Luis López

Locality and the
Architecture of
Syntactic Dependencies
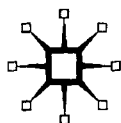
Locality and the Architecture of Syntactic Dependencies

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Luis López
University of Illinois-Chicago, USA

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Preface

This monograph is an attempt at developing a simple, crash-proof derivational model of syntax, as suggested by Frampton and Guttman (2002). I argue that the only way to avoid computational complexity is by taking the operations Agree and Move of Chomsky (2000, 2001a) to be completely local, to regard Move as triggered by the moving item rather than an attracting head, and by reinterpreting apparent long-distance dependencies as a sequence of local complex dependencies. Chapter 1 discusses the main theoretical issues while Chapter 2 presents the general framework of analysis. Chapters 3 and 4 test the ability of the framework to generate correct empirical predictions in several empirical realms that have been the focus of much recent research: quirky subjects in Icelandic and Spanish, indefinite SE in Spanish and Portuguese, multiple nominatives in Japanese, expletive constructions in several languages, with special emphasis on English, and locative inversion in English. Only A-dependencies are discussed in this book. A'-dependencies are, for the time being, in the "for future research" drawer.

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Introduction

The syntactic architecture sketched in Chomsky (2000, 2001a) is almost disarming in its simplicity. His main assumptions are the following:

(i) Lexical array/numeration. The computational system (C_{HL}) does not handle symbols drawn directly from a lexicon. Instead, a previous operation assembles a set of lexical items into a lexical array (LA) and it is only the latter that is accessed by C_{HL}.

(ii) Clause structure. The core structure of the clause is made up of four heads (although he acknowledges that a more detailed analysis can uncover many more, along the lines of Rizzi (1997) or Cinque (1999)). These four heads are C, T, v, V. An object merges with V and receives a θ-role from it. The external argument is introduced by a type of v, referred to as v*, which also has the ability to assign accusative Case to the object. If the structure has no external argument, we have a second type of v, without accusative Case (which derives Burzio's generalization). T can also come in two versions. An ordinary T can be finite or nonfinite, has a full set of (unvalued) φ-features and assigns Case (nominative or null Case). T^{def} is always nonfinite, has only [person] and no ability to assign Case, giving rise to raising constructions.

(iii) Phases. The derivation takes place in *phases*, structures built from subsets of the LA. vP and CP constitute phases, VP and TP do not.

(iv) Dependencies. Dependencies are established by means of an operation called *Agree*. Take a head with an unvalued feature. This unvalued feature (or set of features) turns the head into a *probe*, able to search for a matching but valued feature of the same type within its c-command domain. This valued feature is able to value and delete the

unvalued feature on the probe. Call the matching feature *goal*. Agree can take place long distance, which forces the introduction of two locality requirements: (a) Relativized Minimality/Minimal Link Condition (MLC) prevents agreement to take place between a probe and a goal if there is a potential goal closer to the probe. In the definition of potential goal, it is suggested that only a constituent bearing a complete set of φ-features is relevant; (b) the Phase Impenetrability Condition (PIC) prevents probing into a phase (i.e. the complements of v and C), with an important exception that I discuss shortly.

(v) Displacement. Constituents that appear away from their θ-assignment position have been "attracted" by an agreeing probe. After an Agree relationship is established between a probe and a goal, the probe might need to move the goal to spec,probe due to an extra feature, call it EPP, that cannot be satisfied otherwise.

The main purpose of this introduction is to argue that the conceptual and empirical grounds of Chomsky's (2000, 2001a) theory of Agree dependencies are not solid. The larger goal of this monograph is to argue for an alternative architecture of C_{HL} that does not have the same problems and presents simple analyses of some broad and significant empirical generalizations, some of them undescribed so far.

The model presented in later pages includes the following features:

(i) It makes lexical arrays/numerations unnecessary. Strictly speaking, however, it is not incompatible with them.

(ii) The derivation is organized around cycles, always with the same structure: (a) introduce head H, (b) H probes, features are valued, (c) Move applies, (d) Spell-out and feature deletion apply, (e) a new head enters the derivation (see Epstein et al. 1998, Frampton and Guttman 1999).

(iii) Agree is strictly local: a head H can only probe its complement Y and Spec,Y. Thus, there is no need for MLC (and, consequently, φ-completeness) or PIC.

(iv) Move is triggered by the unvalued features of the goal. This is reminiscent of the Greed framework of the early 1990s (Chomsky 1993, Collins 1997), but conceptualized in a way that avoids the conceptual problems that Greed gave rise to. Additionally, Move is strictly local, always to the nearest spec (as can be deduced from the structure of the derivational cycle above).

(v) Apparent long-distance dependencies involving three constituents (i.e. T, a participle and an internal argument) reveal the presence in the

grammar of *Complex Dependencies* in which a probe reaches a goal which is also involved in a dependency.

There is a second theme in this introduction – and indeed, in this monograph. Frampton and Guttman (2002) make a useful contrast between two different ways of conceiving a computational system. One could conceive it as a system that freely generates sentences paired with a set of filters that eliminate those that, for one reason or another, are ill-formed – maybe because they are unreadable by the interpretive systems. This is what we had in the Principles and Parameters era through Chomsky (1993). Or one could try and design a computational system such that only well-formed outputs are generated – in this system, filters are not needed because the computational system is *crash-proof.* Frampton and Guttman point out that a crash-proof system should not include numerations or Global Economy (both originally put forward in Chomsky 1993). The use of a numeration/LA gives rise to many impossible derivations that need to be filtered out. Global Economy, which involves comparing finished derivations and choosing "the best one", involves a very powerful evaluating filter. The move from the Global Economy of Chomsky (1993) to Collins' (1997) Local Economy is a step toward a crash-proof syntax. Designing derivations without numerations leads in the same direction. I concur with Frampton and Guttman that a crash-proof system is a more plausible candidate for a cognitive system.

The rest of this introduction is organized as follows. Section 1.1 revolves around the notion of complexity. Chomsky (2000) expends quite a lot of effort arguing that his architecture does not give rise to a computational explosion. I argue that, as a matter of fact, the mechanisms that he employs to prevent excessive complexity (simple operations preempt complex ones, locality, elimination of look-ahead) present a number of conceptual and empirical problems. Section 1.2 discusses intervention effects in more detail and, in particular, submits the notion of *φ-completeness* to critical analysis, finding it lacking. Section 1.3 presents a sketch of the architecture to be developed in subsequent chapters.

1.1   Complexity and crash-proof derivations

If we take syntax to be a computational mechanism that maps linguistic properties F onto linguistic expressions Exp and we further assume that

this mechanism is derivational in nature, the question that arises immediately is how to limit the computational complexity of the system to reasonable levels. This question has been around since Chomsky (1993) proposed that a Principle of Economy would be able to compare different derivations constructed on the same lexical array and decide which is the most economical one (the one that employs the fewest steps, for instance), discard the other alternative derivations and consequently give rise to negative grammaticality judgments. The conclusion was soon reached that this Principle of Economy would lead to such computational demands that it was unlikely that a cognitive system would be endowed with it (see Collins 1997, Frampton and Guttman 1999). Thus, reduction of complexity entered the research agenda at the same time that derivational models of syntactic computation began to be explored.

Chomsky (2000) identifies four mechanisms to reduce complexity (1.1, 3, 4, 5), to which I add a fifth (1.2):

(1)   a.   Restricting the access of C_{HL} to F.
       b.   Selection of arguments.
       c.   Privileging simple operations over complex ones.
       d.   Ensuring that operations are local.
       e.   Eliminating "look-ahead" in operations.

In the following subsections I discuss each of (1a–e) and evaluate them according to three criteria: (i) whether the desired reduction in complexity is actually achieved, (ii) whether the empirical evidence presented to support them is solid and (iii) whether the solutions proposed lead to a crash-proof computational system.

1.1.1   Restricting the access of C_{HL} to F

Chomsky proposes that a language L does not access the whole set of F, but only a subset [F], which is selected only once and assembled into a lexicon Lex. Thus, C_{HL} maps lexical items (elements of Lex) onto logical form representations of Exp.

Further, and more controversially, he proposes that C_{HL} does not access Lex directly either. Instead, some operation takes a set of items from Lex and forms a *lexical array* LA. It is LA that is placed in working memory and accessed by C_{HL}. LA, according to Chomsky, reduces

computational complexity because C_{HL} does not need to reach the entire Lex at every step of the derivation but only the (presumably much smaller) LA. Chomsky compares direct access to Lex to a car that goes around with a petroleum refinery attached to it.

Selection of LA is completely free. It is therefore perfectly possible to have an LA like that in (2), which would never give rise to an Exp:

(2)   LA = {the, big, at, run, with}

As a matter of fact, there is an infinite number of possible LAs, only a very small number of which will lead to convergent derivations (Frampton and Guttman 2002). The chance that a convergent derivation ever gets done seems very small – as a matter of fact, one could go on choosing LAs forever without ever hitting on one that works. I conclude that LAs are dubious constructs in a cognitive system.

