Syntax or nothing
Implicit arguments as absence of *Merge*

Abstract: I show that core implicit subjects in Spanish (i.e., the ones that occur with analytical passives, impersonal *se*, and causatives) can be derived from a theory under which absence of *Merge* in external subject position is a possible syntactic output. Core implicit arguments then have no syntactic representation (*pace* Landau 2010). Absence of *Merge* can make to arise two different scenarios: (i) a conflict at the interfaces, which requires the implementation of some repair strategy, (ii) no conflict at the interfaces; i.e., a legitimate object at the interfaces. The first scenario is illustrated with reference to the so-called impersonal *se* in Spanish, and the second one with reference to analytical passives. The proposed system is able to capture a set of very intricate facts that does not have a satisfactory solution hitherto. Crucially, this particular view on implicit arguments, together with a purely syntactic theory of argument structure, derives the full distribution of impersonals and reflexives in *hacer* 'to make' causative contexts. Finally, it is shown that the arbitrary readings that the two scenarios above described display have a different source: whereas impersonal *se* requires (costly) default computation at the interface, arbitrary interpretations in analytical passives are calculated at the *v*P level.

Key words: Implicit argument, Spanish, Merge, feature inheritance, thematic theory

1. Introduction

For reasons that should be more or less evident (at least from a philosophical point of view), the claim that some (non-perceptible) object exists requires more justification than the claim that some (non-perceptible) object does not. Put differently, some particular (non-perceptible) object is claimed to exist only in case we are forced to by strong empirical reasons.[1] The issue is particularly pressing in the realm of elliptical / implicit / empty syntactic entities. To illustrate the point, let me start with an *excursus* and tell a story about how null subjects were treated during the LGB's days (Chomsky 1981) and, in particular, before the introduction of the so-called little *pro* (Chomsky 1982):

In (1), the basic clause structure in LGB is given:

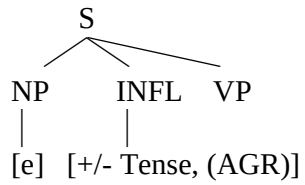
(1) S → NP INFL VP, where INFL = [[+/- Tense], (AGR)]
(Chomsky 1981: 241)

At that time, the inventory of empty categories only included different species of traces and the empty pronominal PRO, which replaced the transformation of *Equi-NP* deletion.[2] These categories were the only available ones to plug them in a tree like (2), which should correspond to what underlies referential null subjects in *pro*-drop languages:

[1] A good illustration in the phonological generative tradition was the dispute between phonemes vs. features (Halle 1962): phonological features (the intuitively non-economical option) defeated phonemes because we were *forced* to conclude that phonological features were able to capture strong empirical generalizations about phonological structure, which would not be captured in terms of phonemes.

[2] A transformation being reconsidered since the movement theory of control was proposed (Hornstein 1999 and subsequent work).

(2)



Chomsky conjectured that [*e*] in (2) cannot be a trace and concluded that it should be PRO. The obvious next question is why (2) is an option in Spanish (and *pro*-drop languages in general) but not in English (and no *pro*-drop languages in general). Here is Chomsky's solution.

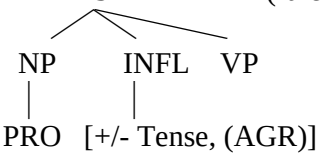
The first step is to accept the following four assumptions:

Assumptions

(3) a. The empty category principle (ECP) applies at LF (or at SS, but not at PF).
b. AGR, in its base position, invariably governs the subject
c. AGR and V are merged under *affix hopping*.
d. *Affix-hopping* does no leave a trace.

From this set of assumptions, it follows that in the general case, PRO cannot be the subject of a given finite clause because of the PRO theorem (i.e., PRO cannot be governed), so the English case is "derived":

(4) *S (ruled out by the PRO theorem)

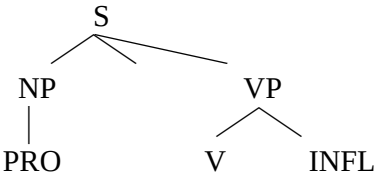


As for null subject languages, there should be some mechanism rendering PRO ungoverned in finite contexts. Chomsky's conjecture was that the mechanism is affix hopping, a rule that can apply at syntax or PF.

(5) *R* may apply in the syntax. [*R* = *affix hopping*]
(Chomsky 1981: 257)

Syntactic affix hopping results in a configuration under which PRO is not governed, in consonance with the PRO theorem:

(6)



The Null Subject Parameter can be now reduced to the statement in (7):

(7) Null subject parameter: The subject of a finite clause is PRO if and only if *R* has applied in the syntax. (Chomsky 1981: 258)

Evidently, next to particular commitments with unmotivated assumptions, such a theory loses the basic generalization that null subjects and rich agreement are connected (i.e., Taraldsen's generalization; Taraldsen 1978), among other well-known correlations involving the null subject parameter. In Chomsky's words:

"[…] the parameter involves the inflectional element INFL, or more precisely, the agreement element AGR (=PRO) that is the crucial component of INFL with respect to government and binding. **The intuitive idea is that where there is overt agreement, the subject can be dropped, since the deletion is recoverable.**"

(Chomsky 1981: 241; my emphasis)

Even though Chomsky explicitly refers to a deletion process, it turned out that the logic of that particular time in the history of generative grammar led Chomsky (1982) to make a suspicious movement: to extend the ontology of empty categories. That move gave us more or less what was, since then, the "standard" ontology of empty categories. In (8), I resume the inventory of empty categories we obtained after Rizzi (1982, 1986), Chomsky (1982) and subsequent works:

(8) a. ***Traces***
   i. A'
   ii. A
   iii. heads
   b. ***PRO***
   i. controlled
   ii. arbitrary
   c. ***pro***
   i. referential
   ii. arbitrary
   iii. "elliptical" (Lobeck's 1995 approach to ellipsis)

From a general point of view, the question is whether this inventory is indeed justified or not by empirical considerations. To a certain extent this question is led by an obvious epistemological reason, although it easily fits within the minimalist research program (Chomsky 1995 and subsequent work). In fact, part of such a program has been to shed some theoretical light on the issue and to evaluate the validity of the inventory in (8). It turned out that in most cases a reductionist strategy brought more benefits than problems (see next section). Here, I will further inquire into the nature of empty categories by addressing the problem of implicit arbitrary subjects. My main claim is that core implicit arguments should be considered as an indication that the operation *Merge* has not applied to a given functional category to produce a complex syntactic object. Failure of *Merge* might make to arise: (i) an illegitimate object at the interfaces that calls for a last-resort, interface solution, and (ii) a legible object at the interfaces. I demonstrate that, if tenable, the research program I will suggest from now on allows for a drastic reduction of the inventory of empty categories.

Before entering into the nature of implicit arguments, which is the core of this paper, in section 1, I will conceptually address the status of the term *ellipsis* and try to show that, under some particular conception of the grammar (Distributed Morphology; see Halle & Marantz 1993), there are not elliptical primitives of any sort; instead, ellipsis is just (normal), abstract syntax. I will then suggest the working hypothesis that whenever a given silent phenomenon cannot be derived by ellipsis, it should be seen as absence of *Merge*, unless we are forced to assume the opposite (*pace* Landau 2010). Implicit arguments are just an

instance of this case. In section 2, I will present a purely syntactic theory of argument structure, according to which the very notion of *argument structure* is epiphenomenal and derives from the basic interactions between the structure-building operation *Merge* and the operation *Agree*. As we will see, the theory leaves room for the two types of scenarios created by absence of *Merge*: (i) an interface failure and (ii) an interpretable object. I illustrate the first case in the realm of impersonal *se* constructions and reflexives and the second one in the realm of analytical passives in Spanish. Section 3 shows how my proposal straightforwardly derives the distribution of implicit arguments in Spanish causatives and their interaction with reflexives and impersonal *se*, a crucial issue that has received little attention in the literature (although see Baauw & Delfitto 2005 for a lexicalist perspective on the issue). In section 4, I reconsider the typology of implicit arguments on the light of the previous discussion and propose that only failure of *Merge* triggers, next to a PF-repair strategy, (costly) default interpretation at C-I interface. Whenever absence of *Merge* is a legitimate option, no interface solution is required and the implicit argument reading is performed under usual syntactic (and non-syntactic) constraints on thematic interpretation applying at the *v*P-level. Section 5 concludes with some final remarks.

2. *Syntax or nothing* as a research program for the theory of empty categories

A particular view of the organization of grammar, Distributed Morphology, assumes that syntax is devoid of phonological information (see, among many others, Halle & Marantz 1993, Embick & Noyer 2001 and Embick & Marantz 2008). Such information is supplied late in the PF component of the grammar, where, in addition to a set of possible morphological operations that alter the syntactic input, phonological information is added to the abstract nodes that syntax produces. An important corollary of this view for the theory of empty categories / ellipsis is stated as follows:

(9) Syntax is elliptical.

To a certain extent, then, the term *ellipsis* is trivial.[3] In other words, there is nothing particular about elliptical objects when compared with non-elliptical ones, except that the former have less information than the latter. Therefore, the heart of the theory of ellipsis boils down to account for the following generalization, where Lexical Insertion Rules are included in the relevant set of morphological operations affecting X:

(10) *Ellipsis-Morphology Generalization (*Elmo-*generalization):*[4] For every morphological operation MO that affects the domain of X, where X contains the target of MO, MO cannot apply to X if X is subject to ellipsis.

The informal statement that X is "subject to ellipsis" supposes to construct an explicit theory for deriving two basic conditions on ellipsis:

> (A) X, a syntactic object (sometimes a head, sometimes a phrase) is in an identity relation with another constituent Y of the same type. The nature of such an identity relation is a matter of debate, but I will assume here that it is purely formal (i.e.,

[3] Adapting Saussure's [2002] conclusions on the matter; see Saab (2007) for some brief remarks on Saussure's ideas on ellipsis

[4] A nice consequence of the formulation in (10) is that ellipsis blocks not only phonology but also other morphological operations. See Saab (2008), Saab & Zdrojewski (2010), Lipták & Saab (2012), and Temmerman (2012) for illustrations of the correctness of (10) in several empirical domains.

syntactic; see Saab 2008 for extensive discussion). The more widely accepted position is that it is semantic or pragmatic (early Merchant's works, in particular, Merchant 2001).

(B) Some additional (syntactic or morphological) conditions must apply. This is sometimes called the *licensing problem*. See, among many others, Rizzi (1986), Lobeck (1995), for a theory of licensing for null pronominals and Merchant (2001), for a reinterpretation of the licensing problem within a theory of PF-deletion.

Again, the research program is to give a precise formulation of (A) and (B). It seems to me that this program is being developed by current research with important empirical and theoretical results, mainly in the domain of phrasal ellipsis (i.e., TP-ellipsis, VP-ellipsis, NP-ellipsis and so on). In the realm of null subjects, things are less clear, although see Holmberg (2005 and subsequent works), Roberts (2010), and Saab (2008, 2012) for different implementations of a "deletion" analysis of null subjects. A "deletion" analysis for traces is a standard assumption in the minimalist program and several explicit analyses were proposed (in particular, Nunes 2004). Topic-drop phenomena (Huang 1984, Raposo 1986, Campos 1986, and Suñer & Yépez 1988) are currently a less explored issue, although it is my impression that a deletion analysis is tenable in this empirical domain, as well. The common property that this entire set of phenomena share is that they require some notion of *antecedent*; so, even when differences among them are remarkable, I think that they can be thought as forming a natural class of elliptical facts; i.e., as syntax without phonology. The ontology of empty categories in (8) is thus drastically reduced.

However, notice that we are still left with a remaining set of empty primitives that cannot be obviously derived as ellipsis (i.e., they lack any evident antecedent). This sort of empty category is sometimes called *implicit argument* (see Bhatt & Pancheva 2006 for a recent overview). With reference to the list in (8), PRO_{arb}, pro_{arb}, are implicit arguments in this sense.

In a recent paper, Landau (2010) claims that *we are forced* to assume that the surviving implicit arguments of the aforementioned list cannot be eliminated and proposes a typology of implicit argument that includes at least two types (Landau 2010: 359):

(11) a. Strong implicit arguments (SIA): null D(P)s
PRO, pro
b. Weak implicit arguments (WIA): null φ(P)s
Implicit agents in passives, implicit object

According to Landau, SIAs can enter into more syntactic dependencies than WIAs. Whereas SIAs can bind, control, license secondary predicates and so on, it seems that WIAs are only allowed to control (in some very restricted circumstances). Now I will not focus on the new empirical argument provided by Landau to justify his typology (see section 2.2. for discussion). For the time being, I will only advance my view that core SIAs are just normal (elliptical) syntax, whereas core arbitrary WIAs are, instead, cases where syntax does *nothing*. For the reasons previously adduced (and the forthcoming ones), I will assume this as the null hypothesis:

(12) *Null hypothesis:* Implicit arguments simply signal the absence of a (sometimes expected) application of the operation *Merge*. In other words, at least in the ideal case implicit arguments have no syntactic representation.

As discussed in section 2.3., it seems that (12) is a too strong claim and that in some very restricted scenarios (to be discussed there) we are indeed forced to assume the existence of some null syntactic entity. Most cases of what Landau calls WIAs, however, comply with the hypothesis in (12). The particular domain I will address here includes core cases of arbitrary subjects: (i) implicit arguments in both analytical passives and impersonal *se* constructions, and (ii) implicit arguments in (Spanish) *hacer* 'to make' causatives. Let me then present a theory including (12) as one of its central components and illustrate it with the empirical scenarios just mentioned.

2. Implicit arguments as absence of *Merge*

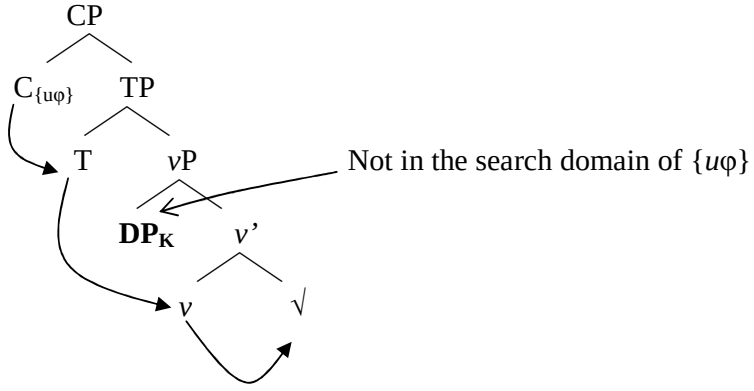
Pujalte & Saab (2012) and, in particular, Pujalte (in progress), have outlined a theory of argument structure, according to which argument structure effects reduce to the formal composition on functional heads and the interactions between *Merge* and *Agree*. The theory has some crucial ingredients, which are: (i) a feature inheritance mechanism for *Agree*, as essentially proposed by Chomsky (2007, 2008), (ii) a subcategorization component triggering particular applications of the operation *Merge*, and (iii) a syntactic theory of thematic interpretation, based on well-restricted considerations on A-dependencies. Let us address these ingredients separately and see how the theory applies to some core cases: impersonal *se*, analytical passives and reflexives.

