Clitics, Procedural Elements and Spanish Syntax

Abstract

In this paper we address the nature, syntax and semantics of clitics. Our focus is on the syntax-semantics interface, since we will attempt to provide a model for interpretation of clitics and their associate constituents. We will address the problem of so-called "clitic doubling", to see the semantic consequences that different syntactic configurations have, and investigate on how syntactic operations are triggered by the need to generate interface effects. We will put forth the thesis that clitics are procedural elements whose function is to license the presence of their associates and provide the semantic interface with instructions as to how to manipulate those sortal associates. Our argumentation will take elements from formal syntax (Radical Minimalism) and semantics-pragmatics (Relevance Theory) to configure an interface-based approach in which no phenomenon is studied in substantive isolation, but taking into account the interaction between different components of the system. Our aim is to provide prospects for a unified theory of the syntax-semantics of clitics, drawing on data from Spanish to support our theoretical claims.

Resumen

En este trabajo trataremos cuestiones relacionadas con la naturaleza, la sintaxis y la semántica de los clíticos. Nuestro foco estará puesto en la interfaz sintaxis-semántica, ya que intentamos ofrecer un modelo para la interpretación de los clíticos y sus constituyentes asociados. Trataremos el problema del llamado "doblado de clíticos" para observar las consecuencias semánticas que producen diferentes configuraciones sintácticas e investigar cómo las operaciones sintácticas están motivadas por la necesidad de generar efectos en la interfaz. Propondremos que los clíticos son unidades procediementales cuya function es licenciar la presencia de sus "asociados" y proveer a la interfaz semántica de instrucciones respcto de cómo manipular las entidades asociadas. Nuestra argumentación se basa en la sintaxis formal (Minimalismo Radical) y la semántica-pragmática (Teoría de la Relevancia) para configurar una

perspectiva en la que ningún fenómeno es estudiado en aislamiento sustantivo, sino tomando en cuenta la interacción entre diferentes componentes del sistema. Nuestro objetivo es proponer una aproximación a una teoría unificada de la sintaxis y la semántica de los clíticos, con un fuerte apoyo en datos del español para nuestras propuestas teóricas.

Palabras Clave: Minimalismo Radical; Teoría de la Relevancia; Doblado de Clíticos; Español; Marcado de Caso.

1. General considerations:

In this section we will introduce some of the theoretical machinery that will be used in the rest of the paper, as well as a discussion on the nature of clitics. A preliminary discussion of the generative procedure is in order, as it will provide the basis for our conception of "syntax". To analyze derivations, we depart from a unique generative operation, call it Merge, which we define as follows (Krivochen, 2011b):

1) Merge is a free unbounded operation that applies to two (smallest non-trivial number of elements) distinct objects sharing format, either ontological or structural.

Formally, Merge is made explicit by what we call *concatenation*:

2) *Concatenation* defines a *chain* of coordinates in *n*-dimensional generative workspaces W of the form $\{(x, y, z…n) \subset W_X … (x, y, z…n) \subset W_Y…(x, y, z…n) \subset W_n\}$

Without dismissing any possibility *a priori*, this scenario leaves us with three possible types of Merge:

1) Merge (α, β), α ≠ β –but α and β share format- *Distinct binary Merge* (Boeckx, 2010; Krivochen, 2011b)

2) Merge (α, β), α = β *Self Merge* (Adger, 2011)

3) Merge (α, β, γ…), α ≠ β ≠ γ *Unrestricted distinct Merge*

Elements Merge freely in the working area, all constraints being determined by interface conditions. So far, we have focused on LF interface conditions, which we take to be constraints on legible structures for explicature purposes, drawing the concept from Relevance Theory

(Wilson & Sperber, 2003 for an overview of the theory). We have outlined a theory of Merge and labeling with semantic basis (Krivochen, 2011b) but we have not paid much attention to the S-M side of the question. We will devote this paper to some problems in the syntax-morphology interface, which, in turn, will lead us to review and problematize some claims that have a long history within internalist studies of language.

We will focus on the phonological ordering of inner morphemes, which we have defined in previous works as the Spell-Out of functional nodes as affixes. Besides, a dimension in a functional head may not be Spelled Out as a "strong affix" (a word, strong enough to stand on its own and carry prominence, for example), and, instead, appear within the phonological limits of a word; or appear both as an independent word *and* an affix. Before getting fully into the topic, some assumptions we will draw upon during our inquiry:

3) Categories, phases and other units are not primitives of the syntactic theory, but arise as a result of the interaction of a free Merge system with interface conditions: the dynamics of the derivation and the biologically-determined legibility conditions of certain mental faculties or any other computational module. (see Krivochen, 2012b, De Belder, 2011, Boeckx, 2010).

4) There is no distinction between "lexical derivations" and "syntactic derivations", and this goes beyond positing a single generative mechanism: there are just derivations in NS. No pre-syntactic generative lexicon and no constraints on Merge. Our analysis of IM and "categorization" has shown that many distinctions that have been posited in the last years are actually epiphenomenic. (for the historical basis of this claim, see Halle & Marantz, 1993. See also Hale & Keyser, 1993 for the first attempts to distinguish between l- and s-syntax).

Once some basic assumptions have been outlined, let us focus on the elements we will analyze in this paper, namely, clitics. We will first define them and characterize them from our perspective, and then provide some explanations regarding case assignment and "selosismo" in Spanish.

2. What are clitics?

Clitics are usually dealt with in the literature as syntactically extraordinary elements. For example, Chomsky (1994), for example, classifies them as [+ mín], [+ máx] elements: heads that are at the same time maximal projections within his Bare Phrase Structure framework; Embick & Noyer (2001) also dub them special elements that do not configure a category on their own; and more recently, Anderson (2005) follows Zwicky's (1977) distinction between *simple* and *special clitics*, based on the syntactic principles that rule their distribution. This thesis has been called *Clitic Idiosincrasy*, and can be formulated as follows:

Clitic Idiosyncrasy Hypothesis:

Certain clitics are neither words nor affixes, but constitute a separate type of object whose behaviour is partly governed by dedicated (i.e. clitic-specific) grammatical mechanisms. (Bermúdez Otero & Payne, 2008: 3).

