Complete and Partial Infl

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ABSTRACT

This paper argues that 'null' Case appears in person-less elements, including (some) clauses in addition to PRO, while 'full' Case shows up in regular nominals. Several data are adduced in this regard, the pertinent distribution being decided when constructing cyclic lexical arrays through an economy metric: Full Case/person features are required only on elements that are not tokenized by the cyclic dynamics themselves. Null Case is a formal consequence of involving the Infl system, under the assumption that full inflection corresponds to fully-fledged person distinctions. Embedded Extended Projection effects arise in terms of the checking of null Case. This makes a prediction if null Case assignment is subject to variation: the reach of A-movement may vary across languages.

1. *Introduction*

In this note I would like to address a perplexing situation. Chomsky and Lasnik (1993) introduce the notion of a 'null' Case, to be assigned to PRO. As Hornstein (1999) points out, it is *ad-hoc* to have a Case whose sole purpose is to be used this way. Thus either null Case should not exist at all, or it must also be assigned to elements other than PRO. Hornstein himself has explored the first possibility, I would like to examine the alternative. The paper starts by posing a puzzle for the Visibility Hypothesis (section 2), and with an interesting piece of data from San Martin and Uriagereka (2003), the analysis of which argues for extending the conditions, under certain assumptions, of null Case relevance beyond its originally intended sense. Section 3 then presents an intriguing degree of variation with regards to successive-cyclic A-movement, which is affected by the generalization of null Case to various inflectional contexts. The next two sections study the precise conditions under which null Case could be assigned, by hypothesis locally (in context-free terms); section 4 is devoted to complements and section 5 to specifiers, where freezing conditions relating to null Case valuation are also discussed. Section 6 analyzes how cyclicity may affect freezing, while section 7 studies situations under which freezing is bypassed, and how those can, in turn, be reinforced again in specific, morphologically active domains. Section 8 investigates some syntactic consequences of the proposal. The last two sections involve conclusions; in section 9 the main syntactic picture is addressed, while section 10 sketches a semantic consequence.

2. *Null Case*

We standardly assume (a) that arguments require Case (the Visibility hypothesis) and (b) that *him* in (1) involves the accusative Case associated to the *v-believe* complex.

(1) I believe [him to be smart]

Since [him to be smart] is the direct argument of *believe*, this creates a contradiction. The problem goes away, however, if *in addition* to accusative Case the complex *v-believe* somehow also assigns null case, and clauses can take this Case to satisfy visibility demands. If so, null Case goes with person-less elements: PRO, (some?) clauses, and perhaps other instances that pose recalcitrant issues concerning Case (e.g. associates of expletives that do not agree with T, which I return to). In turn, full Case is a function of regular nominals.

Confirmation for this hypothesis comes from the facts discussed in San Martin and Uriagereka (2002), where it is shown that obligatorily controlled PRO in Basque effectively renders a transitive verb selecting the controlled clause into an unaccusative:

(2) a. Ni [PRO pisua galtzen] saiatu naiz.
I.ABS weight-ABS lose-nominalizer-LOC try-part I.be
'I have tried to lose weight.'

b. Nik hori saiatu dut
I.ERG that-ABS try-part I.have.III
'I have tried that.'

The situation in (2b) is the normal one: the transitive *saiatu* 'try' goes together with transitive auxiliary *dut*, coding agreement with the ergative subject *nik* 'I' and the absolutive object *hori* 'that'. But this Case/agreement array is altered when the direct object is the clause: this time around the auxiliary accompanying *saiatu* 'try' is the unaccusative *naiz*, signaling agreement with the now absolutive subject *ni* 'I'. In other words, it seems as if the clause is taken as invisible for the regular Case/agreement system when it involves an obligatorily controlled PRO subject. One way to interpret this fact is that the infinitival clause is, in some sense, 'defective', and it only gets null Case. Basque being an ergabsolutive language, this leaves the absolutive Case free to go to the first element that needs it, which is the subject in (2a). In (2b), in contrast, the direct object is *hori* 'that', which need not be defective. That being the case, it involves the absolutive Case, then ergative Case is the one left for the subject in (2b).

That approach presupposes two notions that are quite important for my logic here:

(3) *The minimal array condition* (MAC)
Given a collection of substantive items, select into the array only those Case/person specifications that are necessary for convergence.

(4) *The Person Generalization*
Full (vs. weak) generalized Infl ←→ Person (vs. only number) features in inflections.

The general idea is that lexical arrays are built according to some economy metric, such that unspecified Case/person features are added *only if necessary* for convergence. Full (as opposed to null) Case/person features are required only on elements, such as definite noun-phrases, that are not tokenized by the cyclic dynamic itself. With Drury (2005), I take the *one-category-token-per-cycle* (often tacit) assumption to follow from the fact that 'numerations' are sets, and sets do not tolerate several instances of the *exact* same type; differently put, the cycle-as-set requires one category token per category type per derivational cycle. Case/person morphology, in turn, serves to separate DP category tokens, as suggested in Uriagereka (1997). Null Case, then, is to be seen as the formal requirement on a category that need not be tokenized. Still, the category involves the Case system, although according to (4). Full representation in inflections corresponds to fully fledged person feature distinctions. This is not a necessary condition, but in a sense to be made precise, it is an instance of what I refer to as the Transparency Thesis in section 10. I hasten to add that if this view of things is assumed, the distribution of PRO cannot directly *follow* from the assignment of null Case, since this type of Case will be considerably pervasive.

3. *Variation in Successive Cyclic A-movement*

Having defective Infl assign null Case affects the Extended Projection Principle (EPP) in embedded contexts (where Lasnik (2001) has argued it holds, problematically as it doesn't involve any obvious feature checking): it could arise via null Case checking. Of course then the issue arises of whether *successive-cyclic* displacement across tenseless domains should be possible, assuming that null Case checking, as does Case checking more broadly, in general renders the DP where it occurs inactive for further computation (see Chomsky (2000)). As it turns out, this matter is delicate, exhibiting lots of linguistic variation which I now turn to.

Consider, first, the Galician-Portuguese contrasts in (5):

(5) a. O Luis veu [os xogadores sair(en)]
the Luis saw the players leave(agr)
'Luis saw the players leave.'

b. Os xogadores foron vistos [t sair(*en)]
the players were seen-agr leave(agr)
'The players were seen to leave.'

While agreement is possible in the infinitival complement of a perception verb (5a), a passivized version, as in (5b), eliminates the possibility. It is tempting to analyze this as simply involving the nominative associated to the infinitive inflection, entailing a freezing effect on the nominal thus Case-checked. However observe what happens when the agreement is clearly not associated to nominative Case, as in the participial form highlighted in (6a). In Galician and many Romance languages,[1] A-movement over the participial is impossible, vis-à-vis a comparable A-movement across no such participial (6b); standard Case checking is not involved here:

(6) a. ?*A Xoana foi feita [t ser capitán do equipo]
the Xoana was made-agr be captain of-the team
'Xoana was made to be the captain of the team.'

b. A Xoana parece [t ser capitán do equipo]
A Xoana seems be captain of-the team
'Xoana seems to be the captain of the team.'

c. A Xoana foi feita [t capitán do equipo]
the Xoana was made-agr captain of-the team
'Xoana was made captain of the team.'

Note that the issue cannot be simply 'moving over' an agreeing participial either, since this is precisely what is taking place in (6c), involving an embedded small-clause.

Moreover, instances exist across various languages of long-distance, presumably successive-cyclic, A-movement (7) and even hyper-raising, as in Rivero and Geber's (8):

(7) Jack is likely [t to seem [to be the leader of this group]], but he isn't.

(8) Noi părem [să [t incepem [să [t lucrăm bine]]
we seem-agr Comp begin-agr comp work-agr well
'We seem to begin to work well.' (Lit.: 'We seem that begin that work well.')

The question then is why sentences like (7) are impossible in some languages, while those like the Rumanian (8) are impossible in many; or in other words, what features of relevant languages make these instances of successive cyclic A-movement viable.

At first sight the situation seems hopeless, for in (8) we have agreement allowing movement across, whereas in (5b) or (6a) agreement seems to prevent a comparable movement – in languages within the same family. Then again, these very facts suggest two things. First, that the EPP holds, in some form, even in embedded domains, or else it is unclear what is possible in, say, (7), but not in comparable circumstances elsewhere. Second, this principle must be adequately parameterized. In that second respect, a line of reasoning in terms of null Case seems promising, if nothing else because *a priori* this sort of formal requirement may or may not be operative in the relevant domains. Importantly, by its nature null Case ought to be a local phenomenon. Transformations involve context-sensitivity, thus a characteristic discontinuity posing grammatical and processing complexity. In standard instances this is solved via the grammar signalling the process dually: by uninterpretable morphological markings at the Probe and interpretable matches at the Goal. There are much debated exceptions when characteristic interpretive consequences ensue, for instance in Quantifier Raising. But null Case shows neither morphological marking nor specific interpretive consequences; thus it ought to be resolved in context-free terms.[2] If so we can ask what kinds of manifestations the grammar allows for this sort of process, hopefully leading to the observed variations.