2.1. Feature inheritance

Chomsky (2007, 2008) proposes that only phase heads (C and *v*) can enter the derivation encoding φ-features. Non-phase heads as T or Root (V, in his terms) inherit their inflectional specification from the phase heads selecting them. According to Chomsky, inheritance from C to Root is prohibited by the sisterhood condition on *Agree*; i.e., the Goal must be in the sister domain of the Probe.

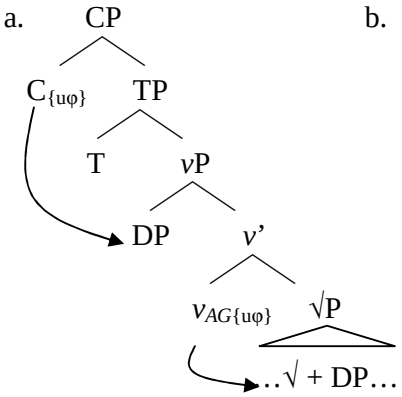
Agree failure (Chomsky 2007: 19)

(13)

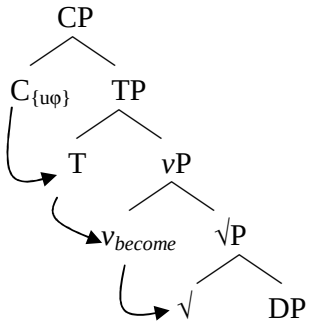


However, Pujalte & Saab (2012) argues that the scenario in (13) only arises if *v* indeed merges with a DP. In other words, inheritance from C to Root should be allowed whenever no DP merges with *v*. This situation is illustrated in (14b), which is the underlying structure of an unaccusative verb (e.g., *John arrived*):

(14) a. *Transitive*

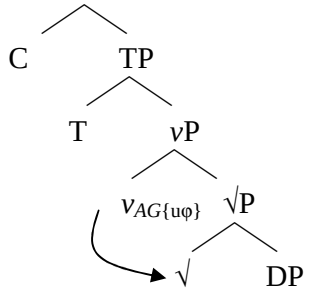


b. *Unaccusative*

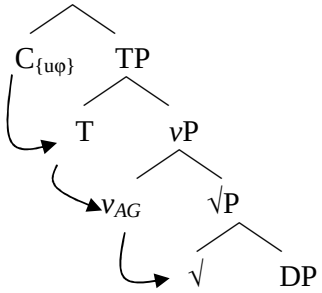


In principle, nothing in the *Agree* system prevents that agentive *v* enters the derivation without φ-features. The consequence of such a possibility is "unaccusative" inheritance from C to Root, but with a transitive skeleton. Of course, it could be also the case that *v* is a probe, but C is not. This last option, however, should be restricted to situations where default agreement for the C-T domain is available[5] and, again, no DP is merged with agentive *v*. In any case, a C unspecified for φ-features is a logical option.[6]

(15) a. *C without φ*



b. *Transitive v without φ*



Another property of the inheritance system, especially stressed in Pujalte (in progress), is that the theory should dictate how and when these options are allowed. A remarkable observation is that no more than two probes are allowed for a given nominative-accusative or ergative-absolutive system (see also Bowers 2010). Assuming now that category-defining

[5] Default agreement in null subject languages, for instance, cannot take place in absence of some overt morphological indication. Thus, the subject of a sentence like (i) can only be interpreted as referential, and not as generic:

(i) Castiga a los culpables.
punish.3SG ACC the culprits
'He punishes the culprits.'

This kind of sentences, then, seems to be in complementary distribution with impersonals like (25) in the main text. This is not the case in partial *pro*-drop languages, where (i) is not allowed as a referential matrix sentence, but only as a generic one, as indicated by Kato (1999), Holmberg (2005, 2010) and Barbosa (2010), among others. As proposed in Saab (2008, 2012), this difference could be the result of the complementary distribution between rich agreement and syntactic EPP checking. I will not address the issue here.

[6] For the purposes of this paper, I will assume that unergatives are 'hidden' transitives (Hale & Keyser 1993 and much subsequent work). In the system proposed here, this means that unergative *v* is not subject to inheritance.

heads (the so-called little *x*s; Marantz & Embick 2008 and Embick 2010) are possible probes -i.e., the *loci* of unvalued φ-features in the low domain of the clause- and that more than one cyclic head can be merged in a given C domain, it follows a putative conflictive situation with respect to the locus of φ-features. For reasons that I will not investigate here, the computational system solves this putative inflectional conflict in the following way:

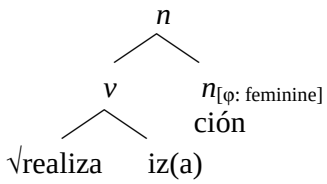
(16) Given a configuration like [x^0…Z…y^0], if x^0 and y^0 are cyclic heads of the same type, Z ≠ C, and x^0 and y^0 are in a potential inheritance relation, then y^0 is fully φ-defective.
[adapted and translated from Pujalte, in progress]

With reference to *v* (i.e., *v* = *y*), the situation in (17b) is then excluded.

(17) a. Cφ … *x*φ … *v* (allowed by 16)
b. Cφ … *x* … *v*φ (not allowed by 16)

I think that (16) conveys a strong empirical generalization, whose consequences go beyond the sentential domain. In the nominal domain, for instance, this is also the general situation, as can be easily demonstrated by nominals involving more than one category-defining head. See the examples in (18a) and the associated structure in (18b):

(18) a. hospitalización 'hospitalization', vaporización 'vaporization', realización, 'realization'
b.



As is well-known, even if *v* is agentive and, consequently, a putative locus of φ-features, it cannot value structural case; only *n*, which in this particular case triggers feminine agreement, can enter into φ-dependencies (see Grimshaw 1990 and Alexiadou 2001, among many others).

(19) a. la realización de la obra por Juan
the.fem realization.fem of the play by J.
b. *la realización la $obra_{ACC}$ por Juan
the.fem realization the $play_{ACC}$ by J.

As we shall see shortly, what we have just observed with reference to this type of nominalizations underlies several distinct scenarios, which are at the heart of this paper (passive and causative constructions).

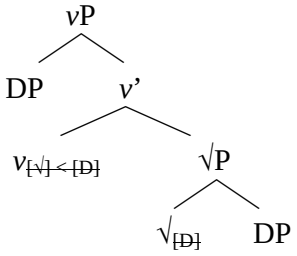
2.2. Subcategorization

Pujalte & Saab (2012) propose that, as it is the case with φ-features, there are not principled reasons that exclude the possibility that a given functional or Root head, which is normally associated with a given subcategorization specification, enter the derivation without such a subcategorization encoding. The consequence of assigning a [D] feature to a given head is triggering an instance of the operation *Merge* (Müller 2010). For a simple transitive sentence like (20), the tree in (21) represents a situation where every subcategorization feature (also

called structure-building features) is correctly discharged by a corresponding instance of *Merge*:

(20) John read the book.

(21)



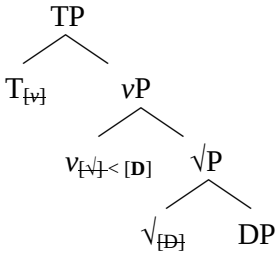
Now, Pujalte & Saab claim that failure of *Merge* for a given syntactic head specified with a [D] feature produces a PF crash because of the interface condition in (22):

(22) At PF, every structure-building feature must be discharged.

Thus, failure of *Merge* in this particular scenario creates an interface conflict:

Illegitimate object at PF

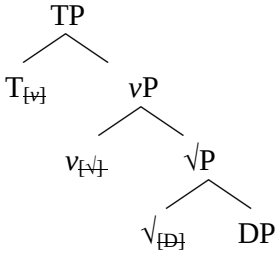
(23)



However, no crash is produced at the PF interface whenever a functional or Root head is not assigned with a structure-building feature in the numeration. In other words, absence of *Merge* for defective *v* creates a legitimate output at PF:

Legitimate object at PF

(24)



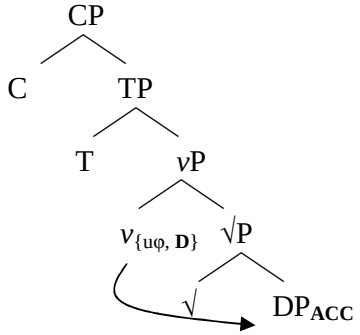
Pujalte & Saab (2012) defend the idea that (23) and (24) are the abstract structures that underlie impersonal *se* constructions and analytical passives in Spanish, respectively. Concretely, whenever C-T is fully defective (see (15a) repeated as (26) below), the possibility of having a full agentive *v* without a DP in its Spec position arises. This is the so-called impersonal *se* construction:

Impersonal

(25) Se castigó a los culpables.

SE punished ACC the culprits
'One punished the culprits.'

(26)



Having a *v* with a non-discharged [D] feature creates a PF failure, unless PF can implement a repair strategy. Pujalte & Saab argue at length that this morphological operation exists in Spanish and consists of the insertion of a D-clitic that satisfies the [D] feature on *v*. The general observation is (27):

(27) At PF a clitic has to be inserted when $v_{[\text{EXT ARG, D}]}$ does not have a specifier.

I will not focus here in the details of clitic insertion in Spanish (see Pujalte & Saab 2012 for an explicit analysis), but the operation seems to be well motivated and constrained by conditions on morphological locality (Marvin 2002, Embick & Marantz 2008 and Embick 2010, among others). What I would like to stress here is the connection between the abstract representation in (26) and the theory of implicit arguments, in particular, with respect to the null hypothesis formulated in (12), and repeated as (28):

(28) *Null hypothesis:* Implicit arguments simply signal the absence of a (sometimes expected) application of the operation *Merge*. In other words, at least in the ideal case implicit arguments have no syntactic representation.

Thus, impersonal *se* constructions instantiate one of the situations connected with the theory of implicit arguments. On the empirical side, moreover, the unavailability for impersonal *se* constructions to enter into some set of A-dependencies follows without any additional machinery. Therefore, the fact that impersonal *se* does not license secondary predication (29a), cannot be reflexivized (29b) or bind a pronominal variable (29c) are immediately accounted for under the null hypothesis in (28) and under the particular analysis of impersonals provided by Pujalte & Saab (2012). Theories postulating pro_{arb} (Cinque 1988 and much subsequent work), PRO_{arb} (Mendikoetxea 1992, 2002), a null generic (Mendikoetxea 2008), or a special type of weak implicit argument (Landau 2010) require additional arguments for deriving the basic pattern in (29).

(29) a. *Ayer se besó a María borracho.MASC.
yesterday SE kissed ACC M. drunk.MASC
'Yesterday Mary was kissed drunk.' (where Mary is not drunk)

b. *Aquí se lava (a sí mismo).
Here SE washes himself
Intended: 'One washes oneself.'

c. *Aquí se puede dejar su saco.
Here SE can to.leave his coat
Intended: 'One$_i$ can leave his$_i$ coat here.'

Yet, it is worth noting that obligatory control is allowed in some particular environments. Consider, for instance, that impersonal *se* can control the subject of an infinitive in well-known cases of obligatory control (OC):

(30) Se quiere castigar a los culpables.
SE wants to-punish ACC the culprits
'One wants to punish the culprits.'

However, as argued at length by Landau (2010), exhaustive OC cannot be taken as reliable test to evaluate whether implicit arguments have a syntactic representation or not. According to him, and I agree, OC can follow from predication theory (i.e., the fact that the infinitival complement must be interpreted as a predicate of the matrix subject).[7]

Despite of this, Landau does believe that there is decisive empirical evidence that forces us to assume some type of syntactic representation for weak implicit arguments (i.e., the ones considered in this paper). This evidence comes from the fact that implicit arguments can participate in partial control (PC) configurations. See the examples in (31).

(31) a. Mary found it exciting to meet on top of the Empire State Building.
b. The chair found it frustrating to gather without a concrete agenda.
c. Rachel found it embarrassing to kiss in public.
(Landau 2010: 369)

Here, an obligatory WIA anaphoric with the matrix subject partially controls the subject of the infinitive. A crucial assumption in Landau's reasoning is that partial control cannot be derived from predication theory, simply because a PC infinitive –a collective predicate containing a plural subject PRO- cannot be predicated of a singular entity. Therefore, it follows that the relation between the controller and the controllee PRO_{PL} in PC configurations must be syntactically encoded (Landau 2010: 367), given that they are not local enough to be related via predication.[8] I think, however, that his claim does not follow. First, it has not been proven that subjects of PC infinitives are plural entities. Second, as argued at length by Boeckx, Hornstein & Nunes (2010), PC predicates are closely connected to the syntax and semantic of commitatives, which as is well known, can apply to individuals. If this is correct, then PC fall under local predication and the infinitive complement of a given PC verb is also predicated of the matrix subject, a co-argument of the infinite complement. For expositive reasons, I will only discuss here the nature of the embedded subject, because if it turned out that they are indeed traces of the matrix subject, it would be demonstrated that Landau's argument does not follow.

Compelling evidence that the subject of a PC infinitive is singular (i.e., indeed it is a trace of the matrix subject) is discussed by Boeckx, Hornstein & Nunes (2010) on the basis of Rodrigues' (2007) work on (inverse) PC. I will just discuss a very clear piece of evidence: gender concord. Consider the following example in Spanish, translated from the original Portuguese examples from Rodrigues and Boeckx, Hornstein & Nunes:

(32) La víctima decidió reunirse vestida informalmente.

[7] This is so, even assuming the movement theory of control, Hornstein (1999) and much subsequent work.
[8] Predication requires that predicates and co-arguments are strictly local. See Landau (2010) for an explicit definition of predication domains. For our purposes here it is enough to assume that predicates and (co)-arguments must be in the same *v*P domain at some point of the syntactic derivation (although things are evidently more complex).

the.FEM victim.FEM decided gather.SE dressed.FEM casually
'The victim decided to gather dressed casually.'

As explained by Rodrigues, the noun *victim* is invariably feminine regardless of the male or female property of the referent. Therefore, the fact that the embedded secondary predicate in (32) agrees with the matrix subject taking both its singular and gender specifications conclusively demonstrates that the subject of the infinitive is a singular entity. Furthermore, taken for granted that PRO cannot have inherent gender features, it also follows that the best analysis for controlled subjects is in terms of A-movement. In a nutshell, PC reduces to OC as far as the properties of the embedded subject are concerned and, as a result of this, Landau's argument does not hold. I conclude this brief discussion with the following observation:

(33) For any implicit argument IA, OC (including PC) is not a diagnostic to detect any sort of syntactic activity for that IA, because local predication derives co-reference.