However, as we have pointed out above, within a free Merge scenario there is no place for such claims unless strongly supported empirically: their theoretical cost is too high. We will therefore maintain a strong uniformity thesis here, namely, *there are no syntactically extraordinary elements, all differences arise at the interfaces[1]*. In this case, the relevant interface is PF: all that clitics have of anomalous is their phonological form, but by no means their syntactic behavior or their semantics. Since Merge is characterized as a free, unbounded, blind operation, there is simply no way in which any characteristic of clitics could have any impact on the very simple generative algorithm outlined above. Semantically, we will draw on Relevance Theory (RT) and its *conceptual-procedural* distinction to make clitics' contribution explicit. We will distinguish these two kinds of elements, whose difference is given not by their format or inherent syntactic properties but by their interpretation potential at the semantic interface (from Krivochen & Miechowicz-Mathiasen, 2012):

Roots: **Roots** are **pre-categorial** linguistic instantiations of **a-categorial generic concepts**. Generic concepts are "severely underspecified", since they are used by many faculties, and therefore cannot have any property readable by only some of them; otherwise, the derivation would crash in whatever faculty we are considering (cf. Boeckx, 2010; Panagiotidis, 2010).

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[1] A similar view is held in Bermúdez Otero & Payne (2008), with different basis.

Roots convey generic **conceptual** instructions, and their potential extension is *maximal* (expressible by the superset that properly contains all referential sets), given their semantic underspecification: bare roots have no (spatio-temporal) anchor.

5) $\sqrt{} = S$, where $S = \{\alpha_1...\alpha_n\}$

Procedural elements: according to Escandell & Leonetti (2004), traditional **functional nodes** in generative syntax convey **procedural** instructions to the post-syntactic semantic parser as to how to manipulate a given semantic substance. The concept of "instruction" can be better refined as follows:

6)
- Restrict reference in terms of a proper subset of the root. Each element restricts the set in different ways, say:
    - $X = \{\alpha, \beta, \gamma\}$
    - $Y = \{\gamma, \lambda, \delta\}$
- Provide instructions as to:
    - Where to retrieve information
    - What kind of information to retrieve

Therefore, procedural elements convey *locative* meaning in the sense that they relate a *figure* (i.e., the root) to a *ground* (a set of intensional properties), and they are thus logical *predicators*.

We define a "clitic" as the Spell-Out of a *procedural* terminal node, a *weak* affix that needs a phonological host because it cannot bear stress and so cannot stand as an independent phonological word. Procedural nodes convey instructions to interpret conceptual content, typically, structures containing a *root*, of the type $\{X, \sqrt{}\}$, being X a terminal node. The characteristics of procedural elements are summarized below, following the bulleted characterization by Escandell & Leonetti (2011), which we will comment on:

1. *Instructions are operational: they specify a set of algorithms or logical operations, such as search, retrieval, matching, attribute-assigning and combination, among others.*
2. *Instructions operate over conceptual representations.*
   (from Escandell & Leonetti, 2011: 2)

This is possible because of Merge: interface conditions accept syntactic objects of the form {X, Y}, being X a procedural node and determining label recognition at the semantic interface. In older terms (GB model, specially LF theories like May's 1985 or Hornstein's 1995), we would say that instructions have *scope* over conceptual representations in LF. In any case, procedural elements are characterized as *predicates* that have scope over their logical *argument*, whose nature and number is determined by the nature of the predicate.

3. *Instructions can operate at two different levels: that of* **syntactic computation** *and that of* **interpretation***. Some instructions, such as those encoded in agreement features or structural case-marking, are combinatorial, i.e.,* **relevant to syntactic computation only***; they are erased after the instruction is completed and are not "visible" at the interpretive interface. Other instructions, in contrast, are interpretive; in addition to their role in syntactic structure building, they are crucial for the interpretive component. What is usually called procedural meaning in relevance-theoretic terms corresponds to interpretive instructions.* (Op. Cit.: 2)[2]

We disagree with this last claim: there are no instructions since the syntactic computation of Merge is free and unbounded, and completely blind to the characteristics of the elements it manipulates (except format). These instructions for the level of syntactic computation is what in orthodox generative terms it is called "formal features", which we have eliminated from the theory, (see Krivochen 2011b for discussion). The so-called "syntactic computation" is a dynamic workspace, result of the interaction of the pre-frontal cortex and determined areas of the brain (D'Espósito, 2007). Radical Minimalism is a form of the "non-existence hypothesis", that is, we do not think that there is a specific FL module, but "syntax", i.e., Merge, is present in all manipulation of discrete symbols, regardless the "module". Thus, there are no instructions but so-called *interpretative instructions*, which are relevant at the interface.

4. *Linguistic items can encode concepts and instructions. Conceptual representations are linked to encyclopaedic knowledge, but instructional meanings lack such connections. Instructions thus represent linguistic meaning in its purest form. In fact, it is this kind of purely grammatical meaning (instead of conceptual meaning in major word classes) that underlies most crosslinguistic and parametric variation.*

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[2] All highlightings are our own.

5. *(…) Among functional categories, **we can use procedural as a shorthand term to refer to those that encode interpretive instructions**. Thus, procedural items can be defined as a sub-class of functional categories whose instructions "survive" syntactic computation and thus enter the interpretive component.*
(Op. Cit.: 2-3)

There have been attempts within Radical Minimalism (like Krivochen, 2010) to wipe the concept of *Functional Category* out of the theory in dialogue with Relevance Theory, in part eliminating some of the categories because of Full Interpretation (like Agr projections) and in part subsuming these categories to a dynamic definition of *procedural* in relation to the availability of *root* terminal nodes (that is, conceptual information) in relation to the relevant elements. Therefore, we suggest that nothing is fixed beforehand: any interpretation is determined by combination and local relation between elements. Krivochen, (2011b) refers to this process as *Influence*:

7) α influences β *iff*:
- α is a procedural node and β is a conceptual node
- The local relation α-β generates a drastic effect on the output
- There is no γ, closer to β than α, that can have an effect on the output if influencing β

Contrarily to *Agree* or any of its variants (within the Feature Inheritance framework of Chomsky, 2005; Ouali, 2010), we do not work with features and relations are established only at the interface levels. If we defend a Free-Merge scenario, any mention of features would be a way of constraining such a scenario, since structure is driven to satisfy probe-goal requirements (as Boeckx, 2010 points out). In our framework, there are no other relations that those established at the interfaces.