First, locality in checking limits relevant instances to those involving displacement to a specifier or association to a complement, preventing long-distance Agree manifestations; this is contrary to what obtains for regular Case checking. Second, the appropriate checking may be affected in two circumstances: (a) there could be something special in the checking head or (b) the checked element could be peculiar. This isn't trivial: we are dealing with something abstract, *null* in the receiving end. Overt syntax is readily acquirable and parsable, whereas tacit processes depend on underlying grammatical conditions and how they interact with independent elements.

4. *Conditions on null Case Realization: Complement Clauses.*

We must determine which inflectional heads check null Case, and moreover how they relate to overt agreement. A natural possibility would be the thesis in (9), the intuition behind which is simple: morphologically manifested Cases (either in terms of case-morphology or visibility on pronounced nominals) are easy for a learner to detect, hence they can in principle relate to null inflectional elements like *v* (in familiar languages) and the like; null Case is in contrast undetectable unless signaled by the element that determines it, since it lacks morphology and may appear on silent elements:

(9) *Null Case Visibility* (NCV) (First Version)
Null Case is determined by a context-free dependence with an overt head.

Given the NCV thesis in (9), we expect elements like the inflectional *to* or lexical heads to, in principle, be able to determine null Case. Infinitival heads involve their specifier (for instance PRO), whereas lexical heads like verbs involve their complement (for instance complement clauses in need of null Case). Let's consider the latter first in some detail, starting with the puzzling example in (1), repeated now with more accuracy:

accusative

(10) I *v* believe [him to be smart]

null

Here the *v* element standardly associated to the main verb assigns accusative Case to the subject of the embedded clause, via long-distance Agree, whereas the verb itself (arguably) locally assigns null Case to the complement clause. In the present perspective the embedded *to* also determines null Case, associated to *him* in this instance. I return below to how this may be possible, and indeed how it affects successive cyclicity.

Right away we must then worry about what happens in (11a). Based on the paratactic dependency in (11c), I propose an analysis as in (11b), adapting a proposal in Torrego and Uriagereka (2002) developed in Hinzen (2006):

(11) a. I believe [that the earth is flat]

Accusative

b. I *v* believe [pro^{i} ATTITUDE] [that the earth is flat]^{i}

null

c. I believe it^{i} possible [that the earth is flat]^{i}

Embedded propositions, whose veridicality the subject of the main clause has an attitude towards, involve a small clausal structure that is overt in instances like (11c). If so, the small clause complement of the epistemic/declarative verb (and thus the attitudinal predicate) can receive null Case, whereas the dependent clause itself is paratactically associated to a (null) pronominal that receives accusative Case.

That paratactic analysis cannot extend to hypotactic selection. The question for volitional/desiderative predicates is whether the *v* they involve can determine Accusative Case. Recall the Basque examples in (2), keeping in mind that subject and object agreement is typically overt in the language. In hypotactic instances where PRO is involved, the embedded clause doesn't participate in the standard Case/agreement system (auxiliary selection is for the unaccusative *izan* 'be', instead of the transitive form). The structure in (12) corresponds to (2a), abstracting away from word order and irrelevant details, and using English words for clarity:

(12) I-ABSOLUTIVE am tried [PRO to lose weight-ABSOLUTIVE] -NULL

A radical way of interpreting this is that in these instances there is no *v* element. That however, is unlikely if *v* is responsible for the agent theta-role associated to *saiatu* 'try'; at the same time, it is a fact that (12) contrasts with the Basque equivalent of (13), corresponding to (2b):

(13) I-ERGATIVE have tried that-ABSOLUTIVE

Assuming theta roles haven't changed, *v* in (13) must be activating the regular Case system, whereas in (12) it does not, and thus the sentence merely involves the null Case possibility associated to the verb itself via NCV. The MAC in (3) ensures that: only when necessary for convergence do we activate the regular Case features. If *that* in (13) need not involve Null Case (a matter I return to in section 8), then the regular Case system in *v* kicks in for (13); by the same logic nothing requires the activation in (12), as the clause can make-do with null Case.

Consider next the Basque subjunctive complement clause in (14). This example presents no PRO in the embedded clause, just plain hypotaxis. Here too, as in (2a) analyzed along the lines in (12), the matrix verb is surprisingly unaccusative (recall (2b)), indicating that its *v* does not activate the regular Case system, sticking to the null Case associated to the verb:

(14)	Jon	[Mirenek	pisua	gal	zezan]	saiatu	zen
	Jon-ABS	Miren-ERG	weight-ABS	lose	have-subj-LOC	try-part	III.be

'Jon tried that Mary lose weight'

This entails that true complement clauses can (perhaps must?) involve null Case, vis-à-vis paratactic 'complements' along the lines of (11) involving indicative dependence, which of course select an expected and transitive auxiliary in Basque:

(15) Jonek [Miren polita dela] pentsatzen du
Jon-ERG Miren-ABS pretty is-Comp think-part III.have.III
'Jon thinks that Mary is pretty.'

We can thus generalize the state of affairs just seen to (16):

(16) True (hypotactic) complement clauses receive null Case from their selecting verb.

If (16) holds, it is only in (paratactic) instances involving attitudinal small clauses that the regular Case/agreement system is activated for clauses.

How do we know that in a sentence like (14) there is specifically *null* Case on the complement clause, as opposed to *no* Case whatsoever? First, a tentative morphological point: these clauses are overtly marked with a mysterious locative, which could perhaps be interpreted as an actual 'default' realization of null Case. Second, we know null Case is involved if we make an auxiliary assumption: that argument taking correlates with Case-marking (the Visibility Hypothesis). If, instead, we took complement clauses to *resist* Case marking, as per Stowell 1981, then certainly the arguments just provided would be consistent with absence of Case in these contexts, as opposed to presence of null Case.

Interestingly, as Plann (1984) argues, the Case Resistance hypothesis is questioned by the fact that clausal dependents of nominals systematically get marked with prepositions in a language like Spanish, yielding instances as in (17):

(17) a. La idea de [que la tierra es plana] es muy sensata.
the idea of that the earth is flat is very sound.
'The idea that the earth is flat is very sound.'

b. Mi intento de [que nos llevemos bien] ha fracasado.
my attempt of that ourselves get.SUBJ well has failed
'My attempt for us to get along has failed.'

Stowell claims that nominal dependents are not complements; they are instead predicates, as suggested by the fact that one can paraphrase the nominal in (17a), in terms of the equative (18a). It is not clear, however, how that would make the clausal dependents less case-marked (presence of preposition *de* 'of' is a fact, regardless of the interpretation the clause gets), but moreover, that observation is restricted to epistemic/declarative nominal dependents:

(18) a. La idea es que la tierra es plana.
the idea is that the earth is flat
'The idea is that the earth is flat.'

b. ?* Mi intento es que nos llevemos bien
my attempt of that ourselves get.SUB well
('My attempt is for us to get along.')

The problem is then the true, arguably hypotactic clause in (17b) (note its subjunctive mood), which seems like a nominal argument –an overtly Case-marked one at that.

Rejecting the Case Resistance hypothesis on factual bases, we must accept that clauses may be assigned Case. If so the analysis of the Basque examples above provides an arguments for the presence of some abstract form of Case to assign to the clause; otherwise we have an argument against the Visibility Hypothesis as a whole. The latter option creates a perplexing and unsatisfactory scenario, though: clauses can, but need not receive any Case at all.

One final thought is in order: if a verb can assign null Case to a complement clause, what happens when it has merely a direct object nominal, which presumably checks its accusative Case via *v*? The most straightforward answer is that in those circumstances too verbs can directly assign null Case. In many instances, as will become apparent later on, this sort of Case won't suffice, since the nominal in question will carry person specifications that have to involve the full Case system. However, there may well be instances where null Case is relevant and useful, as in what Belletti (1988) and Lasnik (1999) call 'partitive' Case, which is suspiciously like null Case as I am exploring it here in that it is assigned locally (at least in Belletti's terms) and it corresponds to indefinite (i.e. personless) nominals. I won't dwell on this matter now, but simply want to emphasize that in particular Lasnik's results on the associates of pleonastics can be assumed directly if this conjecture about partitive Case being null Case is correct. Moreover, that may also be the way of treating 'personal markers' in direct objects in such languages as Spanish or Turkish (see Torrego (1999) on this). Somewhat in the spirit of De Hoop (1992), we could take *v* to assign 'personal' accusative Case (with ensuing definiteness/animacy effects), while letting V assign 'impersonal' null Case to indefinite arguments. This has serious consequences. For example, we will have personal nominals which bear both null and accusative Case; I return momentarily to freezing conditions on Case checking (generally we don't want a nominal to be prevented from checking full Case just because it is in a structural position to check null Case). Another consequence ensues, as discussed in section 8, for the accusative associated to *v* in situations where an impersonal nominal must content itself with checking null case via V.

5. *Conditions on Null Case Realization: Inflectional Sepecifiers.*

Whereas the examples above make a reasonable case for null Case, they also weaken the argument in San Martin and Uriagereka (2002) that *specifically PRO* is involved in its presence.[3] What remains to be seen is whether we can construct a case for null Case in more standard domains, in particular T specifiers, the context that null Case was intended for and where it would have consequences both for the embedded EPP and the variation we find with regards to successive cyclic A-movement. If the NCV thesis holds, we are limited by local conditions on morphological realization of null-Case-determining heads to witness the effects of this abstract process. This should have something to do with overt agreement interfering with A-movement.