Notice now that the same pattern of lack of A-dependencies we have seen in (29) is also attested with analytical passives, although of course (29b) cannot be constructed in passive configurations:

(34) a. *María fue besada borracho.
M. was kissed drunk
Intended: 'María was kissed drunk.' (the implicit AG is the drunk guy)

b. *María fue abandonada a causa de su amante.
M. was abandoned because of his lover
Intended: 'María was abandoned because of his lover.' (his = implicit AG)

Therefore, it seems that we have a first indication that implicit agents in analytical passives are also a concrete instance of the null hypothesis in (28); i.e., they are derived as absence of *Merge*. However, when compared with *se* constructions, crucial (well-known) differences arise. In a nutshell, analytical passives in Spanish: (i) trigger gender and number agreement with the IA (not accusative valuation), (ii) license a *by*-phrase which is interpreted as the agent of the sentence, and (iii) do not show clitic insertion in the *v* position (although they can trigger other instances of clitic insertion, see Pujalte & Saab 2012). Let me show how these properties are derived under the approach I am suggesting here. In (35), we observe all the core properties expressed by a simple passive sentence in Spanish:

(35) María fue besada (por Pedro).
M. was kissed.fem.sg by P.
'Mary was kissed (by Pedro).'

As for *by*-phrases, Bowers (2010) makes the following point:

"[…] it has been clear since the earliest transformational description of English (see Chomsky 1957, 1975a) that the presence of a *by*-phrase (or PRO_{arb}) entails passive verb morphology, while the absence of a *by*-phrase entails absence of passive verb morphology." (Bowers 2010: 22)

Assuming this controversial entailment (more on this below), he proposes "[to] account for this by assuming that the category Ag also contains the feature [+/-]. [+act] Ag selects DP, while [-act] Ag selects a *by*-PP (or PRO_{arb})" (Bowers 2010: 22).

By postulating rules like the ones in (36), which derive from Bowers' reasoning, it seems to me that, even if the entailment he made is correct, we would be missing the basic empirical generalization that connects the presence of implicit agents in passives to the licensing of a *by*-phrase, and the particular case properties of passives in general.

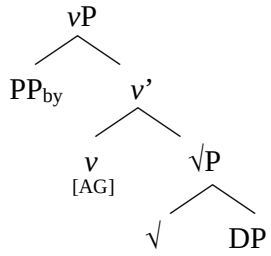
(36) a. $Voice_{[+act]} \rightarrow$ DP
b. $Voice_{[-act]} \rightarrow \left\{ \begin{array}{c} PRO_{arb} \\ by\text{-PP} \end{array} \right\}$

As far as I can tell, the basic entailment is radically different from the one assumed by Bowers. Concretely, there is compelling evidence to derive the correlations in (36) from (37):

(37) Agentive *by*-phrases entail fully defective agentive *v*.

Notice that absence of D specification on *v* allows for the agentive argument to be realized as a PP, because no category requirement is encoded on little *v*. Let us assume, then, that a *by*-phrase can be merged with agentive *v*, although other alternatives should not modify this suggestion (attachment to the Root level, for instance; see Collins 2005 and Bowers 2010 for recent views on the position of the *by*-phrase in English).

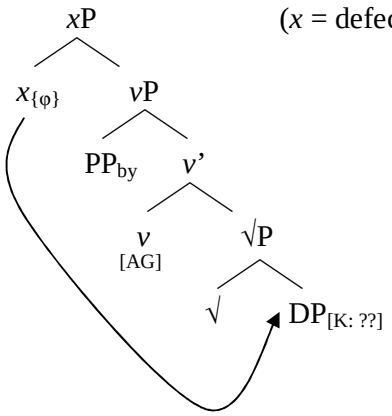
(38)



The impossibility of associating a *by*-phrase with impersonal *se* is accounted for straightforwardly in this system: impersonal *se* entails a $v_{[D]}$ and, as a result, merging a PP in the $v_{[D]}$ domain will produce a category crash.

(39)	a.	*Se	reprimió	a	los	maestros	por	la	policía.
		SE	repressed.3sg	to.acc	the	teachers	by	the	police
	b.	*Se	destruyeron	los	puentes	por	el	enemigo.	
		SE	destroyed.3pl	the	bridges	by	the	enemy	

Regarding the absence of φ-specification on agentive *v*, this could be just an option provided by the UG, but I think that there is an interesting correlation that connects the incapability of accusative case assignment in passives and the presence of number and gender morphology. Indeed, we can dispense with voice features of whatever sort by assuming the configuration illustrated in (40):

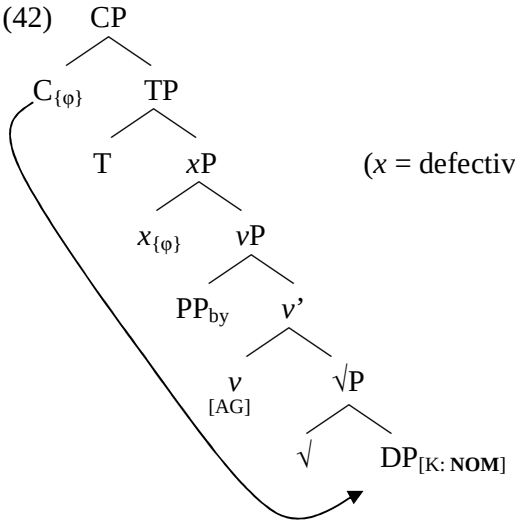
(40) 

(*x* = defective probe of the same type as *v*)

As the reader might have already inferred, (40) illustrates another case of the empirical observation made by Pujalte (in progress):

(41) Given a configuration like [x^0…Z…y^0], if x^0 and y^0 are cyclic heads of the same type, Z ≠ C, and x^0 and y^0 are in a potential inheritance relation, then y^0 is fully φ-defective.

That is to say, analytical passives pattern like event nominalizations (see 18 and 19 above) in that both entail the presence of a fully defective *v* selected by a probe of the same type as *v*. The presence of a *by*-phrase and lack of accusative marking follow directly from the analysis in (40). Now, in passives the IA argument has a K feature that defective *x* cannot satisfy. This makes the DP active for further *Agree* relations (Chomsky 2000, 2001 and much subsequent work). Therefore, once C enters the derivation, the unvalued case feature of this active DP is valued as nominative.

(42) 

(*x* = defective probe of the same type as *v*)

Shortly, I have demonstrated that absence of *Merge* may arise by two different reasons: (i) as a syntactic failure that is repaired at PF (impersonal *se*), or (ii) as a consequence of fully defective *v* (analytical passives). The similarities and differences between impersonal *se* and analytical passives are accounted parsimoniously in the outlined system without invoking any lexical rule or voice features of any sort. The feature

composition of the C and *v* heads seems to be enough to derive the syntax of these particular constructions. In the next section, I show how thematic interpretation proceeds in the derivation and how reflexives / reciprocal are integrated into this system in a simple way.

2.3. Visibility and locality in thematic interpretation

Crucially, both cases seen so far, where no DP is merged with agentive *v*, create a situation that triggers the following interpretative scenarios:

(43) a. For agentive *v* assign a default *arb* interpretation, unless the agent role is expressed by others means.
b. For agentive $v_{[D]}$ assign an agent role to an active and local DP. In absence of such a DP, (43a) applies.

We can generalize even further by interpreting *arb* as last resort strategy.

Default arb *assignment (Preliminary version)*:

(44) For agentive $v_{([D])}$ assign *arb* in absence of an agentive argument in the domain of $v_{([D])}$.

I will not try a formal definition of the intuitions that both (43) and (44) very informally expresses. The idea is that the presence of a syntactic argument encoding the agent role is preferred to default *arb*. On the basis of empirical evidence, I will try to demonstrate later that this interpretative rule cannot be on the right track. As shown in detail in section 4, default *arb* assignment does not apply to implicit arguments in analytical passives, but only to *se* constructions (when necessary). I also will show that a correct characterization of (44) for default arguments supposes to take into consideration some type of costly computation at the interfaces. By the time being, let us delay the discussion on the nature of arbitrary readings and simply assume together with Rizzi (1986) that *arb* is identical to a default [+ human, (+generic)] reading performed by the I-C system.

What I will propose now is a particular conception of thematic theory, under which a given argument DP can receive more than one thematic role in a given domain provided this DP is active when thematic interpretation applies. With reference to the agent role, it seems that a DP can be the agent of a given agentive $v_{[D]}$ only if it is active and local with respect to $v_{[D]}$, as defined in (45):

(45) An argument DP *A* is interpreted as the agent of agentive $v_{[D]}$ if and only if:
(A) ***Activity****: A* has its case value not determined within the *v*P level in which it is contained (i.e., it is active within the *v*P domain to enter into further A-dependencies).[9]
(B) ***Locality****: A* is local to $v_{[D]}$; i.e., A is not contained in the domain of another $v_{[D]}$.

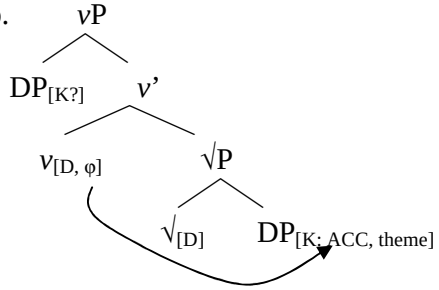
The formulation in (45) makes use of what has been proven as crucial in other syntactic domains: locality and activity. Put differently, to a certain extent, (45) adds nothing new with respect to the way in which syntactic dependencies are established during the syntactic computation. It is usually the case that a given syntactic category C with a formal feature F enter into a syntactic dependency triggered by F with another category C' that is both active (i.e., it also posses an unsatisfied formal feature) and local to C.

[9] As a side note, it is a curious fact that the activity condition seems to be exactly inverse to the *Visibility Condition* in Chomsky (1986), according to which case marking is a condition for Θ-assignment at LF.

In a simple transitive sentence like (46), it can easily be checked that the external argument is the only active DP when thematic interpretation applies to this particular *v*P, even although both DPs involved in this domain are local with respect to $v_{[D]}$.

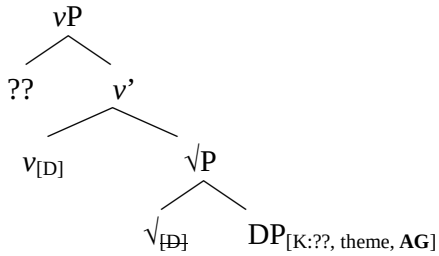
(46) a. John read the book.

b.



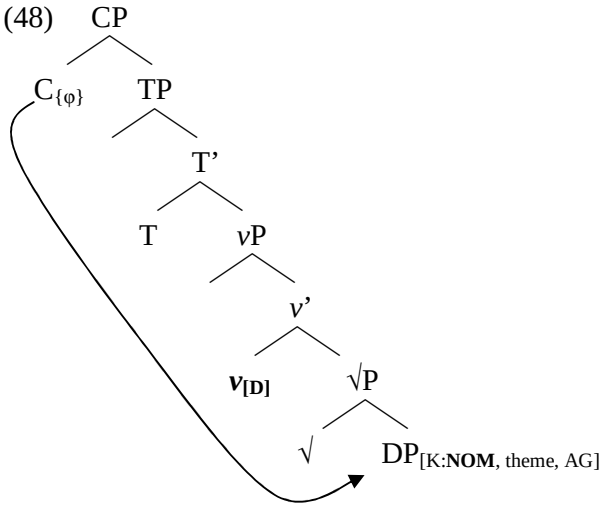
Suppose, however, that *v* is φ-defective but encodes an unsatisfied [D] feature, as illustrated in (47):

(47)



Here, the internal argument, which is already interpreted as the theme, is both active and local with respect to $v_{[D]}$ and, consequently, is interpreted as the agent of $v_{[D]}$. Later in the derivation, this DP will value nominative, if C is φ-complete.

(48)



Finally, a clitic is inserted at PF through the same mechanism we have previously described in connection with impersonal *se* to satisfy the non-discharged [D] feature on *v* (see 27).

The situation abstractly represented in (48) corresponds to reflexives / reciprocals in Spanish and other Romance languages:

(49) Juan se ama.

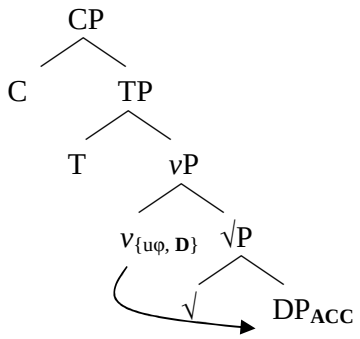
Juan SE loves
'Juan loves himself.'

Comparing now the trees in (47) and (48) with the analysis I provided in (25) for impersonal *se* (repeated below with the relevant example), the different interpretative patterns observed with a reflexive and an impersonal *se* are directly explained by the activity condition on thematic interpretation (45A): only φ-defective *v* with an unsaturated D feature can trigger agentive interpretation of the internal argument; impersonal *se*, instead, blocks this reading, given that, although the underlying *v* also posses a non-discharged [D] feature, it is not φ-defective.

Impersonal

(50) Se castigó a los culpables.
SE punished ACC the culprits
'One punished the culprits.'

(51)



Two immediate consequences are captured by this view on impersonals and reflexives, as well. On the one hand, this proposal explains *se* syncretism in impersonals and reflexives as the direct result of the syntax-PF mismatch. On the other hand, the motivation for a last resort approach to arbitrary readings is also justified by the contrast between these two constructions. By (44), default *arb* is only assigned to impersonal *se* contexts given the fact that reflexives / reciprocals comply with both the locality and the activity condition on thematic interpretation and, consequently, can bear two thematic roles. It remains to be seen whether the *arb* interpretation in the way described here can also be conceived as a repair strategy; i.e., as the semantic reflex of what is observed on the PF side (i.e., clitic insertion). Section 4 will be entirely dedicated to discuss this issue.

Summing up, the system I have outlined so far (essentially following Pujalte & Saab 2012) derives a set of core cases of argument structure effects; in particular, it accounts for the following facts:

(52) a. the complementary distribution between *v*-related *se* and *by*-phrases
b. the correlation between *by*-phrases and fully defective *v* in passives and event nominalizations
c. the correlation between passive and nominal morphology and the absence of accusative marking
d. the absence of A-dependencies with implicit agents in passives and *se* constructions
e. the syncretism pattern between impersonals and reflexives / reciprocals
f. the arising of *arb* readings in impersonals, but not in reflexives / reciprocals

Interestingly, this system dispenses entirely with voice features and operations of argument reduction of any sort. It only invokes well-established constraints on the way in which *Merge* and *Agree* proceed and some restrictions on thematic interpretation that also follow from general conditions on syntactic computation (activity and locality).

For the set of phenomena discussed in this section, it then turns out that the null hypothesis that implicit arguments are absence of *Merge* has been confirmed.