6. *Not only words encode instructions (as discourse markers and personal pronouns do); sub-lexical and grammatical features also do: features, such as [definite], [perfective] or [focus], encode instructions that are linked to specific morphs or syntactic positions. Thus, an item could encode conceptual meaning and at the same time include some instructions, but these two kinds of meaning are not mixed together.*
7. *Instructional features can also be associated to lexical items encoding concepts in the course of syntactic derivation (for instance, when a constituent receives focal stress marking), but again both kinds of meanings (i.e., conceptual and instructional) are different.*

8. *The distinction between representation and computation, or between conceptual and procedural meaning, concerns encoded meaning and hence is a semantic distinction. The fact that procedural instructions guide interpretive processes carried out by means of inference does not make them a matter of pragmatics.* ***This is a crucial aspect of the distinction: procedural meaning is a class of encoded linguistic meaning that plays a decisive role in triggering pragmatic inference, but it is not itself a part of any sort of pragmatic rules or routines***.

(Op. Cit.: 3)

This last claim is also in conflict with Radical Minimalism, at least in part: we seek for a strongly derivational model, in which "representations", which undoubtedly exist (any *Transfer* operation applies to *representations*, more or less complex), are redefined in order to lose the connotations from the GB-era. Our use of "representation" is highly restricted.

We have also abandoned the concept "functional category" as a primitive in syntactic theory, and instead, we say that every node that is not associated with a *root* (that is, any node devoided of conceptual content in the technical sense specified above) is therefore *procedural*, and thus provides the semantic interface with instructions as to how to manipulate conceptual elements, embodied linguistically as *roots*. This view is not free from criticisms, but it will do for the time being. We consider the following nodes, conveying primitive semantic procedural meaning:

- Cause (the linguistic category *v*)
- Location (the linguistic category P)
- Time (the linguistic category T)

Under the light of the theory outlined so far, we provisionally conclude that clitics are procedural elements because the presence of a clitic can determine the interpretation of the relation between two conceptual elements, say, two {D, √} (i.e., DPs in Abney's 1987 terms) structures. Take the following example -from Radeva-Bork (2011)-:

8) Bulgarian: Tatkoto$_{DEF}$ go$_{ACC\text{-}clitic}$ celuna Maria

       Father$_{DEF}$ him$_{ACC}$ kissed Maria

       "Maria kissed the father"

In this case, it is the clitic that contributes to derive the interpretation "Maria kissed the father" or we could say, it disambiguates between the syntactic roles of arguments as suggested by the neutral word order SVO in Bulgarian (Radeva-Bork, p.c.), via procedural instructions, in spite of what word order might tell us, accepting that the external position of T is reserved for the *theme* of the clause, in informational terms (Krivochen, 2011a), and Merge in this position is licensed by the semantic interface to the syntactic object that is to be interpreted as a theme, in an architecture with *invasive interfaces*. The procedural value of the clitic is straightforward. Of course, this does not mean that the *interpretation itself* is straightforward. As discussed in Radeva-Bork (2012) there are other environments of Bulgarian CD, in which the interpretation of the sentence is not straightforward despite the presence of a doubling clitic. An instance of one such environment is a sentence with two arguments that have the same *phi*-features. And yet, the fact that an element is *procedural* does not mean that the sentence interpretation is ultimately unambiguous. What it means is simply that it provides *instructions* to the relevant system (C-I, in this case) to compute the relation between conceptual elements (or in *thematic* terms). And, if one interpretation is *more accessible* than the other, then, *ceteris paribus*, it's *more relevant* in the technical sense, which is what we aimed at from the beginning: a system that can handle flexibility and potentially more than one interpretation for a single string. A *subpersonal* and *biologically-based* relevance-theoretic approach to C-I, provides us with prospects for building such a system. This architecture will be fully explained below.

Another distinctive feature of clitics is that they *license the presence of XPs* (i.e., minimal fully-fledged domains), which we call their *associates*. This licensing takes place in a local domain, typically within a *phase*, as defined in previous works (Krivochen, 2010, 2011b). The relation between the clitic and the associate is made explicit in the phonological exponent of both, since there is *feature copying* at PF: there cannot be a mismatch between the clitic and the associate with respect to VI Spelling Out ϕ-features and Case, and if we consider that a VI is inserted in a terminal node that has certain features, our last claim follows naturally. This instance of redundancy is what we call (following Grohmann, 2003 et. seq.) a *drastic effect on the output*, i.e., in the interface. If there is a mismatch, the derivation crashes:

9) Sp: *A mí$_{[DAT, Sg]}$ les$_{[DAT, Pl]}$-gusta el Jazz

   To me$_{[DAT. Sg]}$ CL$_{[DAT, Pl]}$ like Jazz

"I like Jazz"

We claim that it is the clitic that licenses the XP in Spanish psych constructions and not the other way around with basis on the contrast between the constructions (10) and (11), where we find a DAT argument:

10) Sp: Me[DAT, Sg] gusta el Jazz

   CL[DAT, Sg] like1SgPres the Jazz

11) Sp: *A mí[DAT, Sg] gusta el Jazz

   To me[DAT, Sg] like1SgPres the Jazz

(10) presents us with a situation in which the clitic is realized but the PP, its *associate*, is not, and the result is a well-formed phrase. (11), on the other hand, presents a PP with no materialized clitic, an ill-formed structure. Can a procedural perspective on clitics explain this contrast? We believe it can. First, we have to determine which are the conceptual entities involved: in this case, we will follow Belleti & Rizzi's (1988) hypothesis that psych verbs are unaccusative, relating, in cognitive terms, a *figure* and a *ground*. Moreover, following Acedo-Matellán & Mateu (2010), Svenonius (2008) among many others, we will split the locative projection into π(Path) and P(Place), and generate the dative clitic in the π projection, leaving the propositional figure within the P projection, a *central coincidence* one. The relevant ground in psych Vs is a *mind*, a (null) entity coindexed with the clitic, being thus its associate. The same representation is valid for raising Vs, as we see in (12):