1.1.2   Selection and clause architecture

In Chomsky (2000), the basic derivational step is constituted by the operation *Merge*. Merge takes two syntactic objects, (α, β) and forms another syntactic object, $K(\alpha, \beta)$. K is the set {a,b} (unless they instantiate adjunction, which I do not discuss here). The question he asks at this point is how the label is determined. Chomsky suggests that Merge satisfies the selectional requirements (s-selection) of one of the merging constituents, whose label projects. Or, in other words, θ-assignment takes place instantly as predicate and argument Merge.

This approach to θ-assignment fits very well within the crash-proof desideratum. C_{HL} cannot produce outputs that violate the θ-criterion because it is integrated in the Merge operation. However, Chomsky (2001b) eliminates s-selection and assumes Hale and Keyser's (1993) idea that θ-roles depend exclusively on the structural relations maintained between a predicate and its arguments. Since there is no s-selection, Merge is free. Violations of the θ-criterion are convergent with deviant interpretations, i.e. we go back to a filter system, as he recognizes.

Chomsky makes this move for two reasons. The first one is that s-selection of an external argument would entail a relationship between a head and its spec. However, all structural relations are based on Merge, which gives rise only to relations of dominance/containment and the

derived relation of sisterhood, which involves c-command (one can see echoes of Epstein et al. 1998 here). There is therefore no meaningful structural relation between a head and its spec.

However, I am not sure this reasoning is unassailable. It seems that Chomsky is assuming free Merge plus immediate checking of a selectional feature. Instead, one could conceive of Merge as being *triggered* by selection. If a head H selects two items, a and b, and this selectional requirement brings a and b to merge with H, it must follow that one will be the complement of H while the other, given binary branching, will be Spec,H. There is no reason to posit probing of a spec by its head.[1]

The second reason is also theory-internal. Assume that lexical items are roots that become verbs and nouns only in combination with functional heads in syntax (Marantz 1997). If so, consider the root 'arrive'. As a verb, it needs an argument, but as a noun it does not. This means that Select must wait for the root to become the complement of a nouny/verby functional head before it can decide whether an argument is necessary or not – countercyclically. Obviously, this point depends on accepting Marantz's proposal, which is discussed in Chapter 2. It also depends on the assumption that countercyclic checking of syntactic requirements should be avoided. However, Chomsky (2001a) admits countercyclic checking of the MLC (see section 1.1.4), which undermines this argument. Finally, Select allows us to construct a crash-proof C_{HL}. The benefit of this is, I believe, considerable.

Let's further explore the selectional properties of functional categories. As mentioned, his clause structure includes only four heads (as proposed in Chomsky 1995):

(3)   C...T...v...V

Thus, C selects T, T selects v and v selects V. Both T and v come in two versions. v can have an external argument (v*) or not (giving rise to unaccusative and passive sentences). T can have a full set of φ-features or can have only the feature [person]. The latter type of T is referred to by Chomsky as T^{def}. Categories with a full set of φ-features can assign Case, while categories with a defective set cannot. Thus, T can assign

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[1] But see Rezac (2003) for empirical argument that heads may probe their specs, at least in some languages, which casts doubt on the assumption that there is no syntactic relation between a head and its spec.

[nominative] or [null] while T^{def} assigns no Case – giving rise to raising constructions. Thus, somewhat unexpectedly, the T/T^{def} distinction cuts across the finiteness/nonfiniteness distinction: control infinitives are assumed to have a full set of ϕ-features, only raising infinitivals belong to the defective category. I say this is unexpected because I am not aware of any language in which control and raising infinitivals are morphologically distinct along the lines suggested by Chomsky's system. You can only detect if an infinitive is $T^{control}$ or T^{def} *ex post facto*, by looking at the matrix predicate and figuring out if it is a raising or a control predicate.

Moreover, T and T^{def} are selected by different predicates: T with Case and ϕ-features is selected by C while T^{def} is selected by V. Although Chomsky does not discuss it, presumably the complementizer 'for' should also select for T^{def}:

(4)   For a man to be so stubborn …

Thus, Chomsky's architectural assumptions lead to two sets of assumptions: (*i*) there are two types of infinitives, (*ii*) C can select $T^{control}$ and T^{def} while V can select only T^{def}. I find this result unacceptably inelegant.

Chomsky (2001b), disregarding the complementizer 'for', tries to explain why C cannot select T^{def} by arguing that if C's complement does not have a full set of ϕ-features, C's own features would not be checked. This is vulnerable to two sets of criticism: (i) the existence in natural language of default features suggests that lack of feature checking does not give rise to ungrammaticality (as explained below); (ii) there is example (4) to account for: here we have an example of a C that selects for a T^{def}.

1.1.3   Simple and complex operations

C_{HL} contains only three operations: *Merge, Agree* and *Move*. As mentioned, Merge takes two syntactic objects, (α,β) and forms another syntactic object, $K(\alpha,\beta)$. Agree establishes a relation between a lexical item α and a feature f to be found in some restricted space. α is referred to as the *probe* and f as the *goal*. Finally, Move is defined as the combination of Merge and Agree. After agreement between α and f has been established, a phrase containing f, P(f), is copied and merged with

αP if α has some feature – call it EPP – that demands it. Thus, it can be said that α *attracts* P(f). P(f) is now Spec,α.

Move is more complex than Merge and Agree in two ways. First, because it includes both. Second, it additionally includes selection of the phrase (pied-piping) that must be copied and merged. Under the assumption that C_{HL} is parsimoniously constructed, it follows that Move must be a last resort operation, to be applied only if Merge and Agree are insufficient. It further follows that if C_{HL} has at some point a choice between merging a new constituent or moving an old one, the former will always be preferred, effectively preempting the latter.

Chomsky argues that the ungrammaticality of (5a) is evidence that Merge preempts Move. (5a) shows the final sentence, (5b) shows the crucial derivational step and the items left in the lexical array:

(5)   a. *There is likely a proof to be discovered (cf: there is likely to be a proof discovered).
       b. to be a proof discovered
           LA={there, T, be, likely}

At point (5b), the derivation can proceed in two different directions: either 'a proof' raises to Spec,to or 'there' is merged in that position. Assume Move of 'a proof' takes place. After the expletive is merged in the matrix Spec,T, we have as a result (5a). Assume instead that 'there' is merged in Spec,to, as in (6a). 'there' can then raise to the matrix Spec,T giving rise to the grammatical sentence (6b):

(6)   a. there to be a proof discovered
           LA={T, be, likely}
       b. There is likely t to be a proof discovered.

Chomsky concludes that there is a principle in C_{HL} that preempts the complex operation Move in favor of the simple one Merge.

Chomsky himself notes that equivalents of (5a) are grammatical in Icelandic:

(7)   Það   þóttu   mergir   vera gáfaðir í   þessum bekk
       there seemed.pl   many.NOM   be   gifted in   this   class
       'Many seemed to be gifted in this class.'

<div align="right">Hrafnbjargarson (p.c.)</div>

Chomsky argues that this is a consequence of the fact that Icelandic allows for Transitive Expletive Constructions (TECs). An example of a TEC is in (8a), with the analysis proposed by Bobaljik and Jonas in (8b). Notice that both the EA and the IA are out of the VP-shell and the expletive merges in Spec,Agr:

(8) a. Það   klaruu   margar   mys   ostinn   alveg
         there finished many   mice   the.cheese completely
         'Many mice completely finished the cheese.'
     b. [$_{AgrP}$ Það klaruðu [$_{TP}$ margar mys t(T) [$_{AgrP}$ ostinn t(Agr)
         [$_{VP}$ t(EA) [$_{V'}$ alveg t(V) t(IA)]]]]]

                                            Bobaljik and Jonas (1996: 217)

Chomsky's idea is that in (7) the associate of the expletive would raise to a position intermediate between Spec,T and Spec,v (recall that Chomsky does not assume AgrPs) thanks to the same mechanism that allows for (8). After that, the derivation of (7) would follow the same steps as the English one above: the expletive would merge with the nonfinite T and then raise to the matrix clause. If this analysis were correct, we would expect the associate of the expletive to be stuck in the subordinate clause. This prediction is not confirmed: as a matter of fact, the associate obligatorily shows up in a fairly high position in the matrix clause (as pointed out by Jónsson 1996: 174):

(9) a. Það   mundu   margir hafa virst   þekkja María.
         there would.3rd.pl many   have seemed know   Mary
         'Many would have seemed to know Mary.'
     b. *Það mundu hafa margir virst þekkja María.
     c. *Það mundu hafa virst margir þekkja María.

                                                    Sigurðsson (p.c.)

The conclusion is that the associate does raise to Spec,T within the subordinate clause even though an expletive is present in the LA. The hypothesis that Merge preempts Move is not confirmed empirically.[2]

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[2] One could also consider the consequences of Chomsky's (2001b) assertion that Move (or internal Merge, as he now calls it) is just as expected within a "perfect" system as Merge (or external Merge). This assumption would lead us to expect that both operations are on an equal footing and make us wonder why one would be a "last resort", to be applied only if the other one cannot.

1.1.4   Locality

As mentioned, Chomsky assumes that a head can probe within its c-command domain and give rise to nonlocal Agree relations. However, he postulates two restrictions on long distance agreement: MLC and the opacity of phases. In this subsection I discuss the latter, leaving the former to section 1.2.

