø complain
'They think that {you do / he does} not want to complain.'
(Ø = você / ele)

(41) *??O professor disse que [Ø escrevo bem].*
the teacher said that write.1SG well
'The teacher said that I write well.'

(42) *O professor disse que [Ø escrevemos bem].*
the teacher said that write.1PL well

'The teacher said that we write well.'

[Martins and Nunes 2021: 177]

The fact that only first-person plural gives perfect results follows because it is the only case in which head ellipsis of the pronominal subject respects both locality and identity. First-person singular partially violates identity, since only singular is specified. Finally, second and third person are ruled out as radical identity failures. See Table 7 for reference.

(C) As argued in section 3, languages with agreement dissociation satisfy the EPP on T^0 through the introduction of agreement morphemes at PF. In BP, only dissociation of *-mos* satisfies the EPP by morphological means. The rest satisfies the EPP in the syntax by merging an XP with T^0. This explains why the language has a strong tendency to avoid free inversion of referential subjects not only in finite clauses (43) but also in nonfinite ones (44):

(43) a. *Telefonou* *o* *João.* (EP: OK, BP: *)
called the João

b. *O* *João* *telefonou.* (EP/BP: OK)
the João called
'João called.'

(44) a. *Você saindo* *do* *Brasil,*
you leaving from-the Brazil,
a gente sente uma falta muito grande
we feel an absence very big
dessa parte de verdura.
of-this part of greens
'When you leave Brazil, you miss the variety of greens a lot.'

b. *O* *Pedro chegando,* *nós* *saímos.*
the Pedro arriving we leave
'As soon as Pedro arrives, we leave.'

[Barbosa et al. 2005]

Many issues must be left for further research. In particular, the elliptical nature of the third-person singular is hard to demonstrate. At the moment, I do not have good arguments to distinguish an elliptical analysis for the null ϕP or NP from an empty noun one, along the lines proposed in Barbosa (2019). Hyper-raising properties of the type discussed in several works by Jairo Nunes and others are also not clearly accounted for by mere head ellipsis. Other properties of the distribution of null subjects both in Brazilian and European Portuguese seem, instead, to favor the approach suggested in this paper. The distribution of the subject *a gente* in European Portuguese is a case in point. The crucial fact to have in mind is that *a gente* cannot be elided in discourse initial position even in a language consistently *pro*-drop like European Portuguese. Thus, the null embedded subject in (45) can be interpreted as *você* or *ele/ela* but never like a first-person plural *a gente*.

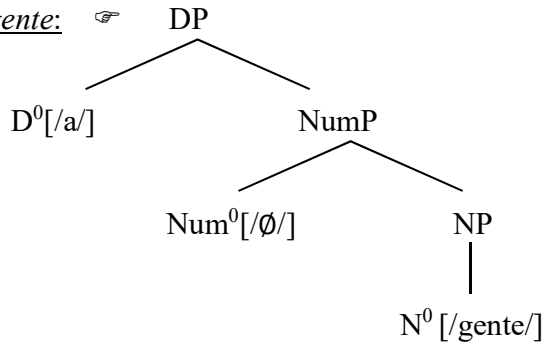
(45) **Eles* *pensam* *que* *[Ø* *não* *quer* *reclamar].*
they think that not want.Ø complain
'They think that {you do / he does} not want to complain.'

(Ø = *a gente* → *, Ø = *você/ele* → *ok*)

[Martins and Nunes 2021: 177]

Based on this type of evidence, Martins and Nunes (2021: 179) claim that "in a sense, it is as if EP, in this particular case, ceases to be a consistent NSL." Exactly for this reason they propose that both in European and Brazilian Portuguese *a gente* is underspecified both for number and person (see Table 7). I think, however, that there is an interesting alternative. If the approach to the NSP I am putting forward here is on the right track, European Portuguese behaves exactly as predicted for a consistent null subject language, which only elides pronominal heads. The problem with *a gente* is just that it is not a head, but a full DP. The following tree illustrates its phrasal structure:

(46) <u>The phrasal nature of *a gente*:</u> ☞



Note now that there are other environments in which a third-person singular null subject can be bound by the DP *a gente*:

(47) *[A gente]$_i$* *acha* *[* *que* *Ø$_i$* *deve* *[participar* *mais]]*.
we think.Ø that should.Ø participate more
'We think that we should be more participative.'

(Ø = *a gente* → EP/BP *ok*)

On the present account, this is fully predictable: Ø in (47) is a bound variable. In a consistent null subject language like European Portuguese, this type of null subject cannot have any other reading, but in partial null subject languages, it can also be interpreted as generic/existential when it is free (see Holmberg 2005; Saab 2008, 2016, and Barbosa 2019, among others). In both languages, under no circumstances can it be used as a referential free pronoun; hence, in (45) the reading of Ø as *a gente* is ruled out. Put differently, the reason why (45) is ruled out in EP reduces to the fact that EP is not a radical argument ellipsis language: phrases are not elided.[15]

[15] Interestingly, Martins and Nunes note that null subjects in gerund clauses both in European and Brazilian Portuguese have a broader distribution. Notably, *a gente* can be elided in both languages.