12)
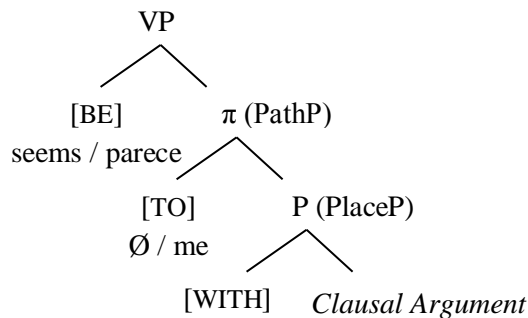
The use of these representations lead us to a more uniform theory, since psych-V and raising Vs are treated the same and there has been no need to posit a particular treatment for any of the structures, thus simplifying the scenario presented by the *Clitic Idiosyncrasy Thesis*. Now, we

will deal with the specific problem of case-marking in both clitics and their associates, with particular reference to how a doubled element, the PP, gets to be case-interpreted.

3. Case marking:

Following the framework outlined so far, we still have to explain the presence of Case marking on clitics, since it is a common assumption that so-called "heads" bear ϕ-features and T_S/T_O features to value [u-T] on DPs (Pesetsky & Torrego, 2007) and therefore case-mark them, but it is not so common to see that *heads* are themselves case-marked. In our theory, there is no such thing as case-marking (even though we will use the term as a shorthand), but *Case is an interface interpretation of a configurational relation*, as posited in Krivochen (2012a):

- Nominative: *read off* from a {Time, {D}} local relation (i.e., respecting *Minimality*), and *interpreted thematically* (in the explicature building process, see Wilson & Sperber, 2003) as Agent / Force

- Accusative: *read off* from a {Cause, {D}} local relation, and *interpreted thematically* as Theme, the object (Figure) located in / moving towards, etc. a Ground

- Dative: *read off* from a {P, {D}} local relation, and *interpreted thematically* as Location, the Ground in cognitive terms.

An essential claim is that the spheres are not «far apart», but in semantic interaction, and there are *points of contact*. There are elements, uses of the VI corresponding canonically to one «Case» that appear in unusual configurations: of these, we will say they are «intersective uses» of the Cases (small dark circles):

13)
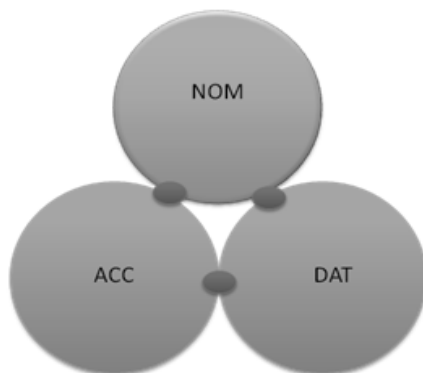
To summarize, our conception of Case is simply a morphological epiphenomenon, parasitic on the syntactic configurations that license so-called "theta-roles" under *collapse.*The general configuration for *Collapse*, to which we have referred above, is as follows:

14)

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        /\
       /  \
      /   /\
     α   /  \
        γ    β
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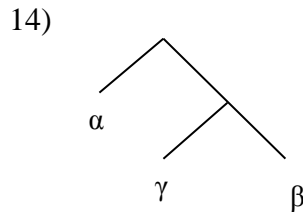
That is, being α a procedural node, specified enough as regards distribution, and γ an *n* number of non-intervenient nodes, the interface reads the relation between α and β as "local", since "distance" is not measured by number of branches (which are nothing more than a representation, no more real than atomic models) but by suitable procedural nodes. In the specific instance of case, α is either T, P or *v,* and β is a {D} construction, in turn a complex object since it minimally contains a *root* and a D, thus being interpreted as a referential expression.

Any other interpretation from the three spheres we have outlined (like Ablative, Locative, Instrumental, even Genitive) is actually inferential, part of the construction of the inferential propositions, and that needs the addition of extra assumptions –propositions that increase computational cost but with the benefit of extra positive cognitive effects-. We will see in the structural configurations, that the associate must appear in one of the aforementioned configurations, and by means of *feature copying* in PF, the case features appear in both elements (even though it is the associate that is under the scope of a procedural node), as a *drastic interface effect*.

4. What doubles what in Spanish "doubling constructions"?

In this section we will analyze the consequences of adopting the following hypothesis: *there is no such thing as "clitic doubling" (CD) as opposed to constructions without doubling, since the presence of the associate is licensed by the procedural node, be this Spelled Out or not*. This amounts to saying that *every language has clitics*, but what they may lack is the Vocabulary Item

to insert in the corresponding terminal node (what amounts to saying, in more traditional terms, that some languages have Ø / null / empty clitics). If there is no clitic, there is no associate, conversely, if we see the associate, we have to suppose a licensing element, which is a clitic in a wide sense. Let us take a look at the following Spanish constructions:

15) A Juan$_{Assoc}$ le$_{Cl}$ parece que María lo engaña

   To Juan CL$_{DAT}$ seems that María CL$_{ACC}$ cheats

   "It seems to John that Mary cheats him"

16) *A Juan$_{Assoc}$ parece que María lo engaña

   To Juan seems that María CL$_{ACC}$ cheats

17) Le parece que María lo engaña (if [A Juan] is recoverable from the context)

   CL$_{DAT}$ seems that María CL$_{ACC}$ cheats

   "It seems to him that Mary cheats him"

The rule behind this seems to be the following: *Spell-Out as few elements as needed for convergence, unless there is a powerful reason to Spell-Out elements that are not strictly necessary*. The last clause contemplates cases like (15), in which the PP is not necessary for grammaticality, as we see in (17), but generates a different interface effect, namely, a *contrastive interpretation*:

18) A Juan, no a Pedro, le parece que María lo engaña

   To Juan, not to Pedro, CL$_{DAT}$ seems that María CL$_{ACC}$ cheats

   "It seems to John, not to Peter, that Mary cheats him"

This possibility is ruled out if the PP is left covert:

19) *Le parece, no a Pedro, que María lo engaña.