The goal Chomsky sets up for himself is to allow for long distance agreement only within a certain domain delimited by the phase. Consider the following sentence:

(10)   a.   There is a possibility that proofs will be discovered.
       b. T^{fut} be discovered proofs
            LA = {there, T^{pres}, be, a, possibility, that}

Consider step (10b). Recall that Merge-over-Move requires merge of the expletive rather than move of the nominal 'proofs'. However, 'proofs' does raise from its initial position to Spec,T in the subordinate clause, giving rise to the grammatical (10a). Chomsky's solution to this apparent problem is to further divide the LA into subsets:

(11)   1.   Select LA.
       2.   Select LA_i, a subset of LA.
       3.   Place LA_i in the workspace/acting memory.
       4.   Once LA_i is exhausted, go back to LA and extract another
            subset.

How is LA_i defined? Chomsky proposes that it is a set of lexical items that includes exactly one C or transitive predicate (v^*). The structure built from LA_i is called a *phase*. This turns the subordinate clause in (10) into a phase with an LA_i that does not include the expletive. 'proofs' raises because there is nothing in LA_i that can be merged in Spec,T:

(12) T^{fut} be discovered proofs
       $LA_i = \{C\}$

Having argued for the existence of phases, Chomsky goes on to show how they can enforce locality. He proposes the following principle: a phase is opaque to higher probes. Only the edge (i.e. the spec) of a phase is visible

for a higher probe. This is called the Phase Impenetrability Condition (PIC). Chomsky argues that phases and the PIC check complexity considerably because they reduce the search space for the probe. In this respect, it is worthwhile pointing out that phases may be of infinite length, since raising predicates may be embedded within one another:

(13)   John seems to appear to be likely…to be expected to win t(John).

Although it seems that phases do reduce the search space in practice for most cases, it does not do so in principle, since it does not prevent search spaces of infinite length. Should we consider this a major problem for the phase system? I would say that a system that does reduce search space in principle should be preferable. More on this below.

Moreover, Chomsky (2001a) weakens the opacity of phases: T can probe within a transitive vP. In the structure

(14)   **H1**…H2…[$_{H3P}$ XP [**H3** … YP]]

where H1, H2 and H3 are all probes and H1 and H3 are heads of phases, the following agreement dependencies can be established: Agree(H3,YP), Agree(H2,XP), Agree(H2,YP), Agree(H1,XP), but crucially not *Agree(H1,YP). Conceptually, it is not at all clear why phases are opaque to some probes but not others. Empirically, it is clear why. Take the following Icelandic sentence:

(15)   Henni   líkuðu   hestarnir.
        her.DAT   liked.3rd.pl   horses.the.NOM
        'She liked the horses.'

Sigurðsson (2003: 224)

In (15), the object agrees with T. The subject, bearing a lexical Case, deflects agreement. Take the nominative object to be a theme merged as a complement of the main verb and the experiencer argument an external argument of v (Sigurðsson 1996):

(16)   C…T…[$_{vP}$ DP$_{DAT}$ v [$_{VP}$ like DP$_{NOM}$]]

According to numerous tests, the dative argument is a subject sitting in Spec,T (Thráinsson 1979, Sigurðsson 1989, among others). However, T

agrees with the nominative object. In Japanese, a nominative object can accompany a nominative subject too. According to Chomsky 2001a: 14, T probes across the dative subject to agree with the nominative OB. Consequently, the vP phase cannot be opaque to T and the PIC only affects probes that are heads of phases. I find this weakening of the PIC reason enough to seriously consider abandoning the phase system and looking for an alternative analysis of nominative objects.

1.1.5 Look-ahead

In the *Greed* approach to movement (Chomsky 1993), it was the unvalued features of the moving item that triggered displacement: informally stated, DPs moved to a position (Spec,Agr/T/INFL) in order to get Case; wh-phrases moved to Spec,C to check some [wh] feature with a [Q] feature on C. However, successive cyclic movement was always a problem for this view: why should a wh-phrase stop in intermediate Spec,C's if there was no feature checking/valuation in those positions? Or, assuming Kayne's (1989) analysis of participle agreement in French, why should a DP stop in Spec,AgrO if Case was to be assigned in Spec,T/AgrS? Greed typically ended up being formulated in a weak form, as: Greed licenses a movement if features of the moved item would not otherwise be satisfied (see Chomsky 1993 and particularly the discussion in Collins 1997). Successive cyclic movement takes place because otherwise the features of the DP or of the wh-phrase are never checked. Greed, viewed like this, either involves look-ahead (I can take this step because I know it will be licensed later) or it is an output filter (so Greed can examine an entire derivation and make sure that every step is justified). If a derivation must include output filters, then it certainly cannot be crash-proof.

Later, Chomsky resolves to abandon the Greed system for an *Attract* system (Chomsky 1995), in which probes and not goals trigger syntactic operations. Chomsky (2000) addresses successive cyclic movement by endowing the heads of phases with optional EPP features, which trigger pied-piping of the wh-phrase to their specs (participle agreement gets a different analysis, detailed below). For a wh-phrase to make it to its final destination, all that is required is a sequence of EPP features on phase heads, cf. (17).

Notice that these EPP features are required by the PIC: the matrix $C_{[wh]}$ cannot probe inside the matrix vP, much less within the subordinate

clause.

(17)   [$_{CP}$ wh C$_{[wh][EPP]}$ ...[$_{vP}$ t(wh) v$_{[EPP]}$ ...[$_{CP}$ t(wh) C$_{[EPP]}$...[$_{vP}$ t(wh) v$_{[EPP]}$t(wh)]]]]

There is no "look-ahead" in this solution, but it could not come without a trade-off. This is that in order to obtain a converging derivation the stars have to line up in exactly the right way, the probability of which is very small. Within this system, there could be many nonconvergent derivations. In the above example, if one of the intermediate v and C does not have an [EPP], the wh-phrase will never make it to the last Spec.C. Moreover, if a C or a v has an [EPP] feature but there is no C$_{[wh]}$ at the end of the day, the derivation crashes too. Again, there are many, many crashing derivations for each convergent one.

In Chomsky (2001a: 34, 35) the perspective changes somewhat. Here he proposes a "Have an Effect on Output" condition that licenses EPP features. Thus, an EPP feature is licensed at a certain position if an interpretation can be assigned to this position or if that position is to be used as an escape hatch. For instance, an EPP feature can be assigned to v* in languages in which Spec.v* can be assigned a meaning (specificity, D-linking, etc.), thus we have object shift. Or v* can have an EPP if the object is a wh-phrase that must reach Spec.C. So now we are closer to a crash-proof syntax, since EPP features are not assigned freely. However, look-ahead rears its ugly head again. I consider this dilemma to be inherent to any probe-based movement theory.

To sum up this section: Chomsky inserts some mechanisms into C$_{HL}$ in order to ensure that derivations do not reach an excessive level of complexity. The trade-off is a system in which unacceptably too many derivations go astray. Moreover, the empirical argumentation presented to support these mechanisms turns out to be flawed. I argued that the "attraction by probe" approach to displacement makes it impossible to obtain a crash-proof syntax without look-ahead.

1.2   Intervention

1.2.1   Match and Agree

As briefly sketched above, A-dependencies gravitate around the operation Agree and its properties. If a head H has an unvalued/uninterpretable feature f, H becomes a probe that will search for a matching feature that can value f. A "matching feature" is considered to be a feature identical in type, although not in value – i.e. a probe may have an unvalued person feature that can be matched by either a first, second or third person determiner. The domain of the probe is its sister, the c-command domain of H. The only locality (other than the PIC) imposed on Agree is that a probe has to match features with the closest c-commanded token of f.

However, a probe that finds a matching feature may not always agree with it. If the matching feature is contained within a category G that has already valued/checked its Case feature, agreement is not possible. Moreover, since matching *is* taking place, the probe cannot go around G, giving rise to the well-known intervention effects usually studied under the label Relativized Minimality or Minimal Link Condition (MLC):

(18)   *John seems that it is likely t to win the race.
        T_1 seem that it T_2 be likely John to win the race

In (18) the matrix T_1 can probe, find the expletive 'it' and match its features against it. Since there has been matching of features, the probe T_1 cannot probe further. However, the expletive's Case has been deleted by the probe T_2, so T_1 and the expletive cannot agree. The derivation crashes because the features of T_1 are not valued and/or DP's Case is not assigned. In effect, Case assignment "freezes" a DP in place, making it unable to participate in further dependencies.

Take now a typical Object Shift configuration (IA = internal argument, EA = external argument):

(19)   C...T [$_{vP}$ IA [$_{v'}$ EA v [$_{VP}$ V t(IA)]]]

As Chomsky (2000) explains, v probes and reaches the object in situ. They agree and value their uninterpretable features. Since v also has an EPP feature, a copy of the object is merged in Spec,v. The Case of the object is

deleted, so it is inactive to a higher probe. This means that the object's Case should be deleted at once for the purposes of syntax so T cannot probe it. However, Chomsky (2001a) links feature deletion to Spell-out, and the latter takes place at the phase level (v*P or CP). This entails that this Case cannot delete at once: it has to stay in place until the CP is completed and can be read by the PF component. The question is how we can let the Case of the IA remain visible without creating an intervention effect between T and EA.