(i) [*Ø$_i$* *comendo* *a* *sopa* *toda],* *a* *mãe* *deixa* *a gente$_i$* *ir* *brincar.*
eating the soup all the mother let us go play
'If we eat soup, Mom will let us go play.'

[Martins and Nunes 2021: 186]

I conjecture that gerund clauses do not license consistent *pro*-drop but radical subject ellipsis of the Japanese type. The fact that gerund clauses lack agreement entirely seems to suggest that the idea could be on the right track. Therefore, the silence Ø in (i) must be analyzed as a case of radical DP ellipsis and not as a case of head ellipsis (i.e., <*a gente*>).

6. Conclusion

The theory put forward in this study accounts for many linguistic types regarding the syntactic distribution and morphophonological realization of subjects across many languages. In particular, it predicts:

(i) consistent null subject languages of the Spanish or European Portuguese type, in which the elided arguments are heads eliminated in the morphology,
(ii) radical argument ellipsis languages of the Japanese type, in which the elided arguments are phrases eliminated in the syntax,
(iii) inconsistent null subject languages of the Central Trentino type, in which some potential null subjects must be pronounced for morphological reasons.
(iv) Consistent non-null subject languages of the English or French type and inconsistent non-*pro*-drop languages of the German type, in which the agreement information comes packaged in the T node itself, making ellipsis impossible (i.e., T^0 and Agr are not properly dissociated, see Saab 2008, 2020 and, more recently, Koeneman and Zeijlstra 2021 for another approach),
(v) Partial null subject languages of the Brazilian Portuguese type in which T^0 has a dissociated morpheme for number, not for person, restricting null subjects to mere variables and forcing EPP checking in the syntax.

Along the lines proposed in Roberts (2019) and others, the syntactic and morphological properties that allow us to make the relevant typological distinctions can be modeled as a parameter hierarchy, as illustrated below:

(48) case /agreement dependency between T^0 and the subject?

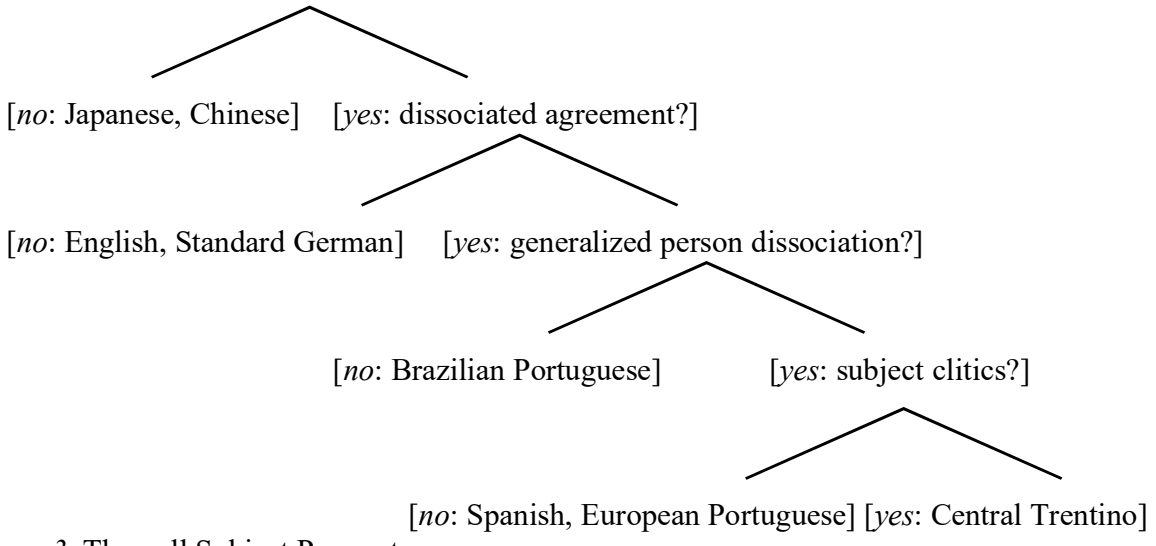


Figure 3. The null Subject Parameter

The idea that some nonfinite clauses in Romance trigger the conditions for radical DP ellipsis in subject position was already proposed by Camacho (2011) based on other empirical considerations. In the present framework, this should not be surprising since absence of abstract *Agree* alone is enough to license radical ellipsis in subject position.

The two higher nodes in the hierarchy correspond to the two crucial properties regarding the NSP: (i) presence/absence of syntactic *Agree*, and (ii) presence/absence of agreement dissociation in *Agree* languages. In this regard, the theory still connects null subject properties to the agreement systems attested in different languages, but it does it based on the acknowledgment that the general theory of agreement must take into consideration two different agreement dimensions: the syntactic and the morphological dimensions. Once this conceptual distinction is made, the NSP can be straightforwardly derived under the general theory of ellipsis.

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