(53) *Null hypothesis:* Implicit arguments simply signal the absence of a (sometimes expected) application of the operation *Merge*. In other words, at least in the ideal case implicit arguments have no syntactic representation.

Thus, our inventory of empty categories can be further reduced (see 8). Of course, this does not imply the end of the story. Empirical evidence can force us to reject (53) in some empirical domain and to accept that some particular empty primitive cannot be dispensed with. Only as an illustration, consider briefly the case of PRO_{arb}. As shown by Pujalte (in progress), PRO_{arb} contrasts with impersonal *se* in each of the tests discussed above. Compare in this respect the sentence in (29) with the following cases of non-obligatory control (NOC):

(54) a. Está permitido entrar borracho en esta sala.
is allowed to.enter drunk in this room
'It is allowed to enter into this room drunk.'

b. Está permitido lavarse.
is allowed wash.SE
'It is allowed to wash oneself.'

c. Está permitido traer su mascota.
is allowed to.bring his pet
'It is allowed to bring his pet.' (*his* = implicit subject)

Although the contrast between (29) and (54) has not been extensively discussed in the literature on Spanish (although see Mendikoetxea 1992, 2002, 2008, Rivero 2001, Ordóñez & Treviño 2007 and Pujalte 2012 for related discussion), the general situation arising from it is not a novelty. The fact that generic contexts, for instance, favor the establishment of A-dependencies that are otherwise impossible has been in the center of the debate on passives (Jaeggli 1986, Baker, Johnson & Roberts 1989, and Landau 2010), implicit objects (Rizzi 1986 and subsequent works), impersonal *se* in generic environments (D'Alessandro 2007) and null generics in partial *pro*-drop languages (see Holmberg 2010 and Saab 2012 for a recent view), among related constructions across languages. Thus, if the idea that null generics cannot indeed be eliminated in favor of one of the two best alternatives we have for empty categories (i.e., syntax or nothing), then we are left with a basic empty primitive -maybe the only one made available by the UG- and with the need of explaining its distribution across languages. In spite of this, this situation, I think, does not lead us to generalize the worst case (*pace* Landau 2010). In fact, assuming (53) as a working hypothesis has been demonstrated as a reasonable way to proceed and, in the remainder of this paper, I will further explore the nature of implicit arguments and show how a set of complex interactions between causatives, reflexives / impersonals and passives are straightforwardly derived as specific predictions of a theory with (53) as a core ingredient.

3. More core predictions: implicit arguments in causatives

Causatives introduced by *hacer* 'to make' (also *dejar* 'to let') constitute an ideal case to evaluate the predictive power of the theory sketched in this paper. This is so because they

have the basic property of having two cyclic *vs* being related in the way that (55) describes and (56) illustrates (see section 2):

(55) Given a configuration like [x^0…Z…y^0], if x^0 and y^0 are cyclic heads of the same type, Z ≠ C, and x^0 and y^0 are in a potential inheritance relation, then y^0 is fully φ-defective.

(56) a. Cφ … *x*φ … *v* (allowed by 55)
b. Cφ … *x* … *v*φ (not allowed by 55)

Therefore, in this section, I will demonstrate that the abstract representation in (56a) is what underlies the structure of causatives with *hacer*. As we will see shortly, a set of complex interactions between causatives, reflexives and passives are explained under the system proposed in the previous section without altering any of its aspects. With the exception of Baauw & Delfitto (2005), who proposed a concrete analysis based on some lexicalist assumptions about reflexives, the data to be discussed in this section have not received deep exploration in the current literature on causatives even when, as it will become clear, they are at the heart of the nature of causative constructions. Before entering into the core data to be explored, let me first introduce the basic syntax of analytical causatives in Spanish.

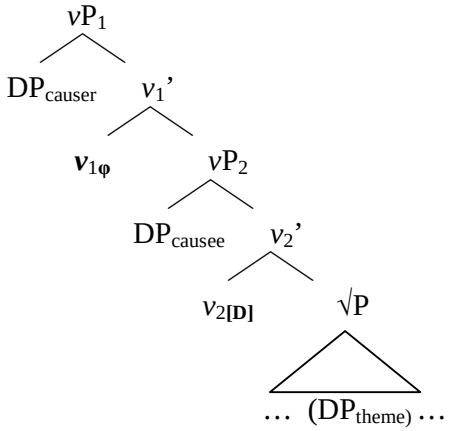
3.1. The syntax of active and passive causatives

As is well known, *hacer* causatives come in two guises: (i) passive causatives (cf. 57a), and (ii) active causatives (cf. 57b) (see, among many others, Kayne 1969, Bordelois 1974, Folli & Harley 2007, Pujalte (in progress), and the references therein):

(57) a. Juan hizo arreglar la cocina por Pedro. (passive causative)
J. made to.repair the kitchen by P.
b. Juan le hizo arreglar la cocina a Pedro. (active causative)
J. DAT made to.repair the kitchen to P.
'Juan made Pedro to repair the kitchen.'

I will follow here the syntactic approach to active causatives proposed by Pujalte (in progress), according to which this type instantiates the abstract structure in (56a).

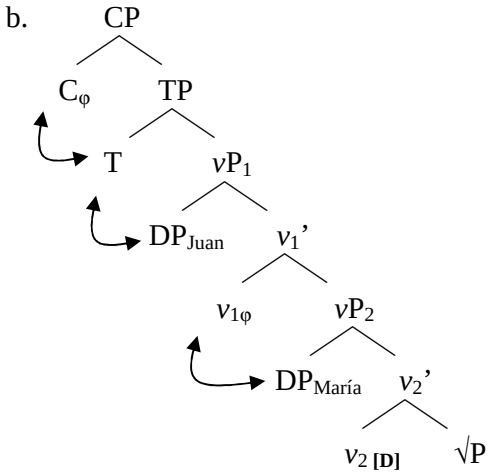
(58) *Structure for active causatives*



As shown by Pujalte (see also Folli & Harley 2007), case relations in vP_2 are entirely determined by the properties of v_1, which acts as the probe, and by feature inheritance. First, if v_2 is unaccusative or unergative, the subject of the infinitive values accusative case. Let us illustrate the point with *a* unergative infinitive:

(59) a. Juan la hizo saltar a María.
J. CL made to.jump ACC M.
'John made Mary to jump.'

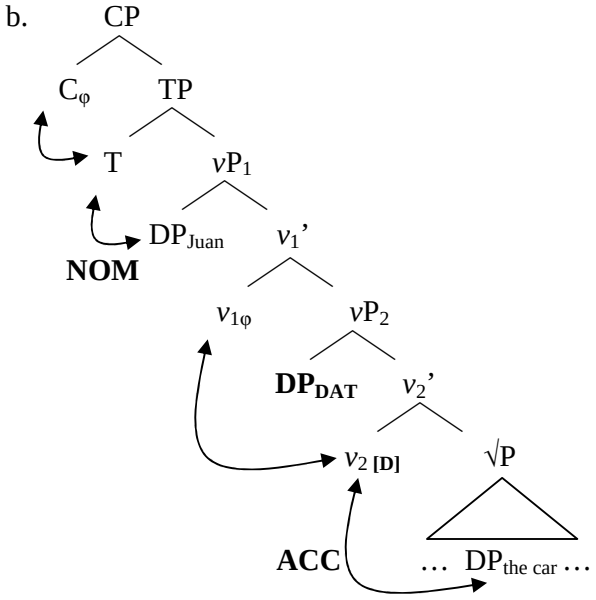
b.



Second, in contexts of transitive infinitives (or ditransitive ones; see Pujalte (in progress) for details), the internal argument of the embedded verb gets accusative and the external argument of the infinitive gets dative. This is predicted by the inheritance system, because for a given transitive infinitive with defective *v*, inheritance from v_1 to v_2 is mandatory. The external argument, in turn, is in a position where it cannot value either nominative or accusative case and, as a result, it receives dative as last resort morphological strategy. As explored in detail by Pujalte, the situation reproduces exactly what is empirically observed with applied datives in Spanish.

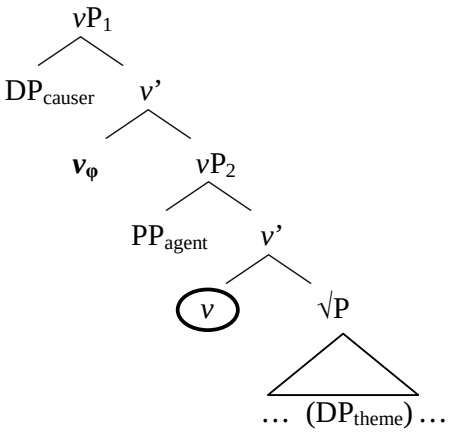
(60) a. Juan le hizo comprar el auto a María.
J. CL.DAT made to.buy the car DAT M.
'John made Mary to buy the car.'

b.



As for passive causatives, I will propose the same analysis as Pujalte's for active causatives with a crucial difference: the embedded *v* is both φ- and D-defective. As we have seen in the previous sections, *by*-phrases entail fully defective *v* (cf. 37), so this particular aspect of passive causatives does not require additional considerations. By (55), φ-defectiveness in both types of analytical causatives follows directly, as well, although it remains to be explained whether the option with respect the [D] specification on the embedded *v* is also derived from some general principle of selection or not. In any case, the difference between the two *hacer*-causatives reduces to this minimum difference in the subcategorization properties of agentive *v*. Compare in this respect the tree in (58) with (61), which illustrates the structure I propose for passive causatives:

(61) *Structure for passive causatives*



An interesting question is whether or not such a subtle difference can capture the set of intricate relations that both types of causatives establish with *se* constructions in Spanish and other Romance languages. Just to put the problem in an impressionistic way, let me make a list of the patterns we have to explain.

First, both types of causatives reject impersonal *se* as the subject of the embedded infinitive; so the sentence in (62) can have a reflexive or reciprocal reading (although only under the active causative) but not an impersonal one:

(62)	*Juan	hizo	castigar**se**	a	los	culpables.
	J.	made	to.punish.SE	ACC	the	culprits

i. Reciprocal / reflexive reading (OK under the active structure)
'Juan made the culprits to punish themselves / each other.'
ii. Impersonal reading (NO for both causatives)
*'John made the culprits were punished.'

Second, only passive causatives allow for *long-distance reflexivization* of their internal arguments:

(63)	Juan	**se**	hizo	besar	por	María.
	J.	SE	made	to.kiss	by	M.
	'John$_i$ made Mary kiss him$_i$.'					
(64)	*Juan	**se**	(le)	hizo	besar	a	María.
	J.	SE	(DAT)	made	to.kiss	DAT	M.
	Intended: John$_i$ made Mary kiss him$_1$						

Third, it seems that there is a kind of *obviation effect* between the subject of *hacer* and the subject of the infinitive. This is demonstrated by the fact that the subject of the infinitive cannot be reflexivized under any circumstance.

(65) *Juan **se** hizo llegar / trabajar / comprar un auto.
J. SE made to.arrive / to.work / to.buy a car
Intended: 'Juan made himself to arrive/ work /buy a car' (*Juan* = infinitive subject)

Finally, double reflexivization is not allowed under any circumstance, either:

(66) *Juan **se** hizo besar**se** (por María)
J. SE made to.kiss.SE (by M.)
Intended 1: 'John$_i$ made himself$_i$ Mary kisses him$_i$.'
Intended 2: 'John$_i$ made himself$_i$ to kiss him$_i$.'

For the sake of expositive clarity, I will not make here a deep comparison between the present approach and Baauw & Delfitto's (2005), which to the best of my knowledge, is the most detailed one hitherto. The interested reader can compare the details of their approach with the purely syntactic analysis I will propose here and evaluate both on the basis of conceptual parsimony and empirical coverage. I think that, even if it turns out that both approaches are extensionally equivalent, simplicity considerations should lead to the conclusion that an approach that does not make any use of especial rules for accounting the full range of data is obviously superior. However, it seems to me that there are also empirical reasons to prefer a pure syntactic analysis of reflexivization over a lexicalist one, as the one proposed by Baauw & Delfitto. Let me show briefly why.

A way to account for the difference between active and passive causatives could be to assume that passive causatives suffer a process of lexical intransitivization (Baauw & Delfitto 2005) or that they syntactically nominalized (Folli & Harley 2007). Whatever is the case, it follows that the subject of the infinitive is syntactically inactive and, as a result, it cannot be enter into syntactic dependencies. Crucially, the absence of reflexivization of the infinitive subject is directly explained on this particular view at least for the case of passive infinitives. Yet, this does not account for the absence of reflexivization in active causatives. Notice, for instance, that (65) should be allowed if the underlying structure of these sentences is the active one; i.e., with no suppression of the external argument position. Baauw & Delfitto (2005) recognize this problem and simply stipulate that "the embedded verb has been drawn from the lexicon as reflexively marked, that is, as devoid of the external theta-role" (Baauw & Delfitto 2005: 177). They conclude then that reflexivization of an intransitive predicate is trivially not allowed. Next to the fact that this is simply a stipulation, their claim is problematic for several reasons. First, it makes no sense for a predicate like *llegar* in (65) (i.e., an unaccusative one) to say that it is lexically intransitivized (the same for unergatives, maybe). Second, even if an intrasitivization process were the case for active causatives, the contrast between active and passive causatives would just vanish. Third, the claim is falsified by the basic fact that reflexivization of the subject of the embedded infinitive is allowed, as shown by the grammatical reading of (62) and the following additional data from Spanish and Italian:[10]

(67) a. Juan la hizo mirar***se*** en el espejo (a María). (Spanish)

[10] Thanks to Irene Franco and Claudio Di Felice for providing grammaticality judgments.

J. CL.ACC made to.see.SE in the mirror ACC M.
b. Gianni l' ha fatta guardar***si*** allo specchio. (Italian)
G. ACC has made to.see.SE in-the mirror
'Juan made Mary to see herself in the mirror.'

As it should be clear enough at this point, if reflexivization of the embedded infinitive is allowed, then we are forced to conclude that active causatives cannot be subjected to lexical intransitivization. Put it in a less conclusive way, even assuming that such a process exists for active causatives, it has to be optional. This complicates the empirical scenario in unnecessary ways. In fact, when referring to perception verbs, Baauw & Delfitto also concludes that whenever reflexivization has applied in the embedded infinitive, a complex predicate has not been created.

On the basis of data like (67), we must then conclude that the stipulation of lexical intransitivization is not tenable. Therefore, the basic "obviation effects" in (65) remain unexplained under Baauw & Delfitto's analysis. The same can be said with respect to data like (62), given that absence of impersonal *se* should be prevented only under the passive causative configuration, but not under the active one (more on this later).