Chomsky (2001a) proposes that the shifted object keeps moving higher up, an assumption for which there is some empirical evidence (Holmberg 1999). He further proposes that the MLC is checked when the phase is completed – turning the MLC into a filter on phase representations. At that point, only the trace of the object stands between T and the subject, and traces do not intervene (by assumption, only full chains do). This analysis allows the Case feature of the object to remain undeleted in syntax until the CP phase is completed, since it does not intervene between T and the subject anyway.

Is it a good idea to postpone the checking of MLC until the phase is completed? Recall that I mentioned above (section 1.1.4, example 13) that there is no principled limit to the length of a phase. This means that our derivation could have many violations of MLC that would not be detected for a long time or, in other words, that many doomed derivations are allowed to reach completion. I find this problematic, if a crash-proof syntax is desirable. Moreover, in section 1.1.2 Chomsky discards backtracking to check that selectional requirements of a predicate are met. It would be desirable to be consistent: either backtracking (within the phase or some other domain) is permitted or it is not.

In these pages I propose a strict derivational approach: intervention is designed so that an application of Agree or Move that violates it is stopped at once.

1.2.2 Features and the MLC

An innovation of Chomsky's recent work is the idea that the total sum of the features of a head is crucial to decide whether an intervention effect will take place or not. If a category does not have a full set of φ-features, it does not intervene in an A-dependency. Chomsky claims that participles, which have [number] and [gender] but not [person] and ECM/raising

infinitivals, which have only [person], are ϕ-incomplete, so they do not give rise to intervention effects. Consider the following examples (20c is in Spanish):

(20) a. Several prizes are likely to be awarded.
     b. We expect several prizes to be awarded.   Chomsky (2001: 5)
     c. Las mujeres fueron   vistas   en la tienda.
        The women   were.3rd.pl seen.fem.pl in the store
        'The women were seen in the store.'

For a Case feature to be valued and deleted, the probe must have a complete set of ϕ-features, or be ϕ-complete. T^{def} or a participle have some agreement features and can probe a DP but, since they are not ϕ-complete, the Case of the DP is not deleted and it remains active for a higher probe. Consider the participle example. Since the participle does not have a full set of ϕ-features, the Case feature of the DP is not deleted and can be later accessed by T:

(21) $T_{[person][number]}$ be seen$_{[number][gender]}$ the women

Something similar can be said about raising infinitivals:

(22) $T/v_{[person][number]}$ $T_{[person]}$ be awarded several prizes

Under one version of the story, T^{def} has an EPP feature that attracts the DP to its spec, from where it can be probed from above. Under another version, also considered by Chomsky, T^{def} does not even have an EPP, but the higher probe can simply bypass it to reach the DP (in Chomsky 2001b he decides that T^{def} definitely has EPP).

Expletive 'there' is assumed to be a [person] feature. Being ϕ-incomplete, it can also be bypassed. Take the following example:

(23)   There is a man in this room.

The expletive is merged in Spec,T. It can probe T and its [person] feature is deleted, even though the [person] of T is also unvalued. None of the features of T delete, since deletion is assumed to be an all-or-nothing operation. The expletive, being ϕ-incomplete, cannot delete the features of T, which probes and finds matching features on the DP/NP 'a man'. Since the latter's Case is still active, nothing prevents Agreement between T and DP/NP:

(24) a. There$_{[person]}$ T$_{[person][number]}$ be a man in this room.
      b. Expl deletes its [person] against the features of T:
          There$_{[person]}$ T$_{[person][number]}$ be a man in this room.
      c. T values and deletes its features against the DP/NP:
          There$_{[person]}$ T$_{[person][number]}$ be a man in this room.

Less clear is the analysis of the following examples (despite extensive discussion):

(25) a. There is likely t to be a man in this room.
      b. We expect there t to be a man in this room.
      c. There$_{[person]}$ T$_{[person]}$ be a man in this room.
          LA(a) = {T, be, likely}
          LA(b) = {we, T, expect}

In order to reach either (25a) or (25b), one has to go through the intermediate stage (25c). With LA(a) we derive (25a), with LA(b) we derive (25b).

Since 'there' and T^{def} have exactly only the feature [person], they should be able to delete each other's and 'there' should become inactive. They are, so to speak, ϕ-complete with respect to one another. However, this cannot be the case, because 'there' has to be probed and pied-piped to the matrix Spec,T/v, which entails that 'there' must have an active feature. It is unclear whether Chomsky's (2000, 2001a) feature assumptions can be maintained.

Another piece of data that demands our attention is predicate nominals. Consider the following Icelandic example:

(26) a. Hún   er goð   stelpa.
          She.NOM is nice   girl.NOM
          'She is a nice girl.'

b. Við   töldum   hana   vera   goða   stelpu.
   We.NOM believed   her.ACC   be   nice   girl.ACC
   'We believed her to be a nice girl.'

Sigurðsson (2002: 101)

In (26) we can see that the case morphology of the predicate *stelp-* co-varies with that of its argument *hún/hana.* This means the probe could reach the pronoun across the predicate nominal, although it can hardly be claimed that the latter is φ-incomplete.

López (2002) levels other criticisms against Chomsky's Agree framework. First of all, the distinction between matching and agreeing is artificial and does not follow from any principles: why should a DP without Case be more able to agree than a DP with Case? Notice that the φ-features of the DP do not delete, since they are interpretable – in Chomsky's framework Case is necessary to make the φ-features of a DP visible to a probe, but we do not know why these φ-features can't stand on their own and be accessed by a probe without the intermediary of a Case feature. Notice that an expletive of the 'there' type can delete [person] against T, which entails that the features of T must be active and able to delete features in another constituent, although T has no Case. So the Case requirement for "activity" affects only D.

Second, how is φ-completeness to be defined? In example (20c), the participle has number and gender features and T has number and person features. Since the DP has number, gender and person features, it would seem that neither T nor the participle has a complete set of φ-features. Are we going to assume that T has unexpressed gender features in Spanish? Or should we privilege [person] over [gender], so the former constitutes a φ-complete probe while the latter doesn't? On what grounds?

Consideration of multiple agreement in Bantu provides further fuel against the notion of φ-completeness (also mentioned in Carstens 2001). Consider the Kiswahili sentence in (27), cited from Carstens and Kinyalolo (1989).

In Kiswahili, a verbal root can't support both tense and aspect morphology. So the strategy resorted to by this language is to have the aspect morphology attached to the stem and the tense morphology attached to an auxiliary verb, glossed as 'be'. The agreement marker *a-* indicates subject agreement, third person singular and first noun class (where noun class is taken to be an expression of gender, see Carstens

1991). Notice that subject agreement is repeated on the main verb and on the auxiliary. Let's consider the stage in the derivation in which the aspect marker has just been merged and the subject is still in its base-generated position. Further, I assume that assembling of the aspect marker and the verb is a PF process, cf. (28).

(27)   a.   Juma a-ta-pika   chakula
            Juma AGR.FUT.cook   food
            'Juma will cook food.'
       b.   Juma a-ta-kuwa   a-me-pika   chakula
            Juma AGR.FUT.be AGR.PERF.cook   food
            'Juma will have cooked food.'
       Where 'a'=agr=3rd person singular 1st noun class.

(28) $[_{AspP}$ *a-me* $[_{vP}$ *Juma pika ...* $]]$
            AGR.PERF   Juma cook

Obviously, '-me-' is an agreement probe, as shown by the overt agreement morpheme. Notice that the probe is φ-complete – or, at least, it can't be said that the Aspect head is any less complete than T. So, matching of features between *-me-* and the subject should lead to deletion of the Case feature of the subject. At this point, the subject is inactive and can't be probed by T, even if *-me-* had pied-piped the subject to its spec. So Chomsky predicts that T can't agree with *Juma*, contrary to fact.

   Alternatively, we could assume that the Case feature of *Juma* is deleted but still present in the computation until the phase is completed – i.e. Chomsky's discussion of object shift in section 1.2.1, example 20 and my criticism of it. Thus, the Case feature is still accessible to T. However, notice that the same reasoning can apply to the examples in (25): we could say that T^{def} does delete the Case of the DP but it survives until the phase is completed, so it is still accessible from the higher probe (we could posit a restriction according to which the case morphology of the DP would depend on the last agreeing head). But if we adopt this way of thinking, we simply do not need φ-completeness at all, only the stipulation that T is not the head of a phase.

   It seems safe to conclude that a system in which there is no distinction between Match and Agree and in which the operation Agree is not concerned about φ-completeness is preferable on the grounds of parsimony.

We have already mentioned quirky arguments in the context of the PIC. It turns out that they are relevant for intervention effects and φ-completeness too. In this regard, Chomsky (2000) considers three configurations present in Icelandic (I cite the example as in the original source, with annotated English words):

(29)   a.   me$_{[dat]}$ thought$_{[pl]}$ t they$_{[pl]}$ be industrious.
        b.   *me$_{[dat]}$ seem$_{[pl]}$ t John$_{[dat]}$ like horses$_{[nom]}$.
        c.   *John seems me$_{[dat]}$ t like horses.