An agreeing participial head associated to an Inflectional projection (typically *v*) does not tolerate A-movement across in many languages. Observe the Galician instances in (19). In this minimal pair, (19a) exhibits a small clause complement to the verb *ter* 'have' in an aspectual use; in contrast in (19b) we present *ter* in a more 'auxiliary' use, involving raising of the subject:

(19) a. Paco ten [unha filla fuxida] (* without agreement)
Paco has a daughter run-away-PART-AGR
'Paco has a daughter missing.'

b. A filla de Paco [t ten fuxido] (* with agreement)
the daughter of Paco has run-away-part
'Paco's daughter has run-away.'

Agreement between the subject and the participial is unsurprisingly obligatory in (19a), but it becomes impossible in (19b), when the subject raises. Though as we saw this is not a universal (recall the Rumanian example in (8) and see also fn. 1), it is a common state of affairs across languages. It would follow naturally if the *v* element morphologically associated to *ter* 'have' involves null-Case checking, and this process freezes the raising as in (19a).

Before we go any further with this idea, note that, given the NCV in (9), we must ensure that wherever we want null Case assigned via *v* (not V as in (10) and (11)), *v* counts as an 'overt head'. The easiest way to do this, in languages where *v* is not pronounced, is via morphological fusion of the overt V to *v*. This raises an issue, though. Presumably in (10) and (11) V also fuses to *v*, but in those instances we want V to assign null Case, and *v* accusative Case. For reasons I return to in section 8 suppose that:

(20) *v* assigns *null* Case if (a) and (b):

(a) *v* has no accusative Case to assign.

(b) V-fused-to-*v* has not assigned its null-Case.

(a) is plausible for a passive/raising structure, but consider now (21) vis-à-vis (20b):

(21) [$_{TP}$We T [$_{vP}$ t *v*-seem [$_{TP}$ t to have [$_{vP}$ t *v*-stolen the money]]]]

The lower *v* associated to *stolen* assigns accusative Case to *the money*. In turn *we* receives null Case from *to* in the TP specifier and, we hope, from the complex *v-seem* in the higher *v*P specifier. But then what assigns Case to the lower TP argument, which is structurally identical to the one we saw in (10)? In the latter instance, the TP received null Case from the matrix verb, but for (20b) to hold in this instance, *seem* cannot be assigning null Case. At the same time, there is an important difference between (21) and (10): in the latter the subject *him* intervenes between the matrix verb and the head of its TP argument; in contrast in (21) the subject *we* is displaced, and thus in principle we could imagine an incorporation taking place, along the lines proposed in Raposo and Uriagereka (1990), following Baker (1988), for instances like this. We made our point for Romance, e.g. Spanish, arguing that clitic climbing (22) suggests mono-clausality:

(22) Juan$_j$ ya lo$_i$ parece haber [t$_j$ digerido t$_i$]]
Juan already it seems have digested
'Juan already seems to have digested it.'

The tacit assumption is that in conditions of head incorporation of argument X to predicate Y, X ceases to be an argument proper of Y, and it instead becomes a predicate modifier, which thus does not require Case visibility. Of course, head incorporation has its own requirements, as Baker showed, among them what we would take today as morphological adjacency of a characteristic sort (see Bobaljik (1995) on this). This adjacency between the verb and its complement clauses is broken in (10) or (11).

Let's return now to the freezing effects associated to participials. Together with those, and even in languages where they exist systematically, we must allow for null-Case checking *per se* not to freeze a nominal involved in this process, given Galician data as in (23b), where null Case, but not a corresponding participial is present:

(23) a. El poida que pareza que nosoutros mesmos temos roubado os cartiños.
it may that seem.subj that we ourselves have.agr stolen the money
'It is likely that it may seem that we ourselves have stolen the money.'

b. [Nosoutros mesmos podemos [t parecer [t ter [t roubado os cartiños]]]]
we ourselves may.agr seem have stolen the money
'We are likely to seem to have stolen the money.'

c. [Os cartiños poden [t parecer [t ter [t sido roubados t]]]]
the money may.agr seem have been stolen.agr
'The money is likely to seem to have been stolen.'

(23a) shows a tri-clausal situation involving an overt pleonastic, thus raising predicates; in (23b) we do the relevant raising of the embedded subject *nosoutros mesmos* 'we ourselves'. The first step in the raising is of the form in (19b), while the next two steps are standard embedded EPP instances. In (23c) we passivize the embedded predicate, which now allows the logical direct object *os cartiños* 'the money' to raise all the way up. This example is interesting because it shows obligatory agreement in the lowest, passive, predicate *roubados* 'stolen'; in contrast the next element that could in principle agree, the participial *sido* 'been', in fact cannot agree here with the raising subject. So (23c) summarizes our problems: we must distinguish agreeing passive from participial morphemes in terms of freezing a subject displaced to their domain, and in turn we must allow further displacements where agreement is not involved. In my opinion there is null Case checking in *all* these instances; however, obviously only some of them entail displacement freezing, hopefully those involving *overt concord*.

The NCV thesis in (9) above would successfully distinguish passives from participials if, unlike the latter, the former involve long-distance Agree, instead of the more local Concord required for null Case checking. There are three indications that this conclusion is tenable. Consider first the fact that the word order in (24b) is impossible with passive predicates, and instead (24a) or (24c) are required. The impossibility of (24b) would be curious if the relation between the subject and the participial *ferida* 'wounded' required local concord, as this is the prototypical configuration where this kind of dependency can be established. (24c) is standard movement to subject position, and in (24a) we see the subject in situ, agreeing with both the matrix T and the lower passive form. This should be an instance of long-distance Agreement, with the Probe in T and the goal in the in-situ nominal; of course, we also see agreement in the participial, but this is arguably best treated in terms of 'multiple checking' from ultimately a single T probe. If this is correct, it will affect raising to subject as in (24c) via the specifier of the passive *ferida*. Recall that this is the contentious situation where we see morphological agreement but no freezing effect upon hypothetical null-Case checking:

(24) a. (El) foi [ferida [a filla de Paco]]
it was.agr wounded.agr the daughter of Paco
'Paco's daughter was wounded.'

b. ?* [(El) foi [[a filla de Paco] [ferida t]]]
it was.agr the daughter of Paco wounded.agr

c. [[A filla de Paco] foi [t [ferida t]]]
the daughter of Paco was.agr wounded.agr

The simplest account of this fact is to assume that the morphologically visible agreement in question is a mere *transitivity effect* of the passive head being probed by T; in other words, there is no overt concord in this step. (More on this in the next section.)

Confirmation of that conclusion comes from the paradigm in (25)/(26):

(25) Fomos feridos unha filla de Paco e mais eu.
were wounded.agr a daughter of Paco and more I
'Paco's daugther and I were wounded.'

(26) a. [Unha filla de Paco e mais eu] temos [t [fuxido t]]
a daughter of Paco and more I have.agr run.away
'Paco's daughter and I have run away.'

b. ?*Paco ten [[unha filla e mais eu] [fuxidos t]]
Paco has a daughter and more I run.away.agr
('Paco has a daughter and I missing.')

In (26b) we see a kind of definiteness effect on the nominal agreeing with the participial, unlike in the passive (25) or for that matter the version of (26b) in (26a): the subject directly associated to the participial *fuxidos* 'run away', as in (26b), cannot involve a person other than third.[4] For reasons that I return to, Concord does not involve the Person system (indirectly, this is the Person Generalization in (4) above). If so, the impossibility of (26b) follows, assuming the latter instance (unlike (25)) involves Concord, not Agree.

In sum, the fact that we witness morphological agreement on a given head does not immediately entail *either* Agree or Concord. The issue is quite complex, depending at least on the sort of agreement at stake (in particular whether Person specifications are involved) and the locality of the process (Concord being totally local, unlike Agree). In addition, I have tacitly assumed that only overt Concord has an immediate freezing effect on the agreeing nominal. This is reasonable. The freezing effect is a consequence of feature valuation on the nominal, after being Probed or, more generally, engaging in a checking process of the Concord sort. The unvalued Case feature in the nominal makes it accessible to further computation (e.g. movement); as the Case feature is valued computational inaccessibility ensues. However, consider a situation where feature valuation does not entail value *fixation*. Suppose in particular that null Case is such an abstract, purely formal process that, unless it is signaled overtly on the determining head, it has no effect on the receiving nominal. We already saw a related property of null Case when demanding, via the NCV thesis, that heads determining null Case be overt; the present requirement is a counterpart of this idea on the receiving nominal. Generalizing NCV:

(27) *Null Case Visibility* (NCV) (Final Version)
Null Case is determined by a context-free dependence between an element X and an overt head Y; it has a freezing effect on X if X's features overtly mark Y.

This final version of the NCV thesis then predicts the viable long-distance A-raising in (23c) vs. the impossible one in (6a). In the latter instance the overtly agreeing participial is involving Concord, and furthermore a freezing instance of this operation. In the former instance, although by hypothesis Concord drives the movement as well (in the process dispensing with the need of a separate EPP requirement), since it involves no overt feature marking on the relevant heads determining null Case, no freezing ensues.