In conclusion, Baauw & Delfitto's approach to causatives is not only conceptually problematic, but also empirically falsified.[11] Thus, let me focus now in each of the sentences in (62)-(66) separately, and show how they are captured as specific predictions of the system proposed so far; in particular, I will center on how they follow from the activity and locality conditions on thematic interpretation we have formulated in the previous section (cf. 45):

(68) An argument DP *A* is interpreted as the agent of agentive $v_{[D]}$ if and only if:
(A) ***Activity****: A* has its case value not determined within the *v*P level in which it is contained (i.e., it is active within the *v*P domain to enter into further A-dependencies).
(B) ***Locality****: A* is local to $v_{[D]}$; i.e., A is not contained in the domain of another $v_{[D]}$.

3.2. Prediction #1: Impersonals vs. reflexives and the activity condition
As already mentioned, the sentence in (62) repeated below cannot have an impersonal *se* reading, although it can be interpreted as reflexive or reciprocal:

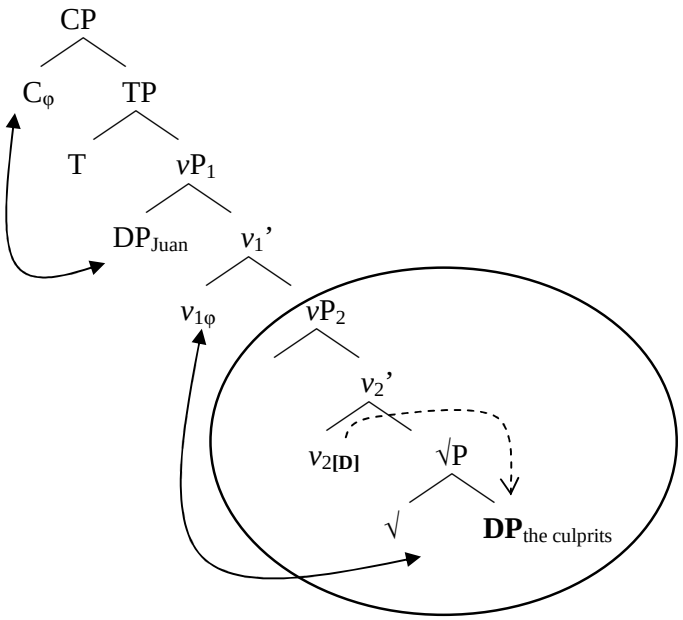
(69) Juan hizo castigar**se** a los culpables.
J. made to.punish.SE ACC the culprits

i. Reciprocal / reflexive reading (OK under the active structure)
'Juan made the culprits to punish themselves / each other.'
ii. Impersonal reading (NO for both causatives)
*'John made the culprits were punished.'

Given that impersonals or reflexive / reciprocal *se* always entail a [D] feature on agentive *v*, its presence in the embedded infinitive indicates that this infinitive has the underlying structure of an active causative. As we already know, agentive v_2 has to be φ-defective. The analysis for (69) is illustrated in the following tree:

[11] Folli & Harley (2007) also makes some conjectures on part of the paradigm under exploration here (Folli & Harley 2007: 209, footnote 10), in particular, with respect to the contrast between (63) and (64). Given that they only speculate on the issue and do not address the entire pattern with we are concerned now, it is hard to make a correct evaluation of their approach in this particular domain.

(70)



By the activity and locality conditions in (68), the internal argument of the embedded infinitive is both local and active as far as v_2 is concerned and, consequently, receives the agent role. Importantly, the structure for the impersonal *se* reading is simply not derived under the system outlined in this paper. The crucial property of this situation is the φ-defectiveness of the embedded *v* in both types of causatives. It is this property what renders the internal argument active for further thematic interpretation in the vP_2 domain in consonance with (68A). Therefore, this case nicely illustrates that thematic interpretation proceeds derivationally under usual constraints on cyclic syntactic computation. Notice that if it were the case that thematic interpretation is computed globally, the difference between an impersonal *se* in a sentence like (50), where *v* is φ-complete and (69), where v_2 is fully φ-defective would not be explained. For the same token, the reflexive / reciprocal reading of (69) is derivationally captured, as well: at the point in which v_1 is introduced within the derivation thematic assignment has been essentially exhausted within vP_2, so, the fact that the internal argument value accusative against v_1 is entirely irrelevant as far as thematic assignment within vP_2 is concerned.

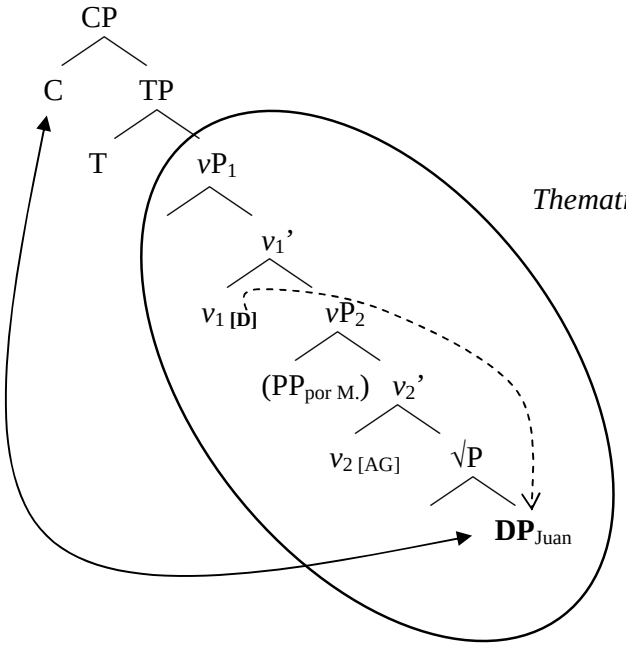
3.3. Prediction #2: long-distance thematic interpretation

As shown by the sentence in (63) above (repeated as 71), passive infinitives allow for reflexivization of *hacer*.

(71) Juan **se** hizo besar por María.
J. SE made to.kiss by M.
'John$_i$ made Mary to kiss him$_i$.'

This case is also directly derived under the theory of argument structure we are developing. See the following tree:

(72)



Thematic domain: Locality/Activity OK

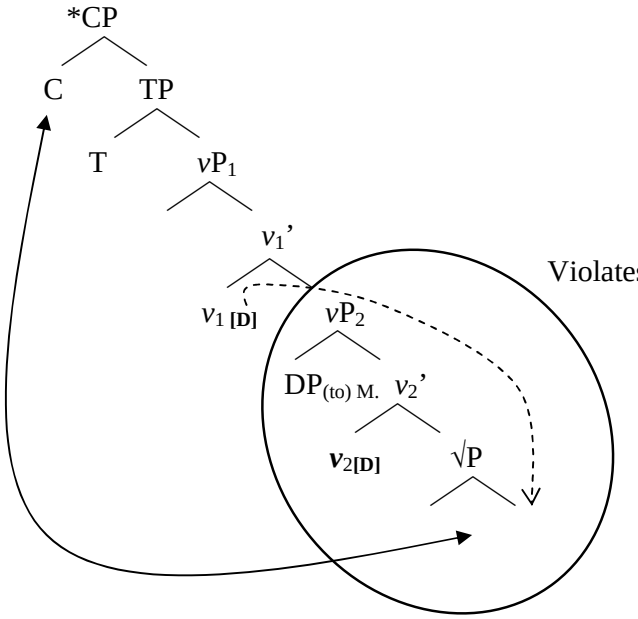
Here, the internal argument of the embedded infinitive *Juan* is both active and local with respect to the higher $v_{[D]}$ in consonance with (68). This is because vP_2, being fully defective (i.e. "passive"), is not an intervener. That is why thematic association between the non-discharged [D] feature on v_1 and the object DP is allowed.

3.4. Prediction #3: Locality effects in thematic interpretation

The absence of reflexivization of the embedded internal argument in active causative environments constitutes a case where thematic locality is violated. See (73) and its associated structure in (74):

(73) *Juan **se** (le) hizo besar a María. (cf. 64)
J. SE (DAT) made to.kiss DAT M.
Intended: 'John$_i$ made Mary to kiss him$_1$.'

(74)



Violates locality!

√ **DP**$_{Juan}$

As it should be evident now, the crucial difference between active and passive infinitives that accounts for the contrast between (71) and (73) is the underlying category composition of agentive *v*: whereas passive *v* is fully defective, active *v* enters the derivation with a [D] feature. It is this feature, then, what creates a locality violation, as formulated in (68B), given that upper $v_{[D]}$ cannot access to the domain of *v*P$_2$ to establish a thematic dependency with the object of the infinitive.

3.5. Prediction #4: obviation effects and absence of double reflexives

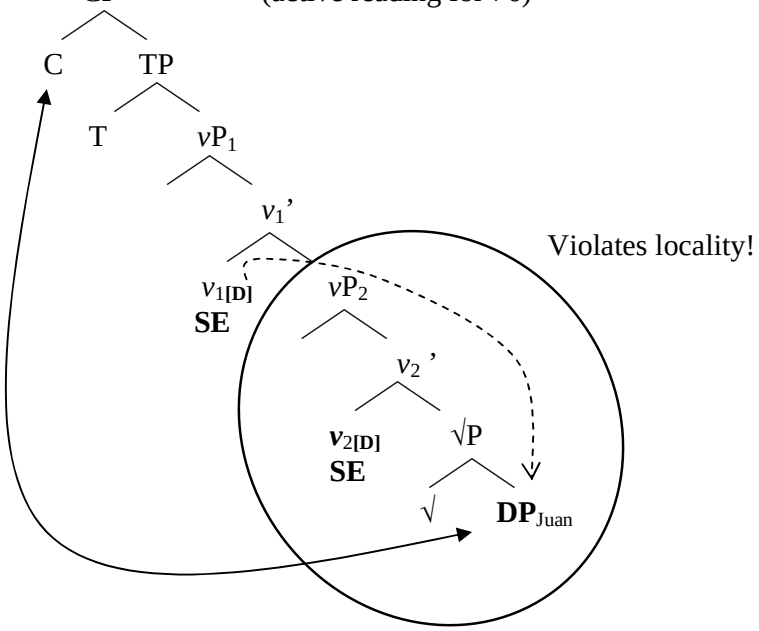
"Obviation effects" (65) and the impossibility of having the two verbs associated with reflexive morphology (66) also violate thematic locality (except for passive causatives):

(75) *Juan **se** hizo llegar / trabajar / comprar un auto.
J. SE made to.arrive / to.work / to.buy a car
Intended: 'Juan made himself to arrive/ work / buy a car' (*Juan* = infinitive subject)

(76) *Juan **se** hizo besar**se** (por María)
J. SE made to.kiss.SE (by M.)
Intended 1: 'John$_i$ made himself$_i$ Mary (or someone else) to kiss him$_i$.' (Passive)
Intended 2: 'John$_i$ made himself$_i$ to kiss him$_i$.' (Active)

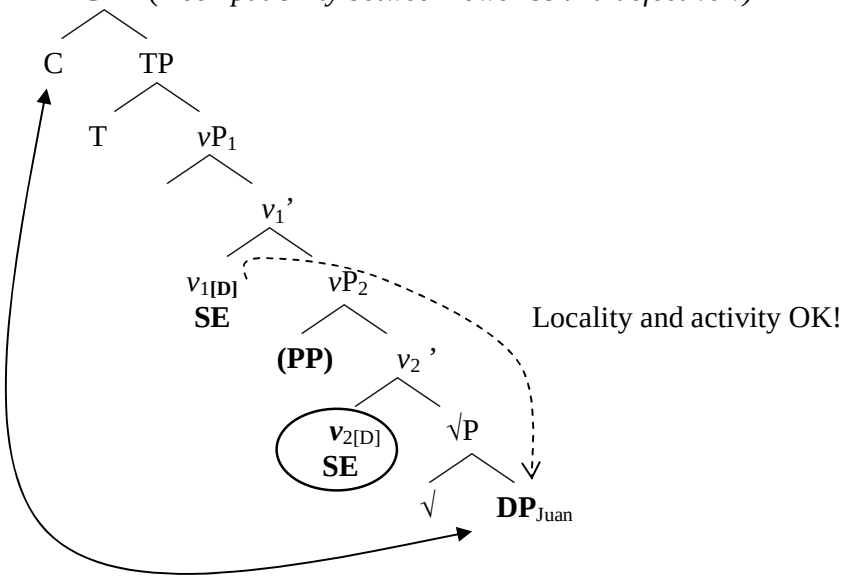
That (76) with the intended reading 2, where *Juan* is also the agent of v_2, is a violation of locality is explicitly indicated by the presence of the lower clitic *se*. Again, given that *se* entails the presence of a $v_{[D]}$, v_1 in (77) cannot "see" the object of *v*P$_2$ to discharge its agentive role.

(77) *CP (active reading for 76)



Under the intended passive reading of (76), where *Juan* is not the agent of the embedded infinitive, *v* is fully defective and, as such, is perfectly compatible with a *by*-phrase (e.g., *por María*), but not with lower *se*, which as I have repeatedly observed, always entails the presence of an underlying [D] feature on agentive *v*.

(78) *CP (*incompatibility between lower* se *and defective v)*



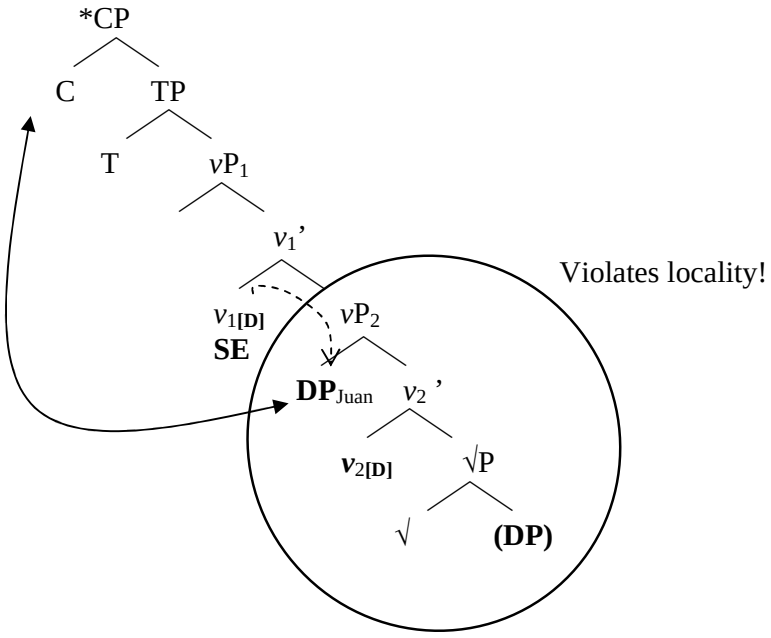
In other words, (78) mirrors the incompatibility of *by*-PPs in impersonal *se* environments we discussed with respect to (39) (repeated as 79), in which the introduction of a *by*-phrase within the $v_{[D]}$ domain produces a category clash.