(29a) shows that 'me' is a goal and can be pied-piped.^{3} The difference in grammaticality between (29a) and (29b) is accounted for by defining more precisely the notion of intervention. Assume that only full chains can create intervention. In (29a) the dative argument does not intervene between T and 'they' because only the trace lies in between. In (29b), the entire chain 'John' intervenes between T and 'horses', with the ungrammatical result. Likewise, 'me' prevents raising of 'John' in (29c).

Two objections can be presented to this argument. The first is that it is clear the dative constituent does not have a full set of φ-features, since it does not trigger agreement on T. If that is the case, why should it give rise to intervention effects at all? It is useful to contrast this example with the following:

(30)   We expect there to be some horses here.

'there' stands between the matrix v and 'some horses'. However, since 'there' is φ-incomplete, there is no intervention effect. Why isn't the same phenomenon happening in (29b)?

The second objection is the following. Consider example (29a) at the point when T is ready to probe:

(31)   T think me$_{[dat]}$ they be industrious

At this point, the entire 'me$_{[dat]}$' chain stands between T and 'they'. It is only later that only a trace stands between T and 'they'. This means that

---

^{3} As we know, in Chomsky's system Pied-piping entails a previous Match+Agree relationship – however, it is not clear what feature or features of 'me$_{[dat]}$' match the unvalued features of T. The latter appears in default third person singular. Quirky subjects are left in a limbo in Chomsky's system.

probes can try several times until they get what they want. Chomsky considers the free application of Agree and Move to be optimal. I disagree. As I will develop in this book, there are advantages to be gained by adopting a strictly cyclic derivational system.

To conclude this section: there are a number of questions left open in Chomsky (2000, 2001a, b) concerning the features that participate in Agree and how MLC intervention effects come about.

1.3   Proposal

1.3.1   Move as a reactive operation

Take the famous Case filter of Roger Vergnaud as formulated in Chomsky (1981):

(32)   *NP if it is overt and has no Case.

Move in the 1980s was conceived as applying freely as long as (32) and a set of other filters were respected. Later, Chomsky argued that movement had to be motivated, therefore it is a "last resort" (see specially Chomsky 1993). NP/DP movement was then characterized as triggered by the necessity of the nominal to have Case in order to be fully licensed in a structure:

(33)   *Greed* (strong form or *Greediest)*
        Move α raises α to a position β only if some morphological
        property of α itself is satisfied in position β.

                                                          Collins (1997: 96)

Strong Greed has a negative empirical consequence: it can't account for successive cyclic movement. Take the phenomenon of past participle agreement. The subject DP agrees with the participle and with T in (34), a Spanish example:

(34)   Las   camisetas   fueron   vendidas en cinco minutos.
        the.f.pl T-shirts.f.pl were.3rd.pl sold.f.pl in five   minutes
        'The T-shirts were sold in five minutes.'

Participle agreement shows that displacement does not affect only the initial and the final positions (the head and the tail of the chain) but also a number of intermediate positions. But if only movement of the DP to Spec,T "to get Case" is licensed, there is no insight on why the DP agrees with the participle: you would expect the DP to move to Spec,T in one shot, without stopping at a position close enough to the participle (Spec,AgrO, according to a popular class of analyses sprung from Kayne 1989) so they can agree. This led to a weaker version of Greed:

(35)   *Greed* (weak form)
       Move α raises α to a position β only if some morphological property of α would not otherwise be satisfied in the derivation.

                                                                    Chomsky (1993: 14)

So, although the DP does not get Case when moving to Spec,AgrO, this movement is licensed by Greed because this movement is a necessary intermediate step en route to Spec,T. Alternatively, Collins (1997), Lasnik (1995) propose analyses which, essentially, allow for movement as long as some feature checking takes place. Thus, either the moving item "knows" where to go in advance or we take Greed to be a filter, and we let the computational system perform many movement operations, only a few of which are licensed.

To a great extent, it was dissatisfaction with the problem of successive cyclic movement that led to a change of perspective from Move to Attract by probe, the model sketched in the previous section.

The question is whether the problems with Move + Greed were real or just a by-product of the way Move was conceptualized. Let's formulate Move along the following lines:

(36)   a. DP/NP enter C_{HL} with an unvalued Case feature.
       b. Unvalued features trigger a reaction: Agree and/or Move.

Additionally, take syntactic operations to apply in successive cycles, as in Frampton and Guttman (1999). That is, each time an LI is merged in the structure Agree and Move apply exhaustively before the final structure is selected by a new head. Combining (36) with this cyclic view of derivations, we obtain spec-to-spec movement, cf. (37).

The DP with unvalued Case triggers a reaction, Move in this case. At every stage of the derivation, DP can only move to one place, the spec of

the newly introduced category. Movement of DP only stops when Case is valued.

(37)   1. $[_{XP}$ DP X] Merge (Y,XP)   →
        2. Y $[_{XP}$ DP X]   Move (DP)   →
        3. $[_{YP}$ DP Y $[_{XP}$ t(DP) X]]   Merge (Z,YP)   →
        4. Z $[_{YP}$ DP Y $[_{XP}$ t(DP) X]]   Move (DP)   →
        5. $[_{ZP}$ DP Z $[_{YP}$ t(DP) Y $[_{XP}$ t(DP) X]]]
        ...

Under this conception, successive cyclic movement turns out to be an organic part of the operation Move. Moreover, Move is not free but motivated, as in the Greed model, by unvalued features. If we want to formulate Greed within a conception of Move as the one in (37), it would look like (38):

(38)   Move α with feature matrix [F] only if [F] includes an unvalued feature.

The perspective has changed: we do not have movement licensed by a filter but movement triggered by a feature. The debates turning around Greed and Greediest (Chomsky 1993, Collins 1997) turn out to be pseudo-problems, a consequence of the way the operation Move was conceptualized and not of Move itself. Substituting Move for Attract is, as far I can see, unnecessary and, given the problems that it creates (requiring a sequence of EPPs to account for successive cyclic movement), a wrong step.

1.3.2   Agree as a reactive operation

Consider now the operation Agree of Chomsky (2000, 2001a):

(39)   A second is an operation we can call *Agree*, which establishes a
        relation (agreement, Case checking) between an LI a and a feature
        F ...   Chomsky (2000: 101)
        We therefore have a relation Agree holding between a and b,
        where a has interpretable inflectional features and b has
        uninterpretable ones, which delete under Agree.
                                                Chomsky (2001a: 3)

Of interest now is what happens if an uninterpretable/unvalued feature is not valued. The answer is (apparently) straightforward: the derivation crashes:

(40)   [...] an uninterpretable feature in the domain (within the phase, but not at the edge of a phase, L.L.) determines at the phase level that the derivation will crash."

Chomsky (2000: 108)

Spell-out must therefore apply shortly after the uninterpretable features have been assigned values (if they have not been assigned values at this point, the derivation will crash, with uninterpretable features at the interface).

Chomsky (2001a: 5)

Is it empirically corroborated that unvalued features lead to ungrammatical sentences? An unvalued Case feature on a DP does lead a sentence to ungrammaticality:

(41)   *It seems a man to be intelligent.

But otherwise, if unvalued features find nothing to agree with, they simply go default:

(42)   Stelpunum   var   hjálpað.
        girls.the.DAT   was   helped
        'The girls were helped.'

Sigurðsson (1996: 9)

In (42), T finds no adequate D with which to value its unvalued [person] and [number]. But the result is a grammatical sentence with a default specification of features on T. This means that we have to conceptualize Agree as a process that takes place if it can, without lethal consequences if it cannot.

There are two ways Agree could be understood. I present them as option a and option b:

(43)   a. a probes b in order to value its unvalued features.
        b. a probes b as a reaction caused by unvalued features on a.

If we think of Agree in terms of (43a), then it follows (intuitively rather than logically) that not checking features should wreck havoc in the derivation. If Agree has an objective (feature valuation) then failure to accomplish this objective surely has to have consequences. However, if Agree is understood reactively – unvalued features trigger an operation without any particular outcome in mind – there is nothing surprising about the presence of a backup resolution, default features.

Thus, eliminating implicit or explicit teleological formulations of syntactic operations fits better with the notion that Agree and Move are natural phenomena. Moreover, it allows us to tackle apparently difficult empirical problems: successive cyclic movement, default features and others that will become clear as we progress.

1.3.3 Agree, Move, Complex Dependencies

My technical proposal will consist of three main parts: (i) and (ii) appear in embryonic form in López (2002), (iii) is used in López (2003a) to account for agreement in quirky subject constructions;

(i) I argue that there is no such thing as long distance agreement. Take the structure (44). Chomsky would allow for Agreement to take place between H1 and a constituent in the domain X across H2P, unless H1 is head of a phase. Instead, I propose that the domain X, after it has been probed by H2, becomes opaque to any further probe. Consequently H1 can't agree with something in X, regardless of the type of H1:

(44)

H1P
├── H1
└── H2P
    ├── Y
    └── H2'
        ├── H2'
        └── X
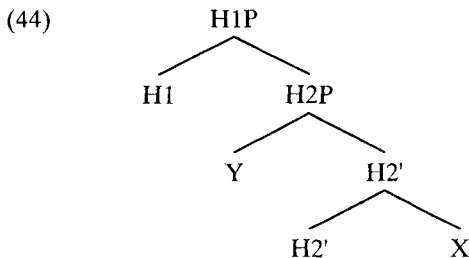
So, there are no phases in this system and no PIC – or, to say the same thing in different words, every syntactic head is a phase and the PIC is understood in its strong form. The MLC and concomitant paraphernalia (ϕ-completeness, "freezing" effects) also become unnecessary. Thus, most

(maybe all) of the awkward technology of Chomsky (2000, 2001a, b) can be eliminated.