6. Cyclicity and Freezing Matters

Given the final version of the NCV thesis in (27) a third argument for the presence of Agree vs. Concord in the relevant agreeing examples can be provided, stemming from the fact that, together with the ungrammatical Galician sentence in (6a) above, repeated now as (28a), we also find the impossible version in (28b):

(28) a. ?*A Xoana foi feita [t ser capitán do equipo]
the Xoana was made-agr be captain of-the team

b. ?* pro foi [$_{vP}$ a Xoana feita [$_{TP}$ t [$_{vP}$ ser [$_{SC}$ t capitán do equipo]]]]

A Xoana must move to the specifier associated to *feita* in order to engage in a context-free Concord checking with the participial, thus no other position in (28b), among those signaled by the various movement traces, serves to do the job. Given the logic of my proposal, *each* intermediate movement trace signals an instance of null Case checking. However, the checking with the overtly agreeing *feita* is special, inasmuch as it overtly marks this Case-determining element, resulting in a freezing (vis-à-vis what happens at the site of the previous trace). If this freezing is interpreted radically, so that *a Xoana* becomes inaccessible *even to check further agreement up via Agree with T*, then we can explain the ungrammaticality of (28b), where in fact *a Xoana* hasn't moved beyond the site where it determines Concord. Now, this state of affairs, with *radical freezing* at the point of Concord, cannot extend to situations involving Agree.

Thus consider again (24c). There *a filla de Paco* 'Paco's daughter' must be able to move to subject position via the specifier of *ferida*, 'wounded', thus the latter site cannot entail freezing. We have argued that in this site there is no Concord, Agree obtains instead; this is consistent with what we find here, so long as Agree entails no immediate freezing. Chomsky (2002) has observed similar effects, one of the reasons he proposes that the consequences of Agree processes be cyclically examined, as in (29):

(29) Where α is a derivational phase, the effects of related syntactic processes spanning over α are evaluated at the point of α's TRANSFER (to PF and LF).

The assumption in (29) allows a derivation certain leeway with regards to, in particular, the phonological manifestations of context-sensitive syntactic dependencies. Basically, within the accessible confines of a phase, things need not materialize where they have taken place syntactically; for example, X and Y may enter into an Agree relation in configuration Z, a function of Y; but X may displace further within the phase confines, to some other configuration W which is itself a complex function of Y and Z. This would describe what we find in (24c). Let X be *a filla de Paco* 'Paco's daughter' and Y *ferida* 'wounded', in whose specifier Z X undergoes an appropriate checking; however, for independent reasons X continues to relate further up in the phrase-marker, to a configuration W that relates to both Y and Z within the confines of a live (not transferred) derivational phase, namely TP. (29) in principle allows a context-sensitive relation in those terms. Obviously, if the relevant checking entails some form of freezing, this cannot be radical, but *cyclic*, or adjustable within a live phase.

That signals another important difference between the context-sensitive mechanism of Agree and the context-free process of Concord: the latter allows no derivational memory (see fn. 2), and thus cannot allow cyclic freezing either;[5] instead, concord must resort to the much more local (read 'memory-less') and radical freezing *at the point of concord*.

It is also worth recalling that in (24a), where *a filla de Paco* doesn't pied-pipe, we have witnessed agreement also in the participial, which we showed cannot be sanctioned via Concord. We have suggested that the agreement in question is possible, involving the T probe, but why is it necessary? Suppose that, as per Chomsky's suggestion, the context-sensitive Agree process is crucially evaluated at the phase. Now observe the situation in (24a), where *a filla de Paco* is buried inside the *v*P phase. In turn, assume the Phase Impenetrability Condition (PIC):

(30) *Phase Impenetrability Condition* (PIC)
Where ZP is the least phase dominating a phase H, the domain of H is not accessible to operations at ZP; only H and H's edge are thus accessible.

Agreement from the T position in (24a) would be 'too far away', unless the computation manages to access the *v*P specifier, that is the *v*P phase-edge. That would allow probing from the T position, via the *v*P specifier, into the VP complement *a filla de Paco*.[6]

7. *Case Slipping and the Bracing Condition*

The main data set left to understand, then, is hyper-raising, where overt Case/agreement marking doesn't result in a freezing effect, even in situations where regular Case (and thus Agree as opposed to mere Concord) is involved. This can have nothing to do with NCV, or Case visibility in general for that matter. Interestingly, languages where this phenomenon is possible involve a curious and characteristic determiner weakness.

East Asian languages of the sort studied by Xu (1993) and Ura (1994) have both hyper-raising and no overt determiner. The same is true of Bantu languages, which Pérez (1985) argues have hyper-raising; as Carsons (forthcoming) observes, these languages involve subject agreement on T *and* in auxiliaries below it (the inverse of the Romance (19b)); these languages also do not present overt determiners. The oldest instance of hyper-raising in the literature probably goes back to George's (1980) treatment of Greek, and is similar to the Rumanian (8) (see Alexiadou and Anagnostopoulou (1999)). Both these Balkan languages have articles, but they are, in a sense, weak too. This is obvious in Rumanian definite articles, enclitic on corresponding nouns: *omul* lit. 'man-the'.[7] As Corver (1992) shows in his study of Left-branch extraction, such a weakness of the definite article may also correlate with the availability of Left-Branch extraction in this language. Just as Rumanian does, Greek too presents left-branch extractions as in (31) (from Horrocks and Stavrou (1987)), together with hyper-raising:

(31) Tinos mu ipes pos dhiavases t to vivlio?
whose me-GEN said that read the book
Lit.: 'Whose have you told me read book?'

Following Corver, we may then assume the relevant weakness in the Greek D system as well.[8]

Suppose then that we make D weakness relevant to hyper-raising, by separating the derivational process of Case valuation from its representational result:

(32) A weak D element does not result in inaccessibility upon Case checking.

One way to understand (32) is as an, as it were, 'slipping' representational situation: the D system has to be robust for Case valuation to representationally affect it, even when the appropriate checking conditions are otherwise derivationally met; when D is not pronounced or is merely a morpheme/clitic on nominal associates, Case valuation 'slips' through its target, hence does not have a deactivating effect on the relevant phrase associated to D. Being representationally visible, this phrase continues to be accessible in the derivation.

That claim can be falsified with a language where the D system is deemed strong, and yet hyper-raising continues to be possible. It may not be easy to decide on what counts as a weak D, though. Take Russian, for instance, which lacks articles and allows Left-branch extractions along the lines in (31).[9] So far as I know, this language tolerates no hyper-raising. Moreover, although –as Brecht and Chvany (1974) show– Russian allows local raisings from small clauses (33), it doesn't allow raising out of infinitival clauses (34):

(33) Ivan kažetsja [t glupym]
Ivan seems silly
'Ivan seems silly.'

(34) a. *Ljudi kažutsja [t priezžat' po-odnomu]
people seem arrive one-by-one

b. *Ivan byl uviden [t uxodit']
Ivan was seen leave

c. *Ja videla [Ivana uxodit']
I saw Ivan leave

A version of (34c) is actually possible, involving a gerundial/adjectival form:

(35) Ja videla Ivana uxodjaš'im
I saw Ivan leaving.msc.sg.inst
'I saw Ivan leaving.'

But (35) could be exhibiting an instance of secondary predication on a simple direct object. (34c), in contrast, would have been activating exceptional Case marking via the matrix *v* on the subject of an embedded infinitival clause; (34b) would have been the passive version of such a construction, involving the raising of the logical subject of the embedded clause to the matrix subject position, a structural situation also obtaining in (34a). All of those raising instances (or the possibility of long-distance Agree in (34c) if relations take place covertly) appear to be out of the question in Russian. If the language had weak D's for the purposes of the Slipping Condition in (32), why shouldn't it behave the way Rumanian does, as in (8), allowing rampant raising?

One might try to say that Russian too (or other Slavic languages behaving like it, and see Franks (1998)) has, in some relevant sense and despite appearances, strong D's. One possibility in this respect stems from the fact that this and related languages exhibit systematic concord internal to DP's, to the point that even adjectives overtly agree in morphological case with the head noun (e.g. (*Ja uvidela*) *xorošego starogo druga* '(I saw) good-ACC old-ACC friend-ACC'). Unfortunately, we cannot make full DP-internal concord a *condition* for D strength in terms of the Slipping Condition in (32), as that would be at odds with linguistic evidence for the learner coming from primary linguistic data suggesting D weakness, starting with its absence of pronunciation or of the sort correlating (in some version of Corver's terms) with Left Branch extraction. That suggests that we must finesse the condition in (32) to its format in (36):

(36) *Bracing Condition*
A domain undergoing morphological dependency results in inaccessibility upon Case checking.