(79)

a.	*Se	reprimió	a	los	maestros	por	la	policía.
	SE	repressed.3sg	to.acc	the	teachers	by	the	police
b.	*Se	destruyeron	los	puentes	por	el	enemigo.	
	SE	destroyed.3pl	the	bridges	by	the	enemy	

The ungrammaticality in (75) does not require any additional observation, because, as shown in (80), it also follows as a locality violation:

(80)



An important prediction of an analysis involving locality as formulated in (68B) and a default interpretation rule like (44) is that an arbitrary reading should arise whenever $v_{[D]}$ cannot discharge its thematic role to some argument DP. This prediction is false: no *arb* reading is attested in the ungrammatical cases that violate locality for v_1 (i.e., 73, 75 and 76 in its active reading). So, there is more to be said in this respect and the next section is entirely dedicated to explore the interactions between thematic theory and default interpretation.

To conclude what has been said so far, the intricate pattern with *hacer* causatives illustrated in (62)-(66) receives a straightforward account under the simple hypothesis that the difference that underlies passive and active causatives is connected to the absence or presence of a $_{[D]}$ feature on the embedded *v*. The rest follows from the syntactic approach to argument structure proposed in section 2.

Before closing the discussion on causatives, let me explore a last important prediction related to the syntax of ECM constructions.

3.6. An additional prediction: ECM-constructions

At this point, the reader might have inferred an immediate prediction arising from the theory. Concretely, it is predicted that all things being equal, two φ-complete *v*s should invert the grammatical judgments in (62)-(66) provided some structural conditions are also met. With reference to the observation in (55), the scenario to evaluate is (82c):

(81) Given a configuration like [x^0…Z…y^0], if x^0 and y^0 are cyclic heads of the same type, Z ≠ C, and x^0 and y^0 are in a potential inheritance relation, then y^0 is fully φ-defective.

(82)	a.	Cφ … *x*φ … *v*	(allowed by 81)
	b.	Cφ … *x* … *v*φ	(not allowed by 81)
	c.	Cφ … ***x*φ … *v*φ**	(allowed by 81 up to the meaning of the second "…")

By (81), (82c) should be allowed if either (i) there is an intervening cyclic head C between *x* and *v* or (ii) the structural conditions that trigger feature inheritance between both little *x*s are nor met.[12]

ECM constructions with perception verbs constitute an ideal scenario to evaluate this prediction.[13] A simple example is given in (83):

(83)	Juan	vio	a María	comprar	ese	vestido.
	J.	saw	M.	to.buy	that	dress

'John saw Mary to buy that dress.'

I will not propose any particular, deep analysis of ECM constructions in Spanish. I will only notice here that the pattern in (62)-(66) can be reproduced in ECM contexts in Spanish with the following results:

Impersonal se *in the embedded infinitive (cf. 62)*: OK

[12] Notice, however, that even if (81) turns out to be empirically falsified in the sense that nothing would prevent two φ-complete cyclic heads of the same type co-occurring in a given domain, the predictions concerning the pattern at hand remain the same. In other words, it could be case that (81) is restricted to a situation where only one set of φ-features is made available by the numeration. Under that particular circumstance, the computational system assigns that set of features to the upper cyclic head *x*. I will not explore here the empirical consequences of such a possible reformulation of (81).

[13] Thanks to Dave Embick for bringing ECM-constructions to my attention.

(84) Juan vio castigar**se** a los culpables.
J. saw to.punish.SE ACC the culprits

i. Reciprocal / reflexive reading
'Juan saw the culprits to punish themselves / each other.'
ii. Impersonal reading
'Juan saw the culprits to be punished.'

Long distance reflexivization (cf. 63 and 64):

(85) *Juan **se** vio besar por María.
J. SE saw to.kiss by M.
Intended: 'Juan$_i$ saw that he$_i$ was kissed by María.'

*Reflexivization of the subject of the infinitive (cf. 65):*OK

(86) Juan **se** vio llegar / trabajar / comprar un auto.
J. SE saw to.arrive / to.work / to.buy a car
Intended: 'Juan saw himself to arrive/ work /buy a car' (*Juan* = infinitive subject)

Double reflexivization (cf. 66): OK

(87) Juan **se** vio besar**se** a sí mismo
J. SE saw to.kiss.SE (himself)
Intended 1: 'John$_i$ saw himself$_i$ to kiss himself$_i$.'

There are two basic differences between causatives and perceptions verbs that are at the center of this sharp contrast. On the one hand, for the impersonal reading to be derived in (84) -but ruled out in (62)- by the activity condition (68A), it is necessary the case that the lower *v* in ECM contexts is not φ-defective, as opposed to causatives. As is well-known, ECM, but not causatives allows for double accusative marking in Spanish (cf. 88 *vs* 89 below), confirming then that (82c) is part of the basic analysis of causatives:

(88) Juan **la** vio (a María) comprar**lo**.
J. CL.ACC.FEM saw (ACC M.) to.buy.CL.ACC.MASC
'John saw her to buy it.'

(89) *Juan **la** hizo (a María) comprar**lo**.
J. CL.ACC.FEM made (ACC M.) to.buy.CL.ACC.MASC
'John made her to buy it.'

Now, it seems that there is more in ECM than only a φ-complete, lower *v*. The grammaticality of data like (86) and (87) shows that the subject of the infinitive must vacate the *v*P where it is first merged. This follows from the locality condition on thematic interpretation (68B). Given a structure like (90), we expect that as a minimum the subject of infinitive moves at the edge of Z:

(90) Cφ … $[_{vP1} x\varphi$ …. $[_{ZP}$ SUBJ$_i$ $[_{vP}$ t_i $v_{[\varphi, D]}$ (IA)]]]
(where Z = a type of φ-defective C head)

In its final edge position, SUBJ is both active and local with respect to v_1 and, consequently, can be interpreted as the agent of the matrix verb.

Edge effects in perception verbs are detectable in Spanish dialects with productive clitic doubling for animate DPs, as River Plate Spanish. As is well-known, this dialect

optionally allows accusative clitic doubling for animate DPs that are differentially object marked by *a* 'to'.

(91) a. (La) vi a María.
(CL.ACC.FEM) saw ACC M.
'I saw Mary.'
b. *(Lo) vi el auto. (cf. *vi el auto*)
(CL.ACC.MASC) saw ACC M.
'I saw the car.'

A sentence like (91b) is ruled out because inanimate objects, which cannot trigger differential object marking, cannot trigger accusative doubling, either. However, in ECM constructions, differential object marking plus clitic doubling is attested (Laca 1995 and Zdrojewski, in press)

(92) (Lo) vi al auto chocar
CL.ACC.MASC saw ACC.the car to.crash
'I saw the car crashing.'

As argued by Zdrojewski (in press), this type of phenomenon, attested also in other contexts of minimal clauses, indicates that the subject of the infinitive is in an edge position, as is usual the case with other related doubling phenomena in Spanish. For our purposes here, it is enough to show that similar edge effects cannot be constructed for *hacer* causatives:

(93) a. *Lo hizo al auto arreglar por María.
CL.ACC.MASC made ACC.the car to.repair by M.
b. *Se lo hizo al auto arreglar a María.
CL.DAT CL.ACC.MASC made ACC.the car to.repair DAT M
Intended: 'He made María to repair the car.'

Summing up, in this section I have demonstrated how a set of intricate facts concerning the nature of causatives are derived without adding any auxiliary assumption to the system proposed in section 2. Indeed, I think that these facts follow as specific predictions of the proposed system, under a simple analysis of Spanish causatives. These predictions are listed below:

<u>*Explained facts*</u>:
(94) a. absence of impersonal *se* readings in passive and active causatives
b. presence of long-distance reflexivization with passive causatives
c. absence of reflexivization of embedded subjects in both types of causatives
d. absence of double reflexivization with both types of causatives

The pattern attested in causatives seems to be nicely confirmed by ECM-constructions, which tend to parallel active causatives, with the crucial exception that ECMs do have impersonal *se* readings of the embedded infinitive, a fact that immediately follows from the different inflectional combinations that both types of constructions allow.

4. Global *vs.* local computation and the nature of implicit arguments

So far, I have shown that the theory of implicit arguments developed in this paper, according to which implicit arguments signal absence of *Merge*, not only obeys conditions of simplicity

and parsimony, but has a broad empirical coverage, as well. Yet, a gap was mentioned in connection with the locality condition on thematic interpretation and the informal rule (44), repeated as (95):

(95) *Default* arb *assignment (Preliminary version)*:
For agentive $v_{([D])}$ assign *arb* in absence of an agentive argument in the domain of $v_{([D])}$.

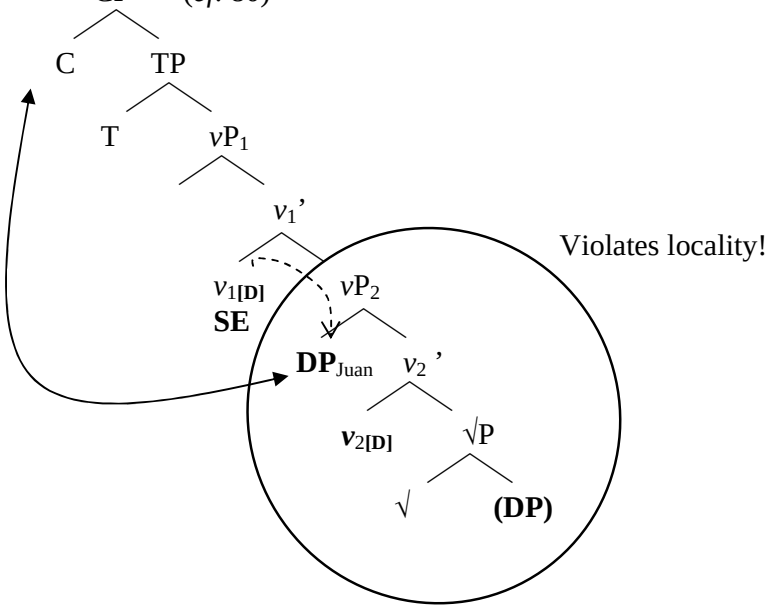
The intuition behind (95) is that *arb* assignment is a default rule applying after local thematic interpretation. However, in the way it is formulated, (95) predicts arbitrary readings in cases where this is never attested in concrete scenarios. Specifically, arbitrary readings should arise whenever locality or activity, as formulated in (68) (repeated below), fails.

(96) An argument DP *A* is interpreted as the agent of agentive $v_{[D]}$ if and only if:
(A) ***Activity****: A* has its case value not determined within the *v*P level in which it is contained (i.e., it is active within the *v*P domain to enter into further A-dependencies).
(B) ***Locality****: A* is local to $v_{[D]}$; i.e., A is not contained in the domain of another $v_{[D]}$.

Both locality and activity failures were explored in the previous section. We saw, however, that the locality failures we particularly discussed never trigger a default arbitrary reading. Let us start with the data in (97) (see 75 above), and its associated tree in (98):

(97) *Juan se hizo llegar / trabajar / comprar un auto.
J. SE made to.arrive / to.work / to.buy a car
Intended: 'Juan made himself to arrive/ work /buy a car' (*Juan* = infinitive subject)

(98) *CP (*cf.* 80)



The sentences in (97) illustrate a locality violation, whose result is the impossibility of having a reflexive reading of the embedded subject. Such a failure should activate (95) giving a default *arb* interpretation of the matrix subject. Yet, this is not the case: the sentences at hand are not read as 'one made Juan to arrive / to work/ to buy a car'. Instead, when possible, each of these sentences assigns *arb* to the embedded subject; i.e., a passive causative reading

arises. This is particularly clear in the case of the transitive *Juan se hizo comprar un auto* ('Juan$_i$ made one to buy a car for him$_i$.'), but is also the first reading you obtain with the unergative *trabajar* 'to work' and the unaccusative *llegar* 'to arrive' in those Spanish dialects that allow for transitivization of these verbs (see Pujalte (in progress) for details). In River Plate Spanish, for instance, the transitive use of *to work* in examples like *Juan trabajó a Pedro* (Lit.: 'John worked Pedro.') means that Juan tried to take some advantage from Pedro by talking to him. Crucially, for those speakers that have this use of *trabajar*, this is also the first reading they get in causative contexts like (97).[14] One can also force the reflexive reading between the matrix and the embedded subject by explaining to the speakers the intended meaning, but there is no way in which a default *arb* can be assigned to the matrix subject. Therefore, as formulated, (95) is falsified at least for $v_{[D]}$. It turns out then that we cannot collapse the *arb* readings for *v* and $v_{[D]}$, as intended in (95).

An alternative to (95) could be to claim that *v* and $v_{[D]}$ create two radically different scenarios as far as arbitrary readings are concerned. Intuitively, an agentive *v* with a non-discharged [D] feature has, after all, the flavor of being an illegible object at the I-C interface, and not only at PF, as we claimed so far. So, an interpretative interface strategy should apply for that particular type of *v*. As convincingly shown by Reinhart (2006) interface strategies require some type of (costly) global computation (e.g., comparisons among derivations). In turn, an agentive *v* without a subcategorization feature, instead, induces no conflict at the interfaces because, being so defective, there is no formal feature triggering any sort of operation (local or global). The logical of this reasoning supposes to accept the following statements:

(99) i. Syntactic theta assignment requires local (syntactic) computation triggered by subcategorization features.
ii. *arb* default reading for agentive $v_{[D]}$ requires global computation at the pragmatic-semantic interface (maybe in Reinhart's 2006 sense[15]).
iii. *arb* default reading for fully defective agentive *v* requires no additional, global computation, because it is a legible object at the interfaces.

What is entailed here is a different source for the *arb* readings each type of *v* expresses. The fact that the first reading arising in examples like (97) is the passive one, where the subject of the infinitive is *arb*, seems to be a good indication that implicit agents in passives are entirely determined by principles of local computation. On the opposite side, the *arb* reading of a $v_{[D]}$ requires additional computation at the interfaces. As a minimum, an additional syntactic searching for this kind of *v* is implied by (99i), but not for fully defective *v*. In effect, the presence of a non-discharged [D] feature for a given head induces syntactic computation by thematic reasons and, as a last resort, default interpretation whenever syntax fails to produce the right input for the interfaces. So, default readings in this respect might be seen as the semantic-pragmatic counterpart of clitic insertion at the PF interface (see the

[14] This is even more clear with the verb *dejar* 'to let', as exemplified in (i):

(i)	Juan	se	dejó	trabajar	(por	Pedro)
	J.	SE	let	to.work	by	P.

In this sentence, the only available reading is the idiomatic one (i.e., 'John$_i$ let Peter to cheat him$_i$.') and not the one where you interpret that Juan is reflexively interpreted as the subject of the infinitive.