(ii) Further, I argue that this opacity is what triggers Move. Recall that in Chomsky's model, once a probe has agreed with a goal the latter can be pied-piped to the spec position of the probe in order to satisfy an EPP feature of the probe. Instead, I argue that X in (44) needs to move if it has unvalued features that can't be probed. Movement is triggered by unvalued features of the term that moves in the reactive fashion sketched above. Movement only stops when the moved item is close enough to a head with the right features so Agree can be established – in effect, if H1 is the right probe, movement stops at position Y.

The obvious conceptual advantage of this conception of Agree and Move is that, by disallowing any sort of long distance agreement, I reduce drastically the search space for an agreement probe, thus reducing the computational complexity involved in the operation.

(iii) Apparent long-distance Agree dependencies (like the one between T and a nominative object, or the one between T, a participle and a DP) are accounted for by using *Complex Dependencies*. Take two terms a and b with unvalued features of the same type. Assume now they are related by the operation Agree. A principle of Full Sharing (Agree must take place if it can) forces a and b to *co-value* or bind together their features. Thus, when a higher probe reaches either a or b it in fact reaches the entire (a,b) dependency, thus establishing a Complex Dependency. I will argue that Complex Dependencies are conceptually natural and empirically supported. Indeed, the empirical scope of this notion is large – in this book I discuss its consequences for e.g. quirky and expletive subjects in separate chapters.

Thus, the focus of this monograph is on the core concepts of Agree, Move and the dependencies created by Agree. I construct an architecture that is computationally simple and crash-proof within assumptions that are expected if we take syntactic operations to belong in the natural world. But enough promises.

2

Agree, Move, A-dependencies

2.1 Introduction

In this chapter I introduce the general framework of analysis. I start by laying out my assumptions on clause structure (section 2.2). Then I introduce the operation Agree as feature valuation and Case assignment is defined as an agreement operation (section 2.3). Section 2.4 spells out the problem of locality of A-dependencies and articulates the strictly local approach sketched in Chapter 1. In section 2.5 I argue that Agree and Move should be considered two distinct operations and I go on to discuss superraising. Section 2.6 discusses the nature of morphosyntactic features, their functioning in C_{HL} and how and when they are deleted and spelled out. Section 2.7 shows some exempla. Section 2.8 presents the conclusions.

2.2 Clause structure and selection

I adopt Chomsky's (1995) proposal that external arguments are introduced by a functional category, a light verb represented as v (for similar ideas, see Kratzer 1996, among others ultimately rooted in Larson 1988).

What does v select for as a complement? The traditional assumption is that it should be a VP. Likewise, D selects for an NP:

(1)   a.

```
              vP
            /    \
          v       vP
                 /   \
                V     YP
```

b.

```
              DP
            /    \
          D       NP
                 /   \
                N     YP
```
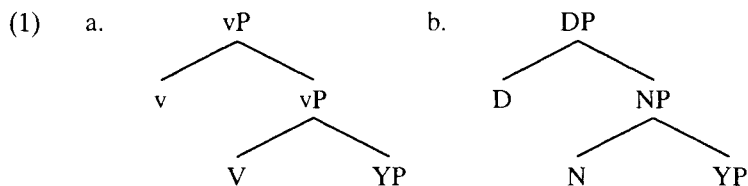
However, it is worth considering Marantz's (1997) recent proposals concerning the morphology–syntax interface (and adopted in Chomsky 2001b).

Marantz argues against the Lexicalist Hypothesis – or more appropriately, he complains that Lexicalism died a while ago but most of us did not read the obituary and missed the funeral. Two lexicalist assumptions that Marantz rejects are crucial for our purposes. The first is that the lexicon is a computational space, separate from syntax, in which words are formed by putting together different bits and pieces, including roots with an inherent category label. The second assumption is that syntax does not see these bits and pieces, only the resulting lexical item with the category label attached to it. Instead, Marantz proposes a "narrow lexicon" composed of roots and bundles of grammatical features. The roots enter the computational system – there is only one for morphology and syntax – without a category label and take the complements that they select. Then they are themselves selected by a functional category. If the functional category is a v, the resulting structure will be a verbal phrase. If the functional category is a D, the result will be a nominal phrase.

(2)   a.

```
              vP
            /    \
          v      RootP
                 /   \
              Root    YP
```

b.

```
              DP
            /    \
          D      RootP
                 /   \
              Root    YP
```
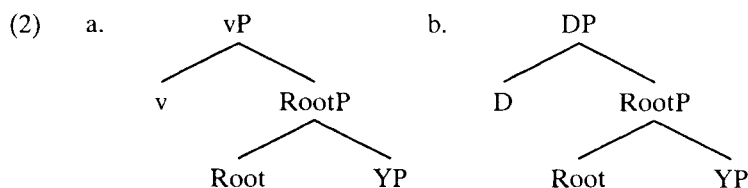
Thus, if //buy// is selected by v, it is going to be a verb, whereas if it is selected by D, it is going to be a noun. Functional heads – Tense, Comp, Det – are feature bundles that have fairly fixed selectional requirements.

However, Marantz's proposals seem hard to implement, particularly considering the existence of inherent features. The Spanish word for

'bridge' (*puente*) is masculine while 'spring' (*fuente*) is feminine. If both words are stored in the lexicon as roots, not as nouns or verbs, where do inherent features come from? Given this difficulty, and the relevance of inherent features for some aspects of my analyses (see section 2.6), I stick to the traditional assumption that lexical items are merged in C_{HL} as nouns or verbs.[1]

From now one I refer to the constituent merged as Compl,V as IA (short for Internal Argument). The constituent merged in Spec,v will be refered to as EA (External Argument):

(3) $[_{vP}$ EA v $[_{VP}$ V IA]]

Above the vP level, I mostly stick to conservative assumptions: so I assume that universally we have a TP and a CP. In some sections I explore the possibility of additional functional categories.

As motivated by my crash-proof desideratum, Merge is triggered by selection. Thus, a predicate, say V, enters the derivation and, if it selects an IA, this will be merged at once to satisfy this requirement. Likewise, T selects v and C selects T (Abney 1987, Grimshaw 1991). The selectional requirements of v are more complex.

v comes in several versions (see Arad 1998, 2002). We are for now interested in two of them. v(EA) is the functional category that selects for an agent external argument and has the property of assigning accusative Case. A second version of the light verb is the one that we find in unaccusatives and passives: it does not assign a θ-role at all but may in some languages assign a Case that I will refer to as partitive (Belletti 1988, Lasnik 1992). Call it v(∅). Another type of v is the one that selects for verbs that refer to psychological states and external arguments that receive the role of experiencers (Marantz 1993, McGinnis 1998, Ura 2000). I refer to it as v(EXP). It becomes prominent in Chapter 3.

v(EA) selects a D argument which, given binary branching, will end up in its spec. v(∅) does not have an argument in its spec. However, looking at v(∅) in more detail may lead to a more fine-grained classification of light verbs. It is intriguing that expletive constructions are constructed over unaccusative and copulative predicates:[2]

---

[1] See also the critique in Baker (2003: 265–275).

[2] Transitive Expletive Constructions in Icelandic are discussed in Chapter 4.

(4)   a. There arrived only one man.
       b. *There worked only one man.

I claim this datum should be taken as evidence that the expletive is merged in Spec,v($\emptyset$): in (4), v($\emptyset$) may select a D in its spec, even without a θ-role to assign. Or, in other words, v($\emptyset$) may have an EPP feature. The EPP in this model turns out to be a residue of the semantic-selectional property of v – thus, the EPP is indirectly connected to the θ-system, as a "bleached" semantic requirement.

Unaccusatives and passives do not always include an expletive. Chomsky (1995) argues that in these constructions there is no v, while Legate (1998) argues that there is. For my purposes, either approach is fine. If there is indeed a light verb, then this light verb does not select D: the EPP has been completely erased. Thus, we end up with a finer-grained classification of v: we can detect two types of v($\emptyset$): v($\emptyset$) proper and $v^{EPP}(\emptyset)$.

Expletive 'there' selects an NP:

(5)   a. There is a monk in the cloister.
       b. There began a revolution in manners.
       c. *There rains.
       d. *There is possible that a monk is in the cloister.

The crucial piece of evidence is the ungrammaticality of (5c, d). One could attribute it to the lack of valuation of T's features (Chomsky 2000 does claim that lack of valuation gives rise to ungrammaticality). However, there is abundant evidence in the literature that unvalued features can simply take a default form:

(6)   Þeim   er   kalt.
       They.DAT is   cold
       'They are cold.'

<div align="right">Sigurðsson (1996: 9)</div>

Given the option of default agreement, it seems that the only source for the ungrammaticality of (5c) and (5d) is the lack of an associate for the expletive. In other words, 'there' selects an NP/DP. This selectional requirement must be understood as being syntactic, since there does not seem to be a semantic selection at work.