(36) is a positive, more reasonable version of (32). It does not speak of sheer strength or weakness in D, or even D as such for that matter. It only concentrates on presence, within the domain where Case checking will be relevant, of other morphological processes that may make Case valuation avoid 'slipping'. Intuitively, concord internal to the nominal has its own representational effect. Even if D, in itself, is in some relevant sense weak, its presence is representationally signaled via internal concord, enough at least for the ensuing visibility to constitute a necessary condition for 'bracing' the Case valuation process.[10] As such, D could still be perfectly weak in Russian in relevant respects, thus allowing for the Corver-style correlation with extraction and whatever underlies its explanation.

Notice that, as stated, the Bracing Condition in (36) is a condition on Case valuation in general. Thus a prediction is made: a language with full DP internal concord may prevent any form of long-distance A-movement across *v*P phases. Two possibilities emerge for a nominal α inside a *v*P β: (a) α has originated within β or (b) α has moved to β. We discussed one version of possibility (a) already, at the end of section 3 –when α's Case is valuated in terms of a *v* Probe or directly via V, and thus it never abandons *v*P. Another version of possibility (a) entails Probing from outside *v*P, which given the PIC in turn implies either displacement to the *v*P specifier or else 'ancillary' agreement with this position. The former of these two implications could already spell trouble for a language with full DP internal concord: Case valuation at the *v*P specifier would result in freezing at that stage; if the freezing is merely cyclic, the displaced nominal could still be accessible to further computation within the active cycle, but if the freezing is radical, Concord being involved in the displacement, then no further computation could be possible, and the derivation would be cancelled if it has no way of checking Case at T. This sort of problem only compounds with possibility (b) above, which forces a nominal to reach the relevant *v*P via successive-cyclic movement, and thus in my terms null Case checking (e.g. at T). With no possibility of value 'slipping' in this sort of language with full DP internal concord, a *v*P 'gate' turns into a *v*P 'trap' if the next TP has to be invoked: the displaced element that has managed to reach this category will no longer be accessible to further computation. This describes the bad instances of raising in Russian.

Recall the examples in (34), repeated now with more detail:

(37) a. *[Ljudi T [$_{vP}$ t [kažutsja [$_{TP}$ t T [$_{vP}$ t [priezžat' t] po-odnomu]]]]]
people seem arrive one-by-one

b. *[Ivan byl [$_{vP}$ t [uviden [$_{TP}$ t T [$_{vP}$ t [uxodit' t]]]]]]
Ivan was seen leave

c. *[Ja$_j$ T [$_{vP}$ t$_j$ [videla [$_{TP}$ Ivana$_i$ T [$_{vP}$ t$_i$ [uxodit' t$_i$]]]]]]
I saw Ivan leave

Note, first, that the killing step in all these instances cannot be the lower *v*P, or there would be no passive or unaccusative constructions in Russian. For instance:

(38) [Ivan byl [$_{vP}$ t [uviden t]]]
Ivan was seen

This step should be analogous to the similarly grammatical movements to *v*P in the Galician (24), discussed in section 6. Of course, in all these viable instances the relevant *v*P is being probed from the next T up, the source of full Case. As we already said in the previous section, given the PIC, direct Agreement from T to the direct object of the verb would be too distant, and thus the *v*P specifier needs to be invoked.

We left pending whether activating this position allows the computation to ignore the PIC or rather an ancillary Probe is activated at *v*P. Given the Bracing Condition in (36), the latter option should be the operative one. Thus, even if accessing *v*P opened some 'worm-hole' into the PIC effects –allowing cross-phasal agreement between T and the V complement– the very fact of involving *v*P (via Agree, or else all of this would be impossible in long-distance terms) would result in freezing the complement in place, and thus no further probing by T would be viable. If in contrast the way of executing the relevant accessibility is creating an ancillary probe in *v*P, it itself could be probed by T, assuming its ancillary nature is signaled this way. Observe, prior to Pied-piping:

P → G P → G
(38) [byl [$_{vP}$ [Ancillary Probe] [uviden Ivan]]]

For concreteness, we can think of the ancillary probe as a pleonastic. Let's call it Pro. The relevant *v*P phase is circled in the example. Pro is local enough, as a Probe, to *Ivan* in (38), and *byl* in T is local enough to Pro, this time taken as a Goal, for this second token Agree to succeed. Now, even if the Bracing condition is relevant in Russian, in this instance it has no effects, as each probe licenses its own goal, and thus it is immaterial whether any further valuation is possible for the goals in point.

Needless to say, this sort of ancillary probe should be extremely limited, or we would trivially eliminate all the sorts of contrasts I am attempting to analyze in this article. So suppose the situation is restricted to those domains where it is needed: phases. It is here that the PIC holds and as a result we need to invoke the phase edge. Chomsky has a way of coding this in terms of what he calls 'peripheral' or P features, added to the computation when a phase edge has to be accessed. Regardless of what the ultimate nature of P-features turns out to be, what matters for us now is the assumption that

(39) A P-feature constitutes an ancillary probe for the purposes of long-distance Agree.

Note that ancillary probes as P-features will then appear on phase edges, where the system justifies them –the *v*P or the CP specifier. The former of these two will be needed for instances like (38), and the latter may well be relevant to those Bantu instances studied by Carstens (forthcoming) where the C system has to be involved. Perhaps there could be other relevant ancillary probes if more phase domains exist, a matter currently under investigation; but in any case, as per the logic of Assumption (39) we should not find these extra probes in the TP specifier (if this domain is not a phase) or more generally those positions that specify non-phase domains (where P features are irrelevant).

As a consequence, the problematic step in the examples in (37) is the intermediate, defective TP, where by assumption there could be no ancillary probe. Grammatical relations with this defective T could, instead, be reached through prior concord steps. But then it does make a difference whether a given language has to invoke the Bracing Condition. In a language obeying this condition, checking Concord at position X is akin to finishing the derivational at X. In the cases in (37), that spells immediate trouble, as there are further categories up that need to be valuated: the matrix *v* and T. If, in contrast, we had the same sort of scenario in a language not obeying the Bracing Condition, then checking concord features at TP wouldn't entail any freezing, and thus further Agree or displacement up the phrase-marker would be viable.

As Usama Soltan notes through personal communication, Arabic variants may well provide us with another language family preventing raising across TP, in fact arguably A-movement altogether. I cannot afford a full analysis at this point, but I do want to point out that in these languages *seem*-type verbs select a finite CP, and they never involve anything but default agreement. That seems very close to what we saw for (37). Moreover, I think strikingly for our purposes, Arabic DPs show rampant internal concord: in gender, number, case and definiteness, manifested in the head noun and accompanying adjectives (e.g.: *haʔulaʔi l-ʔawalad-u l-quiSaar-u* ‘these the-boys-NOM the-short-pl.msc.-NOM). Hence the Bracing Condition in (36) should kick-in in Arabic as much as it does in Slavic, resulting in impossible A-movement across TP, as seen above. In fact, matters appear to be more radical in this language, as not even the equivalent of the possible Russian sentence in (38) is possible. In Classical Arabic, passive is formed by changing the vocalic melody of the verb, and retaining the word-order whereby the internal argument stays in situ, as Soltan observes. Note that if ancillary probes in the sense above were only parametrically available (in other words, if P features in *v*P in the sense of (39) were not universal), this radical freezing effect would be accounted for, as it is through this extra mechanism that we licensed the remaining instances of A-movement in Russian.[11] In that circumstance the frozen argument in Arabic would have to be receiving null-Case in situ, correlating with characteristic indefiniteness.

It should be emphasized that the present reasoning does not pertain to full or null Case checking, but is rather a matter of freezing possibilities internal *to the checked item* (intuitively, a morphologically active one). Still, we see many relevant effects via defective T simply because this sort of category typically constitutes an intermediate step to further movements. Now there are languages like Russian or Arabic where the freezing effect has drastic consequences, radically preventing movement out of TP –even less in the latter instance. But there are other situations as well, where what seems to be prevented is merely movement out of TP *if it doesn’t end in the next TP up* (successive cyclic A-movement across TP). Take for instance German:

(40) a. Hans schien [t Führer dieser Gruppe zu sein]
Hans seems leader this-gen Group to be
'Hans seems to be leader of this group.'

b. ?*[Hans wurde dazu gebracht [t [t Führer dieser Gruppe zu werden] zu scheinen]]
Hans was PART brought leader this-GEN group to be(come) to seem
('Hans was made to seem to be leader of this group.')

As Elena Herburger and Josef Bayer point out through personal communication, (40b) deteriorates drastically vis-à-vis (40a), unlike its English counterpart, as the English gloss to (40b) shows. In that respect, it is reminiscent of the impossible raising instances in Romance across a participial; but the parallel with (23c), which involves no overt agreement, would be more accurate instead, since the participial *gebracht* 'brought' also involves no overt agreement in German; if so the ungrammaticality of (40b) could not be an NCV effect. The Galician (23c), importantly, is grammatical, implying that the German (40b) must be invoking a further limiting condition. The Bracing Condition is a good candidate, particularly because, like Russian or Arabic, German too exhibits case concord internal to nominal expressions (e.g. *meinen guten alten Freund (sehen)* 'my-ACC good-ACC old-ACC friend-ACC (to see)'). That said, we must allow German a degree of freedom that we don't allow either Russian or Arabic.