[15] This depends on whether default *arb* triggers or not comparison among derivations. If not, the meaning of *global* should reconsidered in terms of non-local inspection (i.e., no phase-based) within the same derivation. An example of this type of global computation could arise if the interface is forced to trace back the derivation to evaluate whether some constraint has been satisfied or not.

discussion in 2.2 in connection to 27). Implicit arguments of the passive type, instead, do not trigger (99i); they are sent at the interfaces where they are perfectly legible objects. Regarding LF, a $v_{[AG]}$ may be existentially closed via LF procedures of the usual type (although other alternatives are available; more on this below).

This alternative to (95) implies a new typology of arbitrary subjects, in particular, and of implicit arguments in general. For reasons that will become clear shortly, I think that it could be useful to call *understood agents/arguments* to the objects deriving from (99iii) and to avoid the term *default arb* for this particular type. Such a denomination should be applied only to *true* default arguments, i.e., those arising as repair interface strategy (99ii). Let us call *default arguments* to this type. Absence of *Merge*, then, leads us to formulate the following typology of implicit arguments:

(100) i. Default arguments: The result of a *Merge* failure. This produces an illegitimate object, $v_{[D]}$, that triggers repair strategies at the interfaces.

ii. Understood arguments: The result of free category assignment in the numeration. This produces a legitimate object, *v*, which triggers no repair strategy at the interface.

However, even if these conjectures are correct, we are still left with the problem of providing the right mechanism for default interpretations. Deleting the parentheses in (95) and specifying that the argument should be a DP, as in (101), is not enough to produce the right results.

Default arb *assignment (second version)*:
(101) For agentive $\mathbf{v_{[D]}}$ assign *arb* in absence of an agentive **DP** in the domain of $\mathbf{v_{[D]}}$.

Again, under this formulation the general absence of arbitrary readings in cases where thematic locality is violated are not explained. As for (97), it is important to note that it is not the case that the *understood* subject of the infinitive is in competence with the default argument of *hacer*, because as we saw with respect to (76), default interpretation is impossible, even though the passive reading of the embedded subject is blocked by the presence of the lower reflexive clitic:

(102) *Juan **se** hizo besar**se**
J. SE made to.kiss.SE
Intended: 'John$_i$ made himself$_i$ to kiss him$_i$.'

Therefore, I propose the following reformulation of (101):

(103) *Default agents (at the I-C interface)*:
For any agentive $v_{[D]}$, assign *arb* in absence of a "subject" in the C-domain of $v_{[D]}$.

Now, all the cases seen so far, where *arb* is not allowed as a repair strategy (e.g., 97 and 102), are correctly captured. Just for the sake of illustration, consider (97) and its associated tree in (98). A locality conflict arises at the vP$_1$ level, because its head cannot access vP$_2$ for discharging an agent role to the subject of the infinitive. The derivation, however, proceeds and nothing prevents that the external argument of vP$_2$ is valued as nominative by C. At PF, the non-discharged [D] feature on v_1 can be repaired under clitic insertion, as proposed in Pujalte & Saab (2012). Yet, at the C-I interface, *arb* cannot be assigned because there is a subject present in the C-domain, namely, *Juan*. The final result is

that these particular sentences, although PF convergent, are not C-I convergent. Concretely, we have a subject without the thematic role associated to its predicate. A revealing conclusion regarding the way in which the interface proceeds in this particular case is that tracing back the derivation to evaluate if the subject at hand was theta assigned is not possible, against what is suggested in footnote 15. The interface only allows for a type of computational inference, which connects *subjects* to thematic roles.

The notion of *subject* in (103) plays a crucial role in the computation that the interface can perform. As far as I can tell, this is based on case assignment and not on grammatical function, confirming thus the idea that case is a more primitive notion than grammatical function (Bobaljik 2008 and the references therein). A fundamental piece of evidence is passive *se* constructions in Spanish and other Romance languages (see Pujalte & Saab 2012 for references and discussion):

(104) Se cerraron las puertas a propósito.
SE closed.3PL the doors.3PL to purpose
'The doors were closed on purpose.'

The sentence in (104) is passive in the sense that there is verbal agreement with the internal argument, but is active in the sense given to this term in this paper: the presence of *se* indicates underlying $v_{[D]}$. Crucially for the point I am making here, (104) has a type of animacity / person constraint (see 105, and D'Alessandro 2007 for detailed discussion on this restriction), which can arguably be connected to some φ-defective relation between the "subject" and the verb (as proposed by Pujalte & Saab 2012). Whatever is the deep explanation of this defectiveness, it seems to have important consequences for case assignment. First, notice that overt nominative marking cannot occur in passive *se* contexts in Spanish:

(105) a. Se encontraron cadáveres.
SE found.3pl bodies
'Bodies were found.'
b. *Se encontró Juan/él.
SE found.3sg Juan/he
Intended: 'He was founded.'
c. *Me encontré yo.
ME found.1sg I
Intended: 'I was founded.'
(b-c OK as reflexives; see Pujalte & Saab 2012)

An overt pronoun can only show up in the accusative form, which superficially produces an impersonal *se* construction, not a passive one:

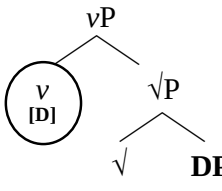
(106) a. *Se lo encontró
SE CL.ACC.3SG.MASC found.3SG
'He was found.'
b. *Se me encontró
SE CL.ACC.1SG found.3SG
'I was found.'

A similar situation occurs with respect to proper nouns (cf. 105b), which can only occur in the impersonal *se* configuration under differential object marking, a property of accusative objects:

(107) Se encontró a Juan
SE found.3SG ACC J.
'Juan was found.'

The basic generalization behind these facts is that only those objects which are not overtly marked for accusative case are allowed to show *verb-subject* agreement effects. This is in consonance with Bobaljik's (2008) claim that morphological case can interfere with overt agreement. We can then interpret the passive *se* pattern as follows. The internal argument of a passive *se* construction is not syntactically valued as nominative; let us assume that either it could be syntactically valued as accusative or inherently case marked in the syntax. Under both options, it turns out that it can never receive the agentive role, given the activity condition (96A). The abstract representation of passive *se* in the *v*P domain is illustrated in (108):

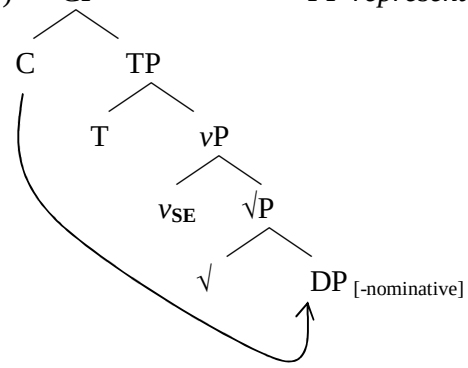
(108) *Passive* se



DP$_{theme}$ → inactive (syntactically accusative or inherently case marked)

At the PF interface, the derivation proceeds via inserting *se* and triggering morphological subject agreement, a relation potentially blocked by the activation of another PF-phenomenon like accusative marking. A simplified final PF representation could be as follows:[16]

(109) *PF representation*



On the C-I interface side, (103) is activated by the presence of the non-discharged [D] feature on *v*. In contrast with what we just observed in connection with reflexives (see, e.g., 98 and similar structures), the interface is forced to assign a default interpretation because no "subject" was found during the searching. This is why, then, (104) but not, for instance, (97), has a default arbitrary interpretation connected to $v_{[D]}$.

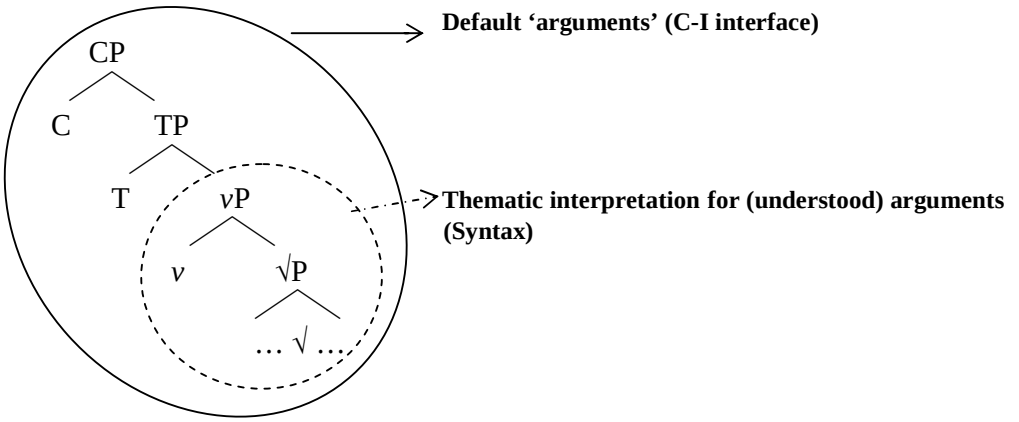
[16] We are assuming that C agrees directly with the DP, but there are other alternatives, which are worth-exploring as well (e.g., C-*v* agreement, see Rodríguez-Mondoñedo 2007).

I conclude then that the best version of (103) makes reference to case and not to agreement or grammatical functions:

(110) *Default agents (Final)*:
For any agentive $v_{[D]}$, assign *arb* in absence of a *nominative subject* in the C-domain of $v_{[D]}$.

The general picture arising from the preceding discussion leads to the important conclusion that there is a difference in the computations of arguments in general. Being the result of syntax, thematic interpretation, a type of A-dependency, proceeds under the conditions on locality and activity at the *v*P level expressed by (96). Being the result of the I-C interface, default arguments are computed at the CP level. This scenario is sketched in (111):

(111)



From the arguments made so far, we can conclude that understood arguments pattern similarly to any other syntactic (non-)overt arguments, although they are the result of absence of *Merge*. As already implied by (99iii), the obvious prediction is that (110) is irrelevant for understood arguments. This is easily demonstrated by a simple passive sentence, like (112), where the internal argument receives nominative, but it does not intervenes in the understood reading of the agentive *v*. This is because absence of a [D] feature on *v* results in that no additional computation related to uninterpretable features is triggered.

(112) Yo fui castigado.
I was punished

Other important predictions also follows from this cut between understood and default arguments. A worth-mentioning one involves the arbitrary interpretation of implicit arguments. If the system outlined here is on the right track, there is nothing in the nature of understood arguments triggering the arbitrary, human reading. The "arbitrary" reading of an understood agent is just the consequence of the particular interpretation of $v_{[AG]}$ and nothing else. Put it in a more general way, understood arguments do not possess a univocal semantic interpretation; their particular semantic import follows from the syntactic positions to which they are associated. Instead, default arguments seem to encode an inherent human and arbitrary reading. Therefore, we expect that understood arguments will be subject to the general conditions that apply within the *v*P level.

Understood objects are a good case to evaluate this type of predictions. As is well-known, the idea that there is a type of pro_{arb} that can be licensed in subject or object positions

up to general UG principles and parametric variation has received a standard consensus since Rizzi's (1986) work on null objects on Italian (see also Cinque 1988).

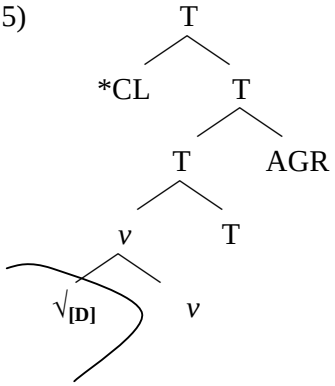
A basic fact about objects in Romance is that *se* insertion is not an available strategy to rescue a putative, non-discharged [D] feature in the Root domain. In this respect, compare the pattern in (113) with (114), taken from Pujalte & Saab (2012):

(113) a. Se compró eso.
SE bought.3sg that
b. Se hizo eso.
SE made.3sg that
b. Se cortó eso.
SE cut.3sg that

(114) a. *Juan compró.
Juan bought.3sg
b. *Juan hace.
Juan makes
c. *Juan corta.
Juan cuts

According to Pujalte & Saab (2012), the contrast between these sentences is accounted because of locality conditions applying at the morphological level. Simplifying somewhat, clitic insertion at PF cannot apply to a given $Root_{[D]}$ position because at the point in which clitic insertion may apply, that [D] feature is in the complement of cyclic head *v* and, consequently, inaccessible to further computation given well-established phase conditions at PF (Marvin 2002 and Embick 2010, among others).

(115)



Assuming this is the case, a revealing conclusion arises with respect to the nature of implicit argument; namely, [D] features in Root position should not be allowed in general. Therefore, (116) is deduced:

(116) Default objects do not exist.

In other words, (110) never applies to Root position just because it is never the case that a [D] feature on a Root can remain unsatisfied. The conclusion is that -*modulo* well-known cases of topic-deleted objects; Huang 1984, Raposo 1986, Campos 1986 and Suñer & Yépez 1988, among many others-, other cases of null objects like the ones in (117) can only be either understood arguments or null generic objects, the choice between these two options being subject to parametric variation. A-dependency tests as the ones discussed in section 2

suggest that Italian, but not Spanish, allows for null generic objects.[17] So, I will assume that Spanish does not license null generics in object position and that the examples in (118) are derived as cases of understood objects (although my argument would remain the same, if Spanish licensed null generics):

(117) a. Los fantasmas asustan.
the ghosts fright.3pl
b. La lectura ayuda.
the reading helps
c. El psicoanálisis cura.
the psychoanalysis cures

What follows from Rizzi and Cinque's classical works on pro_{arb} is that examples of this sort should form a minimal pair with impersonal *se* constructions, where a similar generic and human reading is obtained but where, at the same time, clitic insertion is mandatory (113). However, this seems to be an incorrect claim. The fact that the Spanish objects in (117) are interpreted as [human, (generic)] is linked to the semantic of these particular verbal Roots and to some aspectual and tense conditions that apply quite generally (although both conditions are independent of each other). Put differently, the semantics of understood objects essentially depends on Roots. So, the following sentences can or cannot have a human, arbitrary reading with respect to the objects up to particular Roots and other relevant conditions on interpretation. A sentence like (118a), for instance, can have both readings by obvious reasons, although the human reading is not obtained in (118b), or is hard to get in (118c).

(118) a. Ese cuchillo corta.
that knife cuts
b. Juan come bien.
J. eats well
c. Esto no limpia.
this not cleans

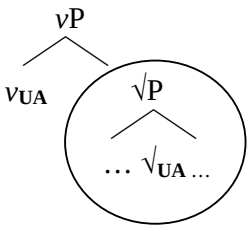
That the Root domain triggers particular interpretations is by no means a new observation; it was made in several empirical fields in the Distributed Morphology framework (see Embick & Marantz 2008 for a general overview). Well-known cases of conventional readings of understood objects (e.g., *John drinks*, or the Spanish (114b) related to physiological processes) are also accounted for in this framework as Root-related

[17] Clear tests dividing Spanish from Italian are binding and secondary predication. Rizzi's famous (ia / iib) are reproduced in the Spanish's (b) examples.

(i) a. La buona musica reconcilia ___ con se stessi. (Italian)
the good music reconciles with themselves
b. *La buena música reconcilia con sí mismo. (Spanish)
the good music reconciles with himself
Intended: 'Good music reconciles one with oneself.'