I posit that, when a syntactic selectional requirement is not satisfied by Merge, the selector can probe in its c-command domain and find an item that satisfies it. Thus, a Select dependency is established:

(7)   [$_{vP}$ there v [$_{VP}$ IA V]]
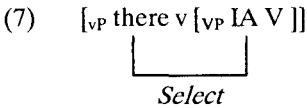
               Select

This is not the only instance in the literature in which a selectional requirement is satisfied not by the complement but by the spec of the complement. Kato and Nunes (1998) discuss free relatives in Portuguese in which one preposition is performing double duty, satisfying a selectional requirement of two verbs at the same time. (8a) shows one of the examples they use, (8b) shows an example in Spanish while (8c) presents an analysis within my assumptions:

(8)   a. Ele só   conversa   com quem ele concorda.
         he   only talk.3rd.sg with who   he   agrees.3rd.sg
         'He only talks with a person he agrees with.'
    b. El   se   burla   de   quien se   ríe.
         He   SE   makes-fun.3rd.sg of   who   SE   laughs
         'He makes fun of the person that he laughs at.'
    c. 1. ele concorda com quem
        2. com quem ele concorda t
        3. ele só conversa com quem ele concorda t

               Select

The verbs *conversa* and *concorda* both select for the preposition *com*. Likewise *burlarse* and *reírse* both select *de*. But there is only one instance of the preposition in either example. So, unless the selectional restrictions of *concorda* or *ríe* are violated, we have to assume that *com* and *de* play double duty, being selected by two verbs simultaneously.

   Given this datum, I extract two conclusions: (i) universal grammar allows for satisfaction of selection with the spec of a complement and (ii) selectional properties of a head can be satisfied after movement.

Turning back to v(Ø) and 'there', we have identified two syntactic (not semantic) selectional requirements, the requirement that v(Ø) select a D and the requirement that 'there' select an NP. Interestingly, both instances of syntactic selection may be understood as a "residue" of semantic requirements left over after semantic selection has been bleached. As mentioned, the EPP on v(Ø) can be best understood if we see v(Ø) as a bleached version of v(EA) – the semantic requirement for an EA is gone but there lingers a syntactic requirement to have a D in Spec,v. Likewise, expletive 'there' can be understood as a bleached version of a locative predicate. As Jackendoff (1987) and Bresnan (1994) show, locative predicates select for two arguments: a place and an object (grammatically, an NP) that is located in that place. Since expletive 'there' is not a locative anymore, it does not semantically require an NP. Its selection of an NP must again be a residue left over after the semantic requirement has already disappeared (a close analysis of expletives and the expletive-associate relation is in Chapter 4).[3]

Could C_{HL} do without Select? The alternative is to delay checking of selectional properties to the interface with the Conceptual-Intentional systems (C-I). A derivation in which the selectional requirements of a head are not satisfied would be convergent but C-I would not be able to interpret it correctly (Chomsky 2001b). The simplification to C_{HL} that this brings about must be weighed against a competing desire: to have a crash-proof C_{HL} (Frampton and Guttman 2002, and see Chapter 1). If C_{HL} is designed to function as efficiently as possible, it would seem entirely plausible that it would incorporate a mechanism to cancel derivations that C-I cannot read at once instead of allowing doomed derivations to proceed uselessly. Select plays exactly this role.

As for specifiers and adjunct positions, I will assume that the only difference between one and the other is whether the position includes an unvalued feature (spec) or not (adjunct). I follow Chomsky (1995) in assuming that the theory of phrase structure does not have any restrictions on how many specs/adjuncts a head can have.

I assume that a structure is built by means of a sequence of

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[3] In diachronic linguistics, semantic bleaching is encountered commonly. For instance, Latin *habeo* was a predicate with two arguments (meaning something like 'have' or 'hold') while its descendant in some Romance languages is a one place predicate (an existential). It would not be surprising to find that an instance of this bleaching (v(EA) → v(Ø)) became a possible ingredient of the universal lexicon.

derivational cycles, a notion that I borrow in part from Frampton and Guttman (1999). A cycle starts when a predicate is selected from Lex. The argument(s) that this predicate selects are then merged with it. Then the transformational operations Agree and Move apply. As a consequence of these operations, features may be valued and deleted and the probing domain becomes opaque. Given certain conditions that I specify later, the cycle can spell out. Once all this is finished, a new predicate can be selected and a new cycle starts again. One main goal of this chapter is to articulate this derivational cycle explicitly. Let's start with Agree.

2.3 Agree

2.3.1 Agree and Case

I assume with Chomsky (2000, 2001a, b) and Pesetsky and Torrego (2001) that agreement is to be regarded as a computational operation such that a syntactic object with unvalued features – a *probe* – searches in its c-command space for a constituent – a *goal* – with valued features of the same type. Henceforth, I represent unvalued features as a variable α so if I want to say that x has unvalued ϕ-features I simply write that x has $[\alpha\phi]$. Thus, a functional category with $[\alpha\phi]$ can probe within its c-command domain until it finds a DP, which has a set of valued ϕ-features, $[\phi]$. As a result of the probe, the $[\alpha\phi]$ of the probe can be valued. Following a long tradition I assume that v, finite T and C have sets of $[\alpha\phi]$ in need of valuation (as for C having ϕ-features see Haegeman 1992 and Zwart 1997, and particularly Carstens 2003, who shows that agreement on C is not the result of "transferring" the ϕ-features of T). If two terms enter a successful Agree relationship, they form a syntactic dependency. As an illustration, consider (9). It shows a v(EA) with unvalued ϕ-features and an object in second person plural. v(EA) probes, finds the object and the latter's features are copied on the former's feature matrix:

(9) $v(EA)_{[\alpha\phi]}$ $IA_{[2nd,pl]}$ $\rightarrow$ $v(EA)_{[2nd,pl]}$ $IA_{[2nd,pl]}$

                     Agree
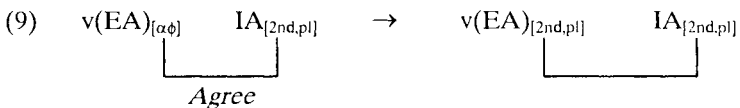
Nominals may have valued ϕ-features and always have unvalued Case,

which I represent as [αC]. How is [αC] valued?[4]

In the Principles and Parameters tradition, certain heads had the stipulated property of assigning Case, namely P, T and V. This view did not change radically until the most recent developments of the Minimalist Program. As I mentioned in the introduction, in Chomsky (2001a: 4), [assign x case] is not a feature of the probe – there is no matching relationship between probe and goal in this respect. Rather, when agreement between probe and goal takes place, and the probe is φ-complete, the unvalued Case of the nominal is valued and deleted. As we saw in the introduction, in Kiswahili we find that both the T head and Aspect co-occur in the same sentence and appear to be φ-complete. As a consequence, the aspect head probes the DP and since the probe is φ-complete, the unvalued Case of the DP should be valued and deleted, effectively freezing the DP in place before T can probe it. This seems to be an undesirable result. Instead, it seems we should retain from earlier frameworks the idea that some heads are responsible for Case licensing of DPs and others are not.

Let's then assume that some functional categories do have a Case feature and, further, that Case is one of the features that can enter an Agree (p,g) relation – notice that I am talking about Case features now like [nominative] or [accusative], not "Case assigning features". I take this feature to be inherent for the heads that bear it. Unlike Chomsky (2000, 2001a), I assume that this Case feature is valued from the onset but uninterpretable. Since this feature is valued, it can be copied on an agreeing goal that has an unvalued Case. For example, v(EA) has an [accusative] feature, so when it agrees with an object with an unvalued Case, the feature [accusative] can be copied on the feature matrix of the object:

(10) $v(EA)_{[acc]}$ $IA_{[\alpha C]}$ $\rightarrow$ $v(EA)_{[acc]}$ $IA_{[acc]}$

            └──────────┘   └──────────┘

              Agree

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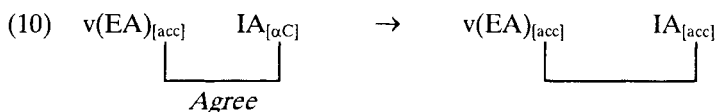
[4] Pesetsky and Torrego (2001) and Sigurðsson (2003) attempt to provide some substance to the notion "Abstract Case". Pesetsky and Torrego argue that Case is simply a tense feature on the nominal. According to Sigurðsson, what triggers movement is the [person] feature, not Case itself. I agree with the general goal of these proposals; my own assumptions are neutral enough to be compatible with either.

Case assignment is therefore only a variant of the agreement relation.

It is often said that Case only shows up on the DP, not on the Case assigner, an apparent datum that Chomsky (2000) uses to argue that there is no "Case assignment" per se, case morphology is simply the expression of an agree relationship with a probe. Is it true that Case assigners never exhibit any case morphology? Consider the following Kiswahili example:

(11)   a-   li-   mw-   ona.
       3rd.sg.1stclass- PAST- 3rd.sg.1stclass- see
       'She/he saw her/him.'

Let's focus on the two agreement morphemes, *a* and *m(w)*. They both convey exactly the same information, as reflected in the glosses. What makes them different? The only difference is that *a* is for "subject" agreement, while *m(w)* is for "object" agreement. I take this to be evidence that case is also apparent on the probes. Thus, *a* is the spell-out of the feature combination [nom, 3rd, sg, 1stclass] while *m(w)* is [acc, 3rd, sg, 1stclass].