   CL$_{DAT}$ seems, not to Pedro, that María CL$_{ACC}$ cheats

However, we can have contrastive constructions if the *verb* (particularly in so-called "raising" constructions, which, as demonstrated in Krivochen (2011a), are actually Modal heads, thus involving no Movement) is the element in question:

20) Le *parece*, *no está seguro* de que María lo engaña[3]

   CL_{DAT} seems, not-be sure, that María CL_{ACC} cheats

   "It seems to him, though he is not sure, that Mary cheats him"

Our "Lazy Spell-Out" principle (i.e., Spell Out as little as you can) accounts for optionality in doubling, since, if doubling is triggered by an interface requirement of contrast, for example (as in Spanish), Spell-Out takes place (interface requirements count as "powerful reasons") but, if there is no such requirement, then some elements can remain "covert", provided that there is no *drastic interface effect*.

4.1 *Structures:*

We will now explicit and analyze the structures and make some comments, from a Radically Minimalist point of view[4]. Let us begin with the DAT clitic, which, as we have said above, must be within a locative / prepositional structure to license the DAT sphere, following our definition:

21) $\{\pi\}$

   $Clitic_i$ $\{P\}$

   [P] $[THING]_i$ *Dative Sphere*
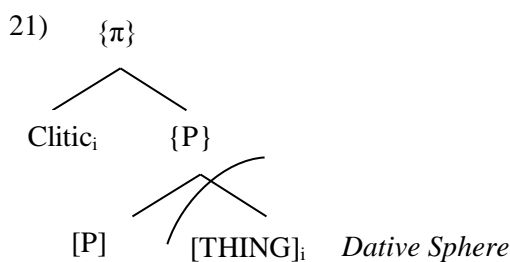
If the associate in the structure above is under the scope of a [P] procedural node, it will be interface-read as a Dative-sphere element, and by means of (phonological / p-) *feature copying*, the same case VI will be inserted in the licensing element, namely, the clitic. We have put the clitic on the Path (π) node for two main reasons: they typically display terminal coincidence

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[3] *Italics* are used to indicate phonological prominence.

[4] We include subindexes to relate the clitic and the associate for purely expositive reasons.

Vocabulary Items VI (as in Spanish raising constructions, see Krivochen, 2011a) and this leaves us the procedural value of Place (P) fully available to relate Figure and Ground within its own local domain.

Notice that we have put a primitive [THING] as the associate of the clitic, but that does not mean it will be *linguistically* instantiated as an object-denoting phrase (i.e., a DP). A proposition can be conceptualized as an entity, just as verbs are extending-into-time entities instead of nominal, sortal semantic substance (see Borer, 2005 and Panagiotidis, 2010 for details). Let us examine an example:

22) I like listening to Jazz

The corresponding logical representation could be something along the lines of (23)

23) $\exists(e) \mid e = $ listen (I, Jazz) $\wedge$ like (I, e)

The last part, after the conjunctive functor, is the same as if we have had (24):

24) I like [$_{DP}$ Jazz]

that is, a sortal entity linguistically realized by a DP.

Now, we will analyze the structure for an Accusative clitic, which deserves more development on the light of some interesting contrasts in Spanish:

25) Lo vi a Juan ayer
    CL$_{ACC}$ see$_{1SgPast}$ P John yesterday
26) Vi a Juan ayer
    See$_{1SgPast}$ P John yesterday
    "I saw John yesterday"

With animate objects, since the insertion of a P "a" is "obligatory" in Spanish (apparently, prescriptive grammars claim, to mark animacy. See RAE, 2010) there is no problem, but if we

replace a proper name or an animate entity for a common name, the situation changes in the following form[5]:

27) Vi el libro que te gustaba

   See$_{1SgPast}$ the book that CL$_{DAT}$ like$_{2SgPast}$

28) #Lo vi el libro que te gustaba (River Plate Spanish)

   CL$_{ACC}$ See$_{1SgPast}$ the book that CL$_{DAT}$ like$_{2SgPast}$

29) Lo vi al libro que te gustaba (River Plate Spanish, also acceptable in Andalucía Spanish)

   *CL$_{ACC}$ see$_{1SgPast}$ P+the book that CL$_{DAT}$ like$_{2SgPast}$*

   "I saw the book you liked"

The form "al" is the result of head movement (or, in our terms, *token-merge*) from P$_0$ "a" to D$_0$ "el". The question is, why, if there is no animacy feature going around, is there a P needed? Our answer is the following: the P is a dummy procedural element, which takes a {D} structure as complement (assuming traditional tree-like diagrams) and, as a whole, acts as the clitic's associate. Dummy though it is, the P is necessary, since it doubles the clitic and is therefore relevant to establish a dependency at C-I. Animacy and definiteness, which could be claimed to play a role in these kinds of constructions as variables, are dismissed since we are dealing with a non-animate element, which in Spanish do not take "a" prepositions for ACC and, moreover, that non-animate element is specified via a Restrictive Relative Clause, therefore being more easily recoverable from the context-cotext. We must now turn to the structure in order to have a better idea of the construal in which CD with ACC elements occurs:

---

[5] The following discussion applies to River Plate Spanish and the Argentinian variety of Spanish in general. Peninsular Spanish (with the possible exception of Andalucía Spanish, as pointed out to us by Victoria Camacho Taboada), however, tends to prefer (27) according to 20 native speakers consulted. In any case, our framework includes (27) as a subset of the cases, being thus able to cope with all possibilities.
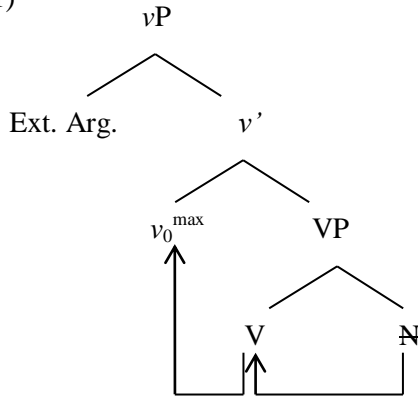
30)   {cause}

    Initiator   {cause}

        Clitic_i   {event}   *Accusative Sphere*

            √   {D}_i
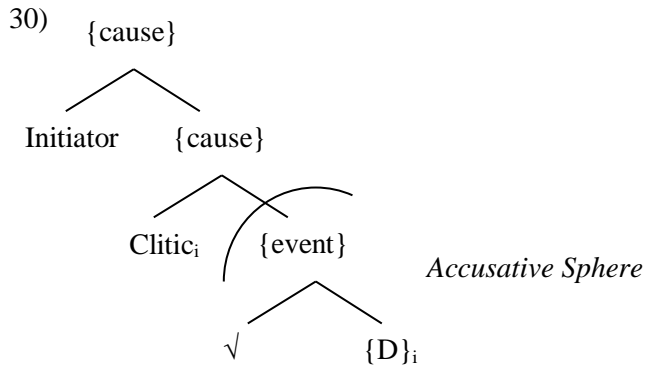
The local relation between [cause] and {D} generate the ACC case licensing sphere, and the procedure is the same as in the previous case[6]. The {event} domain is a "lexical" domain, the VP in traditional terms. Given the functional-procedural value of the clitic, we find it more appropriate to consider it a {cause} node, since: the associate manifests ACC morphological marks and the ACC reading is licensed by the presence of a {cause} primitive in the syntactic structure (as in Burzio's generalization, in our terms related to *affectedness*), coming from the pre-syntactic conceptual semantic structure, via *non-transparent* interface. If we consider (as indeed we do) that the clitic licenses the associate and not the other way around (see below), then our proposal does not lack plausibility. There is, however, one problem, and it is related to how the clitic itself gets case maked, since it manifests case morphologically, even though being outside the {cause} domain (i.e., in its periphery). We will resort to a mechanism devised, among others, by Hale & Keyser (1993, 2002) with respect to unergative Vs manifesting cognate objects. Unergative Vs, according to Hale & Keyser (1993) and Mateu (2000) result from N-to-V incorporation in the following manner (using traditional notation for Larsonian shells):

---

[6] Of course, the root is under the scope of [cause] as well, but as it does not bear a quantum $[Case_X]$ dimension, no case interpretation is generated, and the element is not an intervenient node for Minimality purposes. In more concrete terms, verbs do not inflect for case.

31)

```
                    vP
                   /  \
            Ext. Arg.   v'
                       /  \
                  v₀ᵐᵃˣ    VP
                    ↑      /  \
                          V    N̶
                          ↑↑
```

$$31)\quad \begin{array}{c} vP \\ \diagup\ \diagdown \\ \text{Ext. Arg.}\qquad v' \end{array}$$
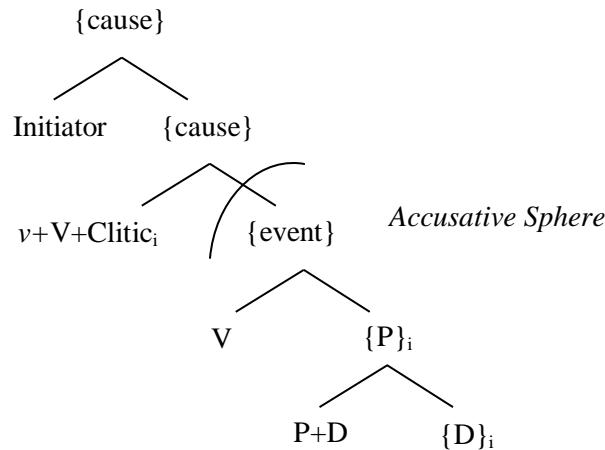
The phonological matrix of an Unergative V comes from the incorporation of a nominal element onto a light dynamic V, [DO] in Mateu's (2000) terms. This incorporation, it is crucial to point out, does not leave a trace behind, because the incorporated element is not an argument but, in our terms, a root. Thus, this place can be occupied via Generalized Transformation with a fully-fledged DP, providing further specification with respect to the incorporated root. For example:

32) John dreamt a beautiful dream

We will use this very same mechanics with ACC clitics and the relation to their associates. Just as [a beautiful dream] is a further specification of the incorporated underspecified root [dream]; in a case like (27) – (29) we will assume that [el libro que te gustaba] is a further specification of the generic element denoted by the clitic, which has no intensional restrictions. Therefore, the clitic is Merged within the {cause} domain, as a "sister" of {event} (assuming 2-D representations) and gets case-marked in that local relation. Once the clitic adjoins the v+V complex head, its place is filled by a DP, [el libro que te gustaba]. However, things are not quite well yet, since, as we have seen, (28) is rendered unacceptable by native speakers in River Plate Spanish. Therefore, we need to mark ACC in the associate as well. Here is where the dummy procedural P comes into play. The "a" P is the only way in which Spanish could Spell-Out case, and thus make the relation clitic-associate more explicit (consequently, easier to process). The "further specification", as we have called it, is not provided by a DP, but by a PP containing the relevant DP, and headed by the dummy P. The structure we propose is as follows:

33)

```
                    {cause}
                   /      \
            Initiator    {cause}
                         /    \
          v+V+Clitic_i  /  {event}    Accusative Sphere
                       /    /    \
                      V        {P}_i
                            /       \
                        P+D         {D}_i
```

The P is just there to Spell-Out ACC morphology; therefore, it is *not* a locative element capable of generating a DAT interpretation of its complement. There lies its "dummy" character. The D incorporates onto P, to give [a] + [el] = [al], and the nominal complement (with all due modifiers) remains in situ.