The difference between those two languages and German may lay on the fact that only the former have weak D, although all have case concord. Simply put, Russian or Arabic exhibit case morphology on the N-related elements (N itself and the adjectives), whereas German also exhibits case morphology in its overtly pronounced D's. It would be natural to take this dual manifestation of case morphology in German to allow for one further degree of freedom in this language. Thus in (40a), in effect null Case checking at the lower, defective, TP is driven by the N system, much as it would be in Russian, leaving the D system untouched for further Case checking at the matrix, complete TP; although case-concord entails activating the Bracing Condition in all languages, only in Russian does it entail termination at the embedded TP domain (in Arabic not even that, assuming no available P features at *v*P for ancillary probes). In German too, case concord terminates at the embedded TP, but D could still be accessible to the matrix D, for agreement purposes. Only when the next TP up is also defective, and thus must involve Concord, not Agree mechanisms, does the result end up being ungrammatical as in (40b).

8. *Some Syntactic Consequences of the NCV Thesis*

I wanted to show Bracing Condition effects –whatever their ultimate source and proper analysis– simply to demonstrate the richness of the paradigm we are discussing. This condition is independent on the NCV thesis, but it reinforces it: if the Bracing Condition is operative in grammar, what it is bracing (from 'slipping') in many interesting instances we saw in the previous section is null Case at some intermediate T. In any case, regardless of whether it is strengthened by this extra condition, in this last section I would like to discuss some consequences of the main NCV thesis, in particular with regards to the distribution of PRO.

Null Case was proposed by Chomsky and Lasnik (1993) to account for the distribution of PRO. In the terms suggested here, there is no need to assume that only one sort of T, associated to controlled infinitival clauses, assigns null Case –therefore, although PRO can reasonably taken to receive null Case, this cannot be the way to account for its distribution. Indeed, as per the NCV proposal *all* inflectional categories assign null Case if they are morphologically visible. However, if as San Martin (2004) argues PRO is a featureless element –which she takes to be the main factor behind its distribution– it will actually never be able to overtly mark anything on the head determing its null Case. As a result, within the confines of the NCV proposal, PRO will be able to indefinitely be controlled across a series of embedding infinitival domains. Thus the prediction that a straightforward implementation of my proposal makes is that we should not witness the diverse variation in successive cyclic A-movement studied here when PRO is involved. I know this to be true for the languages I used to argue my case (where the equivalent of *John expected to want to try … to leave* is fine) but I do not know whether this is a universal.

A further curious situation for my proposal stems from the fact that *all* instances of T, and thus also complete T, should be able to assign null Case. We saw a similar puzzle at the end of section 4, that time around with regards to *v*. There we could make the assignment of null Case by *v* (which otherwise assigns accusative) on its fusing to the, by hypothesis null Case assigning, associated, V; and we have well-known personal effects relating to direct objects, which can thus be blamed on null Case (with the flavor of partitive Case à la Belletti/Lasnik). Recall, however, that we need to say more about this system even VP internally, as noted at the end of section 4. Two issues arose there: personal nominals which bear *both* null and accusative

Case, and what happens to *v* when an impersonal nominal is happy with merely null Case. Answers to these questions bear on the matter of null Case in regular, complete T.

Consider the second issue first. Nothing much has to happen to *v* if it doesn't need to assign Case, so long as it doesn't bring it into the lexical array or numeration. We already saw the need for that when studying Basque hypotactic clauses, as in (14). We observed there that, as the true complement clause did not need (in fact could not take) accusative Case in relevant instances, the next argument up actually was treated as the argument of an unaccusative verb – without the relevant verb becoming thematically unaccusative. The latter condition was crucial in our keeping *v* intact, as the bearer of relevant (e.g. agent) roles. This was possible given the flexibility provided by the MAC in (3): we need not introduce featural specifications unnecessary to the derivation. A similar situation can emerge in regular transitive verbs if their direct object need not (perhaps cannot) use accusative Case. Ricardo Etxepare provides, through personal communication and useful discussion, the following interesting Basque contrasts:

(41) a. Nik hori saiatu dut
I.ERG that-ABS try-part III.have.I
'I have tried that.'

b. Ni horretan saiatu naiz
I.ABS that-LOC try-part I.be
'I have applied myself to that.'

(41a) is (2b) repeated. Remarkably, a situation like that observed for a clause like (2a) or (14) can also be reproduced for a nominal complement (and witness again the emergent locative, which I suggested in passing may well be a direct realization of null Case); *if* two things happen: that the aspect of the ensuing predication should have the characteristic atelic extension of an activity, and that the direct object not be personal, but a theme to measure out atelically the corresponding eventuality. This is what we would expect if this element is not receiving full Case from *v*. In fact in Basque we can tell that it is not in (41a), precisely because it does in (41a). Once again, the fact that Basque has an ergabsolutive Case system allows us to see the effects of assigning null Case lower down in the phrase-marker. In languages with a nominaccusative Case system, even if the sort of process in (41b) is taking place we will not witness its effects so overtly.[12]

Note that a similar story can be told in more familiar languages for the somewhat embarrassing *John drinks heavily*, grammatical together with *John drinks Remy Martin*.[13] In the second instance we know that regular accusative case must be involved; however, in the first it can't be, or it won't be checked. But there still is a characteristic tinge of meaning that involves some sort of 'canonically indefinite' object (in the case of drinking, denoting alcohol). What Case does this element check? We can have it simply check null Case via V. What happens with the accusative Case in that instance? Nothing: the MAC simply allows us not to invoke it.

As to what the fate is of a nominal for which both null Case through V and accusative Case through *v* are available, nothing much has to be assumed if null Case can slip, resulting in no freezing effect. Only in languages that are subject to the Bracing Condition could we detect an effect here, as in those languages null Case assigned by V to its sister may freeze the dependent in place for further computation, thus preventing the checking of accusative Case related to *v*. One way out of the dilemma for those languages and in conditions involving personal objects would be literal substitution of V into *v* in the course of the derivation, with the effect of obliterating the null Case effects of V after the substitution. I leave this as a suggestion.

We are now ready to discuss the nature of T vis-à-vis null vs. full Case. The very fact that we don't have two categories at stake in this instance (e.g. V vs. *v*) simplifies matters considerably, particularly if we assume something which is often taken for granted:

(42) Any given category X can only determine one structural Case Y.

Given (42), we can take T to assign null Case all other things being equal. It is the MAC that, upon an identified grammatical need within a given numeration, in effect turns on the full Case system, with nominative valuation in this instance. If this is the right way to look at things, in effect null Case is a default form of Case determination, with provisos added by the NCV proposal in terms of accessibility. We will see shortly that this situation is testable beyond T categories, with very interesting consequences.

But before we do that, let me point out a further twist on the proposal, raised by a version of the Galician (23c) above with no apparent displacement:

(43) [Ø Poden [Ø parecer [Ø ter [Ø sido roubados [os cartiños]]]]
may.AGR seem have been stolen.AGR the money
'The money is likely to seem to have been stolen.'

The question is what happens with (at least) the positions signaled by way of Ø in (43), particularly those (e.g. the embedded TP specifiers) that we have argued involve context-free concord. Only two possibilities come to mind. One is that the MAC also affects null Case, making the system activate it only when necessary for either merged arguments (the ultimate, most genuine context-free situation) or overt displacement. This need not be a teleological mechanism. In a situation like (43), for instance, the grammar may simply not activate null Case in the lowest cycle (this is a passive context), and then since no further displacement can be involved, no further null Case activation will ever be pertinent (with respect to the relevant dependent). Then the Agree mechanism will face its own difficulties (e.g. the need for ancillary probes), but that is a matter we have discussed already (in section 6). Or the grammar may blindly activate the system in a different derivation (not really an alternative competing with (43)), with the result of displacement at least in the lowest cycle, but perhaps not beyond. A different possibility is that MAC has nothing to say about null Case, and this system is activated entirely by default, when NCV conditions are appropriately met. In that scenario, if this sort of Case is checked in terms of the context-free process of Concord, at least the first Ø element in (43) will have to be an actual formative, capable of entering into a null Case checking in much the way as PRO presumably is. In turn, the rest of the elements marked as Ø in (43) are either traces of the first Ø or else further tokens of a pleonastic type Ø.

I keep referring to NCV provisos affecting the default conditions on null Case. The most interesting situations is this. The grammar may allow some category X to assign null Case by default, but in a given circumstance this particular form of Case valuation may not be operable, given considerations of the sort that X is not morphologically signaled, or the Case process has no visible effect on either the argument or, via agreement valuation, X itself –those are NCV effects. Nonetheless, in that very circumstance it could be possible to obtain *full* Case valuation, precisely because this one won't induce NCV problems. So although in principle the system would default to null Case, there could emerge situations where the more costly form is the only possible one. Consider in that respect the old chestnut in (44). Why can't an appropriately defective version *v* as in (44) license PRO, the way a defective T would?