(ii) a. un dottore serio visita ___ nudi. (Italian)
a doctor.MASC.SG serious visits naked.PL
b. *Una doctora seria visita ___ desnudo (Spanish)
a doctor.FEM.SG serious.FEM visits naked.MASC.SG
Intended: 'A serious doctor visit naked people.'

phenomena. So, we can simply extend this empirical observation to derive the different degrees of systematic readings arising in the domain of understood arguments intra and across languages.

(119) 

(UA = Understood Argument)

Root domain

In turn, default readings, to the extent they are available, are systematic and directly predictable from (110). I know of no example where this is not the case for real cases of default arguments (impersonal or passive *se*).

To conclude, the idea that *arb* readings form a type of natural class that includes at least default and understood arguments is not correct. This is, of course, not surprising, given the different formal source that introduces both types of arguments. What I think it is a remarkable consequence of the discussion in this section is how that difference is computed at the syntactic level and at the interfaces. If the conjectures made in this section are correct, then the very basic fact that understood arguments largely outnumbers default arguments fits nicely within the framework proposed in this paper, according to which default arguments entail complex (and probably costly) interactions between the computational system and the interfaces that connect the Language Faculty with the external systems.

5. Conclusions

In this study, I have shown, *pace* Landau (2010), that most cases of what is commonly known as *implicit arguments* do no belong to the inventory of syntactic primitives, but are derived from the null hypothesis that absence of *Merge* is a permitted syntactic option, even in cases when it is excepted.

(120) <u>*Null hypothesis:*</u> Implicit arguments simply signal the absence of a (sometimes expected) application of the operation *Merge*. In other words, at least in the ideal case implicit arguments have no syntactic representation.

Further inquiry into this research program would decide if (120) remain unaltered or not for other cases of implicit arguments in Spanish and other languages (arbitrary third person plural in Romance being a core case to explore). For the time being, the outlined system I suggested seems to be largely confirmed by its empirical coverage. In other words, a theory with (120) at its heart has a strong predictive power. In the empirical domain I have addressed here, its capacity to derive the following set of empirical generalizations has been demonstrated:

<u>*Passives and impersonal constructions (cf. 52):*</u>

(121) a. the complementary distribution between *v*-related *se* and *by*-phrases
b. the correlation between *by*-phrases and fully defective *v* in passives and event nominalizations
c. the correlation between passive and nominal morphology and the absence of accusative marking
d. the absence of A-dependencies with implicit agents in passives and *se* constructions
e. the syncretism pattern between impersonals and reflexives / reciprocals

Causatives (cf. 94):

(122) a. absence of impersonal *se* readings in passive and active causatives
b. presence of long-distance reflexivization with passive causatives
c. sbsence of reflexivization of embedded subjects in both types of causatives
d. absence of double reflexivization with both types of causatives

Of course, an alternative theory where syntactic implicit arguments are introduced to derive the same patterns (121)/(122) could be shown as extensionally equivalent. In any case, the burden of the proof remains on those that would defend such an alternative view.

Finally, a possible objection to the approach I suggested here of the type "we need null generics after all" (see section 2.2.) cannot be seriously taken, not only because it supposes to generalize the worst-case scenario, but also because the opposite is also true with respect to (120). In other words, an absence-of-*Merge* approach also seems to be unavoidable in some particular cases, as explicitly recognized by those researchers that believe that extending the ontology of empty categories is a good way to proceed (Landau 2010 being an explicit example).

I believe that part of the discussion on implicit arguments has been sometimes misleading and not well founded because the null hypothesis in (120) does not occupy the place it deserves in the broad debate on silent entities in grammar. If the arguments made here can be proven as essentially correct, we will have contributed to this debate giving a step further in our understanding of such entities.

References

Alexiadou, Artemis. 2001. *Functional structure in nominals*. Amsterdam: John Benjamins.

Baker, Mark, Kyle Johnson & Ian Roberts. 1989. Passive arguments raised. *Linguistic Inquiry* 20(2): 219-251.

Baauw, Sergio & Dennis Delfitto. 2005. New views on reflexivity: Delay effects in Romance. *Probus* 17: 145-184.

Barbosa, Pilar. 2010. Partial pro-drop as null NP anaphora. Talk given at *NELS* 41, UPenn.

Bhatt, Rajesh, and Roumyana Pancheva. 2006. Implicit arguments. In *The Blackwell companion to syntax, volume 2*, ed. by Martin Everaert and Henk van Riemsdijk, 558–588. Oxford: Blackwell.

Bobaljik, Jonathan David. 2008. Where's Phi? Agreement as a Post-Syntactic Operation. *Phi-Theory: Phi Features across Modules and Interfaces*, ed. by Daniel Harbour, David Adger, and Susana Béjar, 295-328. Oxford: Oxford University Press.

Boeckx, Cedric, Norbert Hornstein & Jairo Nunes. 2010. *Control as movement*. Oxford: Oxford University Press.

Bordelois, Ivonne. 1974. *The grammar of Spanish causative complements*. Phd Diss., MIT.

Bowers, John. 2010. *Arguments as relation*s. Cambridge, Mass.: MIT Press.

Campos, Héctor. 1986. Indefinite object drop. *Linguistic Inquiry* 17: 354-359.

Chomsky, Noam. 1981. *Lectures on government and binding*. Dordrecht: Foris.

Chomsky, Noam. 1982. *Some concepts and consequences of the theory of government and binding*. Cambridge, Mass.: MIT Press.

Chomsky, Noam. 1986. *Knowledge of Language: Its Nature, Origin and Use*. New York: Praeger.

Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, Mass.: MIT Press.

Chomsky, Noam. 2000. Minimalist inquiries: The framework. In R. Martin, D. Michaels & J. Uriagereka (eds.), *Step by step: Essays on minimalist syntax in honor of Howard Lasnik* (pp. 89-155). Cambridge, Mass.: MIT Press.

Chomsky, Noam. 2001. Derivation by phase. In M. Kenstowicz (Ed.), *Ken Hale. A life in language* (pp. 1-52). Cambridge, Mass.: MIT Press.
Chomsky, Noam. 2007. Approaching UG from below. In U. Sauerland & H. Gärtner (Eds.), *Interfaces + recursion = language?: Chomsky's minimalism and the view from syntax-semantics* (pp. 1-30). Berlin: Mouton de Gruyter.
Chomsky, Noam. 2008. On phases. In R. Freidin, C. Otero & M. Zubizarreta (Eds.), *Foundational issues in linguistic theory. Essays in honor of Jean-Roger Vergnaud* (pp. 134-166). Cambridge, Mass.: MIT Press.
Cinque, Guglielmo. 1988. On *si* constructions and the theory of *arb*. *Linguistic Inquiry* 19: 521-581.
Collins, Chris. 2005. A smuggling approach to the passive in English. *Syntax* 8: 81-120.
D'Alessandro, Roberta. 2007. *Impersonal SI constructions. Agreement and interpretation.* Berlin: Mouton de Gruyter.
Embick, David. 2010. *Localism versus globalism in morphology and phonology*. Cambridge, MA: MIT Press.
Embick, David & Rolf Noyer. 2001. Movement operations after syntax. *Linguistic Inquiry* 32: 555–595.
Embick, David & Alex Marantz. 2008. Architecture and blocking. *Linguistic Inquiry* 39: 1-53.
Folli, Raffaella & Heidi Harley. 2005. Flavours of *v*: Consuming results in Italian and English. In P. Kempchinsky & R. Slabakova (Eds.), *Aspectual inquiries* (pp. 95-120). Dordrecht: Springer.
Folli, Raffaella & Heidi Harley. 2007. Causation, Obligation, and argument structure: On the nature of little *v*. *Linguistic Inquiry* 38(2): 197-238.
Grimshaw, Jane. 1990. *Argument Structure*. Cambridge, Mass.: MIT Press.
Hale, Kenneth & Samuel Keyser. 1993. On argument structure and the lexical representation of syntactic relations. In S. Keyser & K. Hale (eds.), *The View from Building 20. Essays in linguistics in Honor of Sylvain Bromberger*, (pp. 53–109). Cambridge, Mass.: MIT Press.
Halle, Morris. 1962. *Phonology in Generative Grammar*. *Word* 18: 54-72.
Halle, Morris & Alec Marantz. 1993. Distributed Morphology and the pieces of inflection. In *The view from Building 20* ed. by Hale, Ken & Samuel Keyser, 111-176. Cambridge: MIT Press.
Holmberg, Anders. 2005. Is there little *pro*? Evidence from Finish. *Linguistic Inquiry* 36: 533-564.
Holmberg, Anders. 2010. The null generic subject pronoun in Finnish: a case of incorporation in T. In Theresa Biberauer, Anders Holmberg, Ian Roberts & Michelle Sheehan (eds.) *Parametric Variation: Null subjects in minimalist theory*, 200-230. Cambridge, UK: Cambridge University Press.
Hornstein, Norbert. 1999. Movement and control. *Linguistic Inquiry* 30: 69-96.
Huang, C.-T. James. 1984. On the distribution and reference of empty pronouns. *Linguistic Inquiry* 15: 531–574.
Jaeggli, Osvaldo. 1986. Passive. *Linguistic Inquiry* 17: 587-622.
Kato, Mary. 1999. Strong and weak pronominals in the Null Subject Parameter. *Probus* 11: 1-37.
Kayne, Richard. 1969. *The transformational cycle in French syntax*. Phd Diss., MIT.
Laca, Brenda. 1995. Sobre el uso del acusativo preposicional en español. Carmen Pensado (ed.) *El complemento directo preposicional.* Madrid: Visor Libros. 1995, 61-91.
Landau, Idan. 2010. The explicit syntax of implicit arguments. *Linguistic Inquiry* 41(3): 357-388.
Lipták, Anikó & Andrés Saab. 2012. Movement and deletion after syntax: Licensing by inflection reconsidered. Ms., University of Comahue and Leiden University.

Lobeck, Anne. 1995. *Ellipsis: Functional heads, licensing and identification*. New York: Oxford University Press.
Marvin, Tatjana. 2002. *Topics in the stress and syntax of words*. Phd Diss., MIT.
Mendikoetxea, Amaya. 1992. *On the nature of agreement: the syntax of ARB SE in Spanish*. PhD Diss.. University of York, UK.
Mendikoetxea, Amaya. 2002. La semántica de la impersonalidad. In Cristina Sánchez (ed.) *Las Construcciones con* se. Madrid. Visor. 239-267.
Mendikoetxea, Amaya. 2008. Clitic impersonal constructions in Romance: Syntactic features and semantic interpretation. *Transactions of the Philological Society* 106: 290-336.
Merchant, Jason. 2001. *The syntax of silence: sluicing, islands and theory of ellipsis*. Oxford: Oxford University Press.
Müller, Guereon. 2010. On deriving CED effects from the PIC. *Linguistic Inquiry* 41: 35-82.
Nunes, Jairo. 2004. *Linearization of chains and sideward movement*. Cambridge, Mass.: MIT Press.
Ordóñez, Francisco & Treviño Esthela. 2007. Non-paradigmatic *se*. Talk given at the *IV Encuentro de Gramática Generativa*, Unidad de Lingüística de INCIHUSA, CONICET, Mendoza.
Perlmutter, David. 1971. *Deep and surface constraints in generative grammar*. New York: Holt, Rinehart and Winston.
Pujalte, Mercedes & Andrés Saab. 2012. Syncretis as PF-repair: The case of *se*-insertion in Spanish. In María Cristina Cuervo & Yves Roberge (eds.) *The end of argument structure?*, *Syntax and Semantics* 38, 229-260. Bingley: Emerald.
Pujalte, Mercedes. in progress. *Argumentos (no) agregados. Indagaciones sobre la morfosintaxis de la introducción de argumentos en español. Phd diss.*, University of Buenos Aires.
Raposo, Eduardo. 1986. On the null object in European Portuguese. In *Studies in Romance Linguistics 24*. ed. by Jaeggli, O. & Silva-Corvalán, L., 373–390. Dordrecht: Foris.
Reinhart, Tanya. 2006. *Interface Strategies: Optimal and Costly Computations*. Cambridge, Mass: MIT press.
Rivero, María Luisa. 2001. On impersonal reflexives in Romance and Slavic and semantic variation. In Joaquim Camps & Caroline R. Wiltshire (eds.) *Romance* Syntax, *Semantics and L2 Acquisition: Selected Papers from the 30th Linguistic Symposium on Romance Languages*. Amsterdam: Benjamins, 169–195.
Rizzi, Luigi (1982) *Issues in Italian syntax*. Dordrecht: Foris.
Rizzi, Luigi. 1986. Null objects in Italian and the theory of *pro. Linguistic Inquiry* 17:501–557.
Roberts, Ian. 2010. A deletion analysis of null subjects. In Theresa Biberauer, Anders Holmberg, Ian Roberts & Michelle Sheehan (eds.) *Parametric Variation: Null subjects in minimalist* theory, 58-87. Cambridge, UK: Cambridge University Press.
Rodrigues, Cilene. 2007. Agreement and flotation in partial and inverse partial control configurations. In W. D. Davis and S. Dubinsky (eds.) *New Horizons in the Analysis of Control and Raising*, 213-229. Dordrecht: Springer.
Rodríguez-Mondoñedo, Miguel. 2007. *The syntax of objects: Agree and differential object marking*. PhD. Diss., University of Connecticut.
Saab, Andrés. 2007. La elipsis verbal a través de las lenguas. Ms., University of Comahue.
Saab, Andrés. 2008. *Hacia una teoría de la identidad parcial en la elipsis*. PhD. Diss., University of Buenos Aires.
Saab, Andrés. 2012. On the notion of *partial pro-drop* in Romance languages. Ms., University of Comahue and Leiden University.

Saab, Andrés & Pablo Zdrojewski. 2010. Syntactically inert clitics: A paradox involving clitic doubling and its resolution. Paper presented at *Romania Nova IV,* Campos de Jordão, São Paulo, November 2010.

Saussure, Ferdinand de [2002] *Escritos sobre lingüística general*. Barcelona: Gedisa, 2004.

Suñer, Margarita & María, Yépez. 1988. Null Definite Objects in Quiteño. *Linguistic Inquiry* 19(3): 511-519.

Taraldsen, Knut Tarald. 1978. On the NIC, vacuous application, and the that-t Filter. Ms., MIT.

Temmerman, Tanja. 2012. *Multidominance, ellipsis, and quantifier scope*. PhD. Diss., Leiden University. Utrecht: LOT.

Zdrojewski, Pablo. in press. Los rasgos del SD en la duplicación pronominal: el caso del doblado de clíticos acusativos. In Múgica, Nora, Héctor Manni & Inés. Kuguel (eds.), *Léxico y morfosintaxis*, Universidad Nacional del Litoral.