What happens in other varieties of Spanish (like Cataluña Spanish or Peruvian Spanish), in which (28) is perfectly acceptable? We could talk of syncretism, or simply that ACC features need not be Spelled Out in this case to establish the dependency at the interface level: they must, however, be interpreted at LF in order to generate a clitic-associate interpretation. If the amount of structure can be minimized without losing interface effects, it must be, and this is what happens: the P layer is omitted altogether, but the dependency can still be established.

4.1.1 Some interesting cases:

We have presented some interdialectal variation regarding the availability of P in accusative contexts. Now, we will present some cases in which, given the fact that Ps are procedural elements and thus lead the inference to different places depending on the instructions they carry, just like clitics, the inference is not straightforward and there is a further context-sensitive inferential process to build an inferential proposition. Let us consider ditransitive constructions like (34) and (35):

34) Le di [a Juan] [el libro que querías]

  CL_{DATi} give$_{1SgPast}$ [to John$_i$] [the book that want$_{2SgPast}$]

35) Le$_i$ di [el libro que querías] [a Juan]$_i$

Following Bleam (2003), we characterize (34-35) as Double Object Constructions, in which the CD situation generates the presupposition of goal-possession of the theme: John has the book as a result of the process. Word order is not relevant here, since [Juan] is DAT-marked by a P, and the interpretation is unambiguous. This is evident when we are presented with (36):

36) *Le di a Juan al libro que querías
    CL$_{DAT}$ give$_{1SgPast}$ [to John]$_{ACC}$ [to the book want$_{2SgPast}$]$_{DAT}$
    "I gave John to the book you wanted"

Since [al libro que querías] is not a viable possessor, then we have an ungrammatical example: the presupposition, though logically derivable, is not parseable.

Now, what happens when we have a ditransitive construction in which both, the theme and the goal are P-marked? Let us focus on (37):

37) Le entregué al jefe de la Mafia al jefe de Policía
    CL$_{DAT}$ deliver$_{1SgPast}$ [P+the boss of the Mafia] [P+the chief of Police]
    "I delivered the boss of the Mafia to the Chief of Police / I delivered the Chief of Police to the boss of the Mafia"

The problem here is clear: we have two animate entities, and since both require a P in Spanish, it is not clear which is the theme and which the goal. Both interpretations are available: I delivered the Chief of Police to the boss of the Mafia or the other way around. Both entities are capable of being themes and goals / possessors, and since they both have a P, it is not possible, in isolation, to determine which of these P is a dummy P and which is a real *terminal coincidence* locative P. The clitic can, in principle and *ceteris paribus*, be coindexed with either of the bracketed constituents: no procedural element leads the inference to one side or the other. But this does not result in ungrammaticality: contextual propositions used to build explicatures (see Wilson & Sperber, 2003 for details on this process) disambiguate the sentence and the context-sensitive logical derivation proceeds at C-I after *transfer*.

At this point, once we have introduced the notion of case-mark at the interface, we have to expand on why we do not base our computational system on Agree, as orthodox Minimalism

does (see Chomsky, 1998; Pesetsky & Torrego, 2004, 2007, among many others). The next section will introduce some theoretical machinery that is indispensable to fully understand our proposal.

5. A digression on Agree:

The basic claim underlying all Agree machinery, as we understand it, is "things establish relations to one another" (Zeijstra, p.c.). If that is the intuition, our system is completely compatible with it. Let us first summarize what is needed in an Agree-based syntax (Chomsky, 1999; Pesetsky & Torrego, 2000, 2004, 2007; Di Sciullo & Isac, 2008; Müller, 2011):

38)

a) Dimensions

b) Values

c) An unvalued instance of a dimension [D] that acts as a *probe*, searching for a valued counterpart

d) An operation to relate a valued and an unvalued instance of the same dimension

In Radical Minimalism there are no features as traditionally conceived, [± F] (see for example Uriagereka's comments to Chomsky, 1999) but only semantically interpretable dimensions that, *in abstracto*, comprise all possible outcomes. For example, [Case] comprises NOM, ACC and DAT (Krivochen, 2011b, 2012a). Following a well-known convention in physics, we will call such an indeterminacy state "ψ-state". In our system, a dimension in its ψ-state collapses to one of the possible outcomes in a local relation with a procedural node.

We have suggested that α makes the quantum dimension in β collapse if and only if γ is not an intervenient element for Minimality effects. Although we adhere to this definition, we would like to present a new approach to our quantum theory. Dimensions enter into mutual influence relations when their influence zones overlap. Think of this as throwing stones to calm water: circular waves generate, and sometimes those waves intercross. There we have a very interesting type of influence that *Agree* has neglected, because of its unidirectional character (see Zeijlstra, 2011 and Putnam et. al, 2011 for opposite views on the directionality of Agree). In our system, in

which trees are nothing more than a symbolic representation (and not a mental reality), elements have *areas of direct influence* in a local domain, and a wider *area of indirect influence* via a third element. That is, α can *directly* influence β if there is no γ structurally closer to β that can influence it, both α and γ being procedural and *specific* enough distributionally (so as to generate a non-ambiguous interpretation at the interface). However, the combination of α and γ can also influence β, in what we have called *cumulative influence*. For example, T and Asp can influence definiteness in {D}, but only T is relevant for case-category recognition purposes.

Influence α must not be taken as an operation, but as *the result of certain configurations* that arise in the *syntax-semantics interface*. This way, the sphere of influence of an element is not limited to its "domain" which, if defined upon c-command runs the risk of becoming a representational notion, with little place in a strongly derivational theory, even less so in a 3-D model (which takes syntactic representations to be tri-dimensional and not bi-dimensional like traditional trees), but extends upwards and downwards, its boundaries being determined by Optimal Relevance (Wilson & Sperber, 2003) rather than limiting themselves stipulatively to the first available goal. Of course, both may coincide, but the problem is theoretical justification rather than visible effects. *Influence* is not a constraint on Merge, since it is read in the semantic interface. Therefore, it is perfectly compatible with a free *Merge α* system like the one we have built. Collapse and category recognition, both *interface readings* (see Krivochen, 2011a), are read "top-down", but that does not mean that it is the only allowed relation in our system. In this respect, we are close to *bi-directional probing* (Putnam et. al. 2011), but we eliminate features from the picture, so there is *no probing*, and there are no probes or goals either. Impoverishing syntax and refining the semantic interface theory we aim at a simpler minimalism, both methodologically and substantively. If the scope of *Influence* is determined by Optimal Relevance, as we think it is, then we are talking about third factor principles and not specific syntactic constraints. This, we believe, is another highly desirable consequence of adopting our framework.