(44) * [I [*v* believe [PRO to be old]]]

Now recall the licensing conditions we assumed for *v*'s assignment of null Case in (20) above: (a) *v* must have no accusative Case to assign and (b) V-fused-to-*v* has not assigned its null-Case. In (44), condition (a) is met,[14] if PRO cannot check full (e.g. accusative) Case. But whether V has assigned its null Case, and it in fact has appropriately fused to *v*, is an interesting theoretical question. Recall in this respect the Spanish (22), repeated now as (45a), an instance of what is often called 'reanalysis', and compare it to the so-called 'restructuring' in (45b):

(45) a. Juan$_j$ ya lo$_i$ parece haber [t$_j$ digerido t$_i$]]
Juan already it seems have digested
'Juan already seems to have digested it.'

b. Juan$_j$ lo$_i$ intentó [PRO$_j$ digerir t$_i$]]
Juan it tried digest
'Juan tried to digest it.'

If clitic climbing is our sole indication for *v*-V fusing, then the process should be present in (45b) as much as it is in (45a). Still, as first discovered by Tim Stowell, an important semantic difference exists between these two sorts of examples, which Martin (1996) discusses at length. The two events in (45a) (the matrix *seeming* and the completed *having digested*) are coetaneous. This is not true for the two events in (45b): the matrix *trying* and the embedded *digesting* are entirely separate; the second is arbitrarily projected into the future. For example, we could add to (45b) that Juan did his trying by way of preparing during a year to ingest small doses of whatever he wasn't capable of digesting, but he in fact failed after having tried and tried. This is an important semantic fact that prevents us from analyzing the embedded event as a modifier, after fusion, the way we did for (45a). Of course, even if this is a sound empirical argument, we must ask why it is that control verbs behave differently with regards to raising verbs in terms of allowing the *v*-V fusion that sanctions the necessary null Case for (44) to be grammatical.

An answer emerges from treating PRO and NP-trace differently. In section 5 we showed a central difference between (21) (repeated now as (46a), slightly modified to match the other example) and (10) (repeated now as (46b), with more bracketing details and omitting irrelevant ones): whether a subject like *him* intervenes between the matrix verb and the head of its TP argument determines whether T-to-V incorporation is possible. T-to-V allows for TP to turn into an event modifier, thus bypassing visibility requirements on arguments (hence voiding Case restrictions). A V that hasn't had to assign null Case can in turn fuse to *v*, allowing this element to assign this sort of Case in satisfaction of NCV conditions. If the argument TP specifier prevents T-to-V incorporation, the embedded TP will require null Case from V, and thus the matrix *v* will not be in a position to assume null Case from the *v*-V fusion:

(46) a. [$_{TP}$ He T-was [$_{vP}$ t *v* believed [$_{TP}$ t T-to [$_{vP}$ …]]]]

b. [$_{TP}$ I T [$_{vP}$ *v* believe [$_{TP}$ him T-to [$_{vP}$ …]]]]

The question for us now is whether PRO should be treated like *him* or rather like *t*.

A prior question actually is why *t* doesn't count as an intervener for T incorporation to the matrix verb; the most straightforward answer, related to Lasnik's (1999) explanation for why NP-traces do not involve reconstruction effects, is that these elements are representationally inactive –in effect A-movement leaves no trace. Then the difference between (46b) and (46a) is not in phonetic content, but in syntactic representation, the relevant contexts being literally *was v believed to* vs. *v believe **him** to*; here it is obvious that *him* intervenes between *believe* and *to*, but nothing does when A-movement takes place. From this perspective, *believe **PRO** to* should be of the latter sort, assuming contra Hornstein (1999) that PRO does not involve A-movement. As a result of the intervention effect propitiated by PRO the *v* associated to *believe* will end up not being able to assign null Case. From this perspective, the main difference between raising and control complements is that only in the former is incorporation of T to the selecting verb viable (resulting in the characteristic event reduction that Stowell discovered), precisely because raising predicates are reduced in valences, and thus an intervening embedded subject can get out of the way. This accords with the Basque facts analyzed by San Martin and Uriagereka, since as we saw in section 2, in control infinitival complements the complement clause (TP if San Martin (2004) is correct) is receiving null Case from V, and thus the corresponding *v* could not be assigning any Case. In contrast in raising infinitival complements the complement clause (also a TP) is receiving no Case whatsoever, which entails its need for incorporation to V. If this is the right analysis, 'reconstruction' is actually a less radical process than 'reanalysis'.

It is an interesting question whether sentences of the form in (44), which basically attempt to sanction PRO in 'Exceptional Case Marking' (ECM) terms, are impossible universally. Empirically, it might seem as if the Spanish example in (47) is of the right sort:

(47) Yo creo PRO ser viejo.
I believe-agr be old
'I believe to be old'.

However, it is easy to show that this example is not of the form in (44). Observe:

(48) a. *Juan siempre quiso PRO ser creido t haber amado a María
Juan always wanted be believed have loved to María
('Juan always wanted to be believed to have loved Maria.')

b. Juan siempre quiso PRO creer PRO haber amado a María
Juan always wanted believe have loved to María
'Juan always wanted to believe to have loved María.'

If PRO in (47) were in an ECM site, it should be able to passivize as in (48a), as is possible in the corresponding English gloss. But (48a) is very bad in Spanish, vis-à-vis a possible comparable example involving two PRO's, as in (48b). In addition, observe (49):

(49) a. Xan cré [sermos vellos]
Xan believes be-I.pl old
'Xan believes us to be old.'

b. ?Juan cree [PRO ser todos viejos]
Juan believes be all old
'Juan believes to be all old.'

In Western Iberian examples like the Galician (49a), we can have inflected infinitivals in the contexts we are interested in, suggesting that the relevant complement clause here is more complex than implied in (44), involving perhaps the F category discussed in Raposo and Uriagereka (2004). Note also that even in Spanish (which has no inflected infinitives) a sentence like (49b) is acceptable in these contexts; here the subject of the embedded clause is only 'partially controlled' by the non-coreferent subject of the matrix clause (see Landau 2001 on these matters), which is consistent with the idea that this is a different phenomenon altogether.

I suppose it would be in principle possible to find a language sanctioning (44) if, and only if, this language has a source for null Case in *v* which is not parasitic on the null Case that, by hypothesis, the accompanying V brings with it. To start with, such a *v* would have to be morphologically heavy without needing fusion to V, in order to meet NCV requirements. If such a language exists, in addition, we should find it possible for the PRO thus licensed to passivize as in (48a), all other things being equal. I am in no position to test this possibility at this point.

9. *Syntactic Conclusions*

The following are my basic conclusions, given the evidence analyzed in this paper:

(50) a. The MAC is reinforced (perhaps to the point that it controls the activation of null Case).

b. The NCV thesis is central in understanding part of the variation we witness with regards to successive cyclic A-movement.

c. The Bracing Condition attempts to describe the other set of variations in A-movement.

d. We must distinguish the context-free Concord from context-sensitive Agree.

With regards to (50a), I argue elsewhere (e.g. Uriagereka (forthcoming)) for the MAC, but the interaction between full and null Case, and in particular the idea that only the latter is default, is entirely contingent on a condition on the lexical array or numeration being built elegantly –so this is an indirect argument for the array itself. If in addition, as suggested in section 8 to address one of the possible implementations of very long-distance agree relations, the MAC activates null Case only in some instances, then it is doubly reinforced.

(50b) has constituted the bulk of this note. To the extent that the linguistic variation in A-movement across tenseless domains is explained by positing rampant use of null Case, albeit regularized in its use to conditions pertaining essentially to its detectability, this is an empirical argument for generalizing null Case –naturally then also for null Case itself as a grammatical concept. I agree with Hornstein that the postulation of such a peculiar Case should raise warning flags. My attempt to rationalize this form of Case and extend it should address the conceptual difficulty: this is, in my terms, a perfectly reasonable form of Case, which generalizes to various domains so long as it is detectable, with a variety of empirical consequences.[15] If those facts I brought to bear on the issue are explained away or analyzed in a different, better fashion, then my argument for null Case will be considerably weakened: everyone should prefer a theory with *no* Case instead of null Case (or any Case for that matter). I return immediately to what I take to be a rationalization behind such an abstract notion of Case.

(50c) is independent of everything I had to say about null Case, although in my proposal the Bracing Condition interacts with null Case conditions simply because it is a general condition on Case realization; it presupposes the idea that in some instances Case checking actually doesn't entail freezing. I don't purport to understand either why Case freezing obtains to begin with, or why in some 'slipping' instances it doesn't –and if what I've called 'bracing' holds, yet in some other conditions a slipping Case could actually be braced. This requires a more serious morphological study of what's going on than I can afford. Nonetheless, I think the generalizations I discussed are quite robust: (I) Languages that involve 'hyper-raising' have weak determiners; and (II) languages that prevent raising (more or less completely) have active concord systems within nominal arguments. Surely generalizations are nothing but that, and the truth is I won't have much to say about motivating whatever may underlay these two. At any rate, Bracing Condition effects seem quite consistent with my analysis of some instances of A-movement as involving null Case, and thus they constitute another (weak) argument for it.

Finally, (50d) is perhaps the most important syntactic result: this theoretical assumption is basic for the analysis to work. That concord exists as a phenomenon is hardly worth emphasizing. For instance, the case-concord facts discussed in section 8 couldn't be analyzed in terms of Probe-Goal relations; we may create one-to-many such relations or letting ancillary probes proliferate like mushrooms, but the price will be cheapening the perfectly reasonable Agree thesis as we are trying to understand it. The different, I think more sound, alternative is to simply accept that Concord is not Agree. In my view it makes sense to treat is as a context-free phenomenon, thus forcing extreme locality (basically, (extended) forms of sisterhood), leaving context-sensitive dependencies for probing relations that demand a search space.