6. A "late notice" on Late Insertion

The reforms of the architecture of grammar outlined here (like *invasive interfaces*, adapting an idea of Boeckx's 2007) allow to account for a phenomenon that has been observed from the perspectives of lexical decomposition: apparently, the grouping of features in terminal nodes

("morphemes", Distributed Morphology terms) is of somehow constrained by the availability of Vocabulary Items to spell these nodes out, a proposal shared with Nanosyntax (Starke, 2009, 2011). For example, the lack of incorporation of [Manner] onto Motion in English (so-called "Path of Motion constructions", like *John marched into the tent*), or Direction onto Movement in Spanish (with verbs like [entrar] *in-go*, [salir] *out-go*, etc.), thus giving a linguistic typology like "verb-framed" vs. "satellite-framed" languages; would be determined by the lack of vocabulary items to materialize all (or a proper subset, such is the notion of *underspecification* in DM) of the dimensions present in the relevant terminal node. Such a constraint, we have called "Morpheme Formation Constraint" (MFC), and we have formulated it as follows:

39) *Dimensions cannot be grouped in a terminal node (i.e., a morpheme) if there is no*

     Vocabulary Item specified enough to materialize that node.

The fact that the items of vocabulary that are inserted late in the derivation, after syntactic operations within local cycles (so-called "Late Insertion"), conditioning the formation of clusters of features would be a violation of the strictly local Chomskyan computational system, as it would represent a clear *look ahead*. In our model, this is perfectly legal. We believe that, if a language allows the realization of a particular trait, the trait should materialize, either originally composed the node or the nearest node that has a corresponding element in the B List (i.e., the set of morpho-phonological matrices available in L) specified enough to be inserted in that terminal node and materialize its dimensions. If the syntactic component is to transfer information to the phonological component, and if we also consider the above condition (which could well be considered a *bare output condition* in Chomskyan terms, even though, in an *invasive interfaces* framework, it would be better to speak about *bare input conditions*), then it is only natural that the interface's *input conditions* constrain the computations in the generative workspace (a consequence also to be found in Stroik & Putnam's in press *Survive Minimalism*). This condition is more generally expressed in our Dynamic Full Interpretation principle (Krivochen, 2011):

40) *Any derivational step is justified only insofar as it increases the information and/or it*

     generates an interpretable object.

This is, in Radical Minimalism, the interface condition *par excellance*, and the condition that drives the application of operations within a workspace Wx. We assume that dimensions can be manipulated either in clusters or dispersed (*scattered*) (Giorgi and Pianesi, 1996), depending on the possibilities of materialization and global considerations of economy: a certain set of features can be projected as a single node or appear distributed in different projections, depending on the requirements of the interface systems. The number of projections is defined "(...) *According to economy considerations, that is, the shortest derivation compatible with the initial array is selected.*" (Giorgi and Pianesi, 1996: 141-142). In other words, if a language L allows a set S of dimensions $\{d_1, d_2, d_3…d_n\}$ to be realized either synthetically or analytically (concomitant semantic effects aside, since we are looking at the problem from the generation-phonological interpretation interface), the synthetic version will be preferred as default, *ceteris paribus* as there is no movement / feature percolation operation involved Crucially, features can also be realized (i.e., materialized) in different nodes than those in which they have generated, if Spell-Out possibilities require so. We also assume, crucially, that if a language L has vocabulary items to Spell-Out a dimension D, this dimension *must* be spelled out as tihs gives the hearer more clues to arrive to the intended interpretation. Thus, not only can we account for the typological verb-framed / satellite-framed difference but also other phenomena, more specific to certain languages, such as Spanish "selosismo" in examples like (41):

41) a. Les$_j$ envié el paquete$_i$ a mis parientes$_j$.

   $CL_{DAT[Plural]}$ send$_{1SgPast}$ *the parcel to my relatives*

"I sent the package to my relatives"

b. Se$_j$ los$_i$ envié.

   $CL_{DAT[u-\#]}$ $CL_{ACC[Plural]}$ send$_{1SgPast}$

"I sent it to them"

In this case, the clitic [se] is not reflexive, as it is most of the times, but it is an allomorph of [le] to avoid cacophony (*le los envié). Because [se] is unable to materialize number inflection (which we have expressed through the [u-#] notation, not "unvalued" but "unspecified" since it is morphologically both singular and plural), and there is a [plural] feature in the terminal node, this feature looks for the closest host (within a Minimal Configuration, in Rizzi's 2004 terms,

within the same local domain in ours, but always respecting Minimality) in which this feature is plausible to be materialized. This process, we will refer to as *feature migration*, and, arguably, is a PF condition. The clitic [lo] is an element in which [number] can be materialized and, moreover, is within local boundaries: the [plural] feature that cannot be spelled out in [se] *migrates* to another host, in which it receives phonological interpretation, even though semantically. These phenomena come into our framework naturally without additional stipulations.

7. Conclusion

In this paper we have analyzed some phenomena concerning clitics in general (their definition, their place in a derivation) with particular attention paid to their behavior in Spanish, while attending intralinguistic variation. Within the limits of a paper, we have tried to provide an interface approach to these phenomena, including not only considerations about syntax but also semantics, as it has been proven very useful for the definition of clitics as procedural elements and thus the syntactic distribution of these units. Naturally, there are many questions that have been left unaddressed, but we believe the framework outlined here has the potential to tackle those issues in a satisfactory manner. This task, we leave to the interested reader.

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