Why should the grammar have *null* Case? I think the best answer is Mallory's with respect to why one should climb Mount Everest. Of course, we also need to worry about why null Case 'is there', but that presupposes understanding why full Case is part of the system. As mentioned in passing in section 3 above, my own view about this since (1997) is that Case distinctions serve the purpose of tokenizing DPs. The logic of that idea is that *specific* Case valuations relate to *specific* configurations (e.g. nominative to TP, accusative to *v*, and so on). To put it simply, if our system has difficulties distinguishing a token D_i from another token D_j (without trivial annotations or allowing the syntax access to interpretive information), their configurational *context* will do the trick. It's not the same to have a D sister to the *v* projection, let's say, than one sister to the T projection –even the dullest syntax can know that (and see Drury (2005) for further discussion of these and many related ideas). Now, if this is the rationale behind full Case, it can't be that null Case, as I have understood it in this note, has anything to do with (at least successful) tokenization. Quite plainly, I've had (at least) V, *v* and T assign null Case; in fact this was central in my addressing Hornstein's worry that null Case as in Chomsky and Lasnik's proposal (where it is restricted to defective T of the raising sort) is ad hoc. My null Case appears all-over (modulo NCV conditions), but precisely for that reason it has to be orthogonal to any form of contextualization, as it is a moving target. Indeed, for all practical purposes null Case for me is used to signal non-personal arguments *and movement targets*. But I don't think the system has this form of Case *because* of those interesting consequences.

Matters could be much duller, and still have those neat side-effects. In particular, suppose the grammar has Case for the tokenization reasons alluded to; this implies the grammar can identify a configurational context X, and associate it (arbitrarily far, via valuation, within a derivational cycle) to a given D; this then becomes token D_x. Once this is the case, the grammar can't help but having null Case as well, for null Case is a trivial instance of full Case where configurational context X is devoid of any substantive content, and thus is matched locally. In other words, null Case can be seen as what the MAC activates without worrying about whether X is T, *v*, or anything else; it's simply a category, and as such a configuration at the point of context-free Merger –*any* configuration. Full Case, in turn, is more costly for the MAC, it involves knowing T from *v* and so on, hence its tokenization consequence. If the MAC is also involved in activating even null Case (as suggested as a possibility in section 8), a more basic option for the grammar is simply not to worry about configurational context at all. That would give no Case; unspecified context would determine null Case; and specified context would determine full Case, a typical context-sensitive relation. These three situations are tantalizingly in line with the three levels in the Chomsky hierarchy ((i) Markovian, (ii) Context-free and (iii) context sensitive) that we (ought to) consider relevant to the description of language.

10. *An Argument for the Transparency Thesis in the Syntax/Semantics Mapping*

But what I take to be the most far-reaching idea in this paper pertains to the syntax/semantics mapping. More or less tacitly, I have assumed the Person Generalization in (4), that is the idea that morphological fullness in inflectional heads correlates both with their ability to determine full, as opposed to null, Case and crucially also their manifesting person, as opposed to only number distinctions. Without that assumption, I could not have expected PRO, indefinites or CP to go well with null Case, as opposed to personal elements like *I* or *John*. But of course, this doesn't seem like a necessary assumption. What would go wrong in a syntax that mapped null Case to personal pronouns and full Case to PRO, for instance?

A familiarly defeating dictum takes the relation between syntax and semantics to be arbitrary. The alternative is taken to be 'functionalist', and based on such non-starters as 'iconicity'. More seriously, any first-order formal language can be shown to map to the natural numbers, hence to *any* denumerable concept; if syntax is one such formal object, there is no meaning to the claim that one particular mapping to a denumerable semantics is better than any other. Researchers have attempted to 'naturalize' the mapping in terms of learnability considerations. Thus Larson and Segal (1996) suggest that learning is aided by the Strong Compositionality Thesis (semantic relations are only stated in terms of syntactic sisters). To prove this point, one would have to show that language learning is *prevented* in an alternative mapping (e.g. one based on whichever elements happen to be syntactically closest, for which sisterhood is a mere sub-case). Similar considerations apply to other ways (e.g. parsing) that one could provide to naturalize the relevant mapping, suggesting that the syntax/semantics mapping is accidental. That view is consistent with the position expressed in Jackendoff (2002) that linguistic competences (syntactic, semantic, phonological) are plural and connected in the tinkering way that organs appear to be within organisms. However, if one takes the minimalist perspective that semantics is merely interpretive (not generative) and performative, assuming an accidental mapping is unacceptable. This forces us to seek a new form of 'motivation' to the mapping, avoiding the assumption that human language is a first-order formal language. Moreover, one must study the limitations on semantics that the proposed syntax may bring about.

I have argued elsewhere (e.g. Uriagereka (forthcoming)) that interpreting syntax in terms of the Chomsky Hierarchy yields a 'dimensionality' that is incompatible with it being just a first-order formal language. Moreover, I have proposed a Transparency Thesis, which has semantics exploit *whatever formal corner it can* in order to yield meaning. Compositionality is one aspect of this thesis, for that portion of language that is context-free: we take the elements that syntactically combine in context-free terms and assume their semantic combination. Underneath, that portion of language that is Markovian also has an interpretation, a non-compositional one (as in the iteratively emphatic *never, never, have I said such a thing!*, where composition of each *never* would change the polarity of the expression, contrary to fact). Above, in that portion of language that is context-sensitive, we should also find a formally transparent mapping for relevant objects, called 'chains'. This note can be seen as an exercise to provide one instantiation of a syntax-semantics mapping that is 'motivated' in the sense of the Transparency Thesis.

I want to finish by suggesting that the Agree relation, which involves a context-sensitive Probe/Goal dependency, has an interpretive consequence that is rather different from that of a related, albeit context-free syntactic process also involving feature-match: Concord between a head and its specifier. Only Agree exhibits personal semantics, while the syntactically lower-order Concord does not. This is 'motivated' arguably because personal semantics involve a system of paradigmatic dependencies, inexpressible in terms of binary oppositions like the familiar [+/- plural] (number) or [+/- masculine] (gender). Personal relations are context-sensitive in the pragmatic sense. The transparency Thesis allows the system to reason thus: *because* the relation between X and Y is syntactically context-sensitive, semantic context-sensitivity (i.e. pragmatic dependency) will be its natural interpretation. Needless to say, developing this point thoroughly is beyond the scope of the present exercise.

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Notes

[1] As is well known, facts are different in French and Italian dialects, where it is in fact possible (even necessary in some instances) to agree successive-cyclically. Iberian dialects in general, however, pattern with Galician. The other major case, also different to the two just mentioned, is Rumanian (cf. (8)).

[2] The terms context-*free* and context-*sensitive* are meant technically. The first of these involves phrasal relations of the (external) Merge sort. In contrast, relations of the second sort are much more cumbersome and hard to characterize, involving access to an entire derivational history in familiar characterizations.

[3] All that matters for the argument above to go through is that the complement clause that contains PRO as a subject should receive null Case –as does a comparable hypotactic dependent involving no PRO at all.

[4] Of course, this is not to be confused with the definiteness effects typically studied in post-verbal subjects, which as is well-known does not normally arise in Iberian variants in general.

[5] The processes alluded to in the previous paragraph, involving cyclic adjustments, obviously require non-trivial derivational memory.

[6] A somewhat technical issue arises as to whether involving the intermediate specifier allows the computation to bypass (30), or rather a kind of ancillary Probe is activated at *v*P via its own posterior agreement with the accessible T; I return to this matter in section 7.

[7] In some instances they can even cliticize to pronominal adjectivals, as in *sarac-ul baiat* lit. 'poor-the boy'.

[8] Note also that the genitive form –here the Wh-element *tinos* 'whose'– overtly coexists with the definite article, unlike what we witness, for instance, in English: 'whose (*the) book'.

[9] The Russian data, together with useful discussion, are due to Lydia Grebenyova.

[10] Obviously this cannot be true in any simple-minded sense, since although Russian (like all other languages) can have adjectives –and if so they show massive concord with the N head– this situation is certainly not necessary. I leave this intriguing matter for future research, since it clearly doesn't affect the main research topic of this paper: null Case conditions.

[11] That P-features more generally, including those in CP, need to be parameterized is shown by the fact that some languages (e.g. Madurese) do not allow overt Wh-movement, whereas as others allow displacement across Wh-islands, presupposing 'extra' P-features in CP (e.g. Spanish) or even multiple Wh-fronting (e.g. Bulgarian.

[12] Although *mutatis mutandis* they should obtain also in instances of comparable aspectual effects.

[13] Occasionally it is suggested, to my mind perplexingly, that we are dealing with two different verbs here.

[14] Recall the very first example we studied, the comparable (1), analyzed as in (10).

[15] Lasnik and Uriagereka (2005: chapter 7) in turn argue that there is no deep minimalistic reason to deny the existence of PRO as a grammatical object.

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