2.3.2   Case assigners

The next question to be decided is which heads bear a Case feature. I assume that v may bear a Case feature. As already mentioned, v(EA) bears accusative Case whereas v(Ø) may have no case or may have so-called partitive Case (after Belletti 1988, Lasnik 1992, see Chapter 4 for discussion of the conditions involved in v(Ø) having Case).

Stowell (1981) discovered that assigner and assignee must be adjacent:

(12)   a. I looked carefully at her.
       b. *I saw distractedly her.

The configuration of accusative or partitive Case assignment must be as shown in (13).

Why IA should raise to Spec,V remains unexplained in contemporary theories of A-dependencies. Neither the classic spec-head configuration approach of Chomsky (1993) or the Agree (p,g) of Chomsky (2000) predicts it. For now, I just point this out hoping to intrigue the reader.

Finite T does have [αφ], at least in English, but, contrary to standard

assumptions, I argue that where [nominative] is located is parametrized. Finite C bears [nominative] and nonfinite C [null] in English – I postpone the articulated argument to the next section.[5]

(13)

```
              v'
          /        \
        v            VP
        |          /     \
        |        IA        V'
        └──────► ↑        /   \
                        Adv     V'
                               /   \
                              V    t(IA)
```
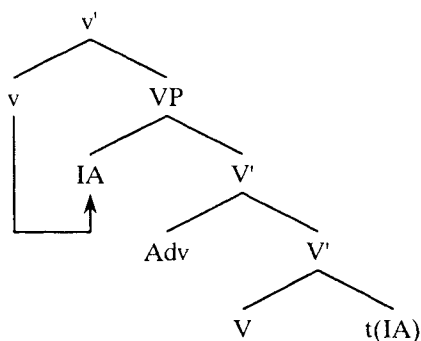
Case assignment in English takes place with the subject in Spec,T:

(14)

```
              C'
          /        \
        C            TP
        |          /     \
        |        Subj      T'
        └──────► ↑
```
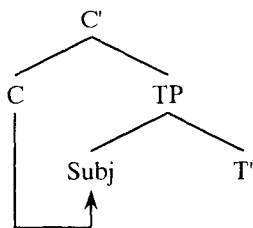
The isomorphism between (13) and (14) is not chance, I believe.

Other languages, I claim, have the [nominative] feature on $T^{[fin]}$ (whether [null] can also be in $T^{[non-fin]}$ is harder to tell and I will not discuss it in this book). In these languages, the subject is assigned Case in Spec,v.

Assume that a language has [nominative] in T. A consequence of this is that the position Spec,T is not a privileged subject position and other constituents can move into it. As a matter of fact, a number of languages use this Spec,T as a position for (continuing) topics.[6]

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[5] In a more articulated CP structure, like the one in Rizzi (1997), the Case assigning head could be Finite⁰.

[6] Other languages with [nominative] in T do not seem to use this position, or not for the same purpose. Irish would be a case in point. It has also been argued that

(15)

```
              CP
           /      \
          C        TP
                /      \
            TOP          T'
                      /      \
                    T          vP
                    |        /    \
                    └──►  SU        v'
                  nom
```
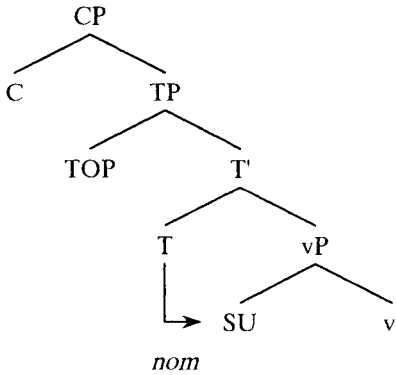
Let's examine one particularly transparent case, that of Finnish, following the lead of Vainikka (1989), Vilkuna (1995), and Holmberg and Nikanne (2002). As these linguists tell us, there are two preverbal positions in the Finnish clause. The highest one, identified with Spec,C or adjunction to C, is a position for constituents that they label contrastive, in a broad sense: contrastive topic, contrastive focus, interrogative words.

The second position, the one of interest here, is identified with Spec,T and is interpreted as a (continuing) topic. This position can be occupied by a subject or by an object, or by adjuncts that can be loosely construed as referential, as seen in the following examples (where underlining represents contrast):

(16) a. Anna   sai   kukkia.
      b. Anna.NOM get.PAST flowers.PART
          'Anna got flowers.'
      b. Anna sai kukkia.
      c. Kukkia Anna sai.
      d. Mikolta Anna sai kukkia.
          'From MIKKO Anna got flowers.'
      e. Sai Anna Kukkia.

Vilkuna (1995: 245–6)

Although in (16b) the object and not the subject occupies Spec,T, T still agrees with the subject, which bears nominative Case. The Finnish data

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Spec,T can be a position for wh-phrases and focus-phrases (see Goodall 1991, Ordóñez 1998, Zubizarreta 1998 for the Spanish case).

present a challenge for received opinion concerning Case assignment, which can be summarized thus: T universally assigns Case to a DP located in Spec,T. It also represents a challenge for Chomsky (2000, 2001a). Recall that in these papers, movement is a three-part operation: Agree–Pied-pipe–Merge. However, in (16b) the argument that is pied-piped and merged in Spec,T is not the argument that agrees with T. In contrast, my model in (15) can provide the beginnings of an account: Spec,T can be occupied by an object because it is not a Case position in this language, Case being assigned to EA in situ.

What is left of the analysis is what motivates displacement to Spec,T. Case certainly is not at issue: both EA and IA get their respective Cases within the vP; moreover, if the object moved to Spec,T for Case-related reasons, there should be a relativized minimality effect with EA. However, Holmberg and Nikanne point out that movement of the IA to Spec,T can strand a floating quantifier, which suggests that movement of the IA to Spec,T should be considered a type of A-movement:

(17)   Ilmeisesti nämä kirjat on   kaikki kirjoittanut Graham Greene.
        Evidently these books has all   written   Graham Greene
        'Evidently Graham Greene has written all these books.'
                                          Holmberg and Nikanne (2002: 88)

IA to Spec,T does not seem to be an instance of A'-movement, since it does not intervene in wh-movement, as Holmberg and Nikanne point out:

(18)   Kuka tämän kirjian on   kirjoittanut.
        Who   this   book   has written
        (what about this book?) 'Who has written this book?'
                                          Holmberg and Nikanne (2002: 88)

Holmberg and Nikanne (2002) argue that T has an EPP feature. Maybe this could drive movement, attracting either the subject or the object. However, as is well known, the EPP has no attracting power independent of Case/agreement: if a DP has Case, it cannot be moved to Spec,T to satisfy the EPP:

(19)   *The men seemed to t that it was getting late.

Consequently, one must conclude that we have a third type of movement

here, triggered by a third type of feature, which we can call [f]. [f] is available to a subset of the languages that assign nominative Case in Spec,v. It is an optional feature that can be borne by a variety of constituents – although a requisite of referentiality/specificity seems to be at work. Likewise, I venture that object shift in Scandinavian could also be triggered by [f], although the assigning/checking functional category would be a different one.

From now on I refer to Finnish-type languages as Discourse Configurational Languages (DCLs), following the terminology of Kiss (1995) (discourse configurationality can also be achieved by means of scrambling or other syntactic operations, but I will not discuss these options in detail in this work).

2.3.3   Arguments that C assigns Case in English

It may seem somewhat exotic to have C as a Case assigner in English (but see Platzack 1986, Vikner 1995 and Chomsky 2001a: fn 17), but clearly this assumption leads to a simplification of the theory. Currently, Chomsky (2000) must assume that there are two types of infinitival heads. On the one hand, T^{def} does not assign Case, has only an [αperson] feature and is selected by a V. It is the one that we find in raising constructions:

(20)   a. John seems [$_{TP}$ to be intelligent t]
       b. John believes Peter [$_{TP}$ to be intelligent t]

Presumably T^{def} is also selected by the complementizer 'for', since the latter assigns Case:

(21)   For [$_{TP}$ John to be late again] would be unforgivable.

On the other hand, infinitival T in control and PRO$_{arb}$ constructions has [αperson] and [αnumber], assigns null Case and is selected by C:

(22)   John put on a nice shirt in order [$_{CP}$ C [$_{TP}$ PRO to impress his boss]]

Therefore, Chomsky makes two sets of assumptions: (i) there are two types of nonfinite T, (ii) C and V have different selectional properties because V cannot select nondefective T or nonfinite C and C cannot

select defective T (except 'for', which does select defective T). Instead, I propose that there is only one type of infinitival T, which neither has α-features nor assigns Case (at least in non-DCLs) (see also Romero 2002). Nonfinite T can be freely selected by a nonfinite C that bears null Case, by a prepositional complementizer (like 'for') that bears accusative, or by a lexical verb that is selected by v (giving rise to raising constructions). The three relevant configurations are shown in (23) (and I stick to the assumption that assigner and assignee are adjacent).

There are two empirical advantages of dissociating Case assignment from agreement with T. The first is that it turns out to be a necessary step to account for the properties of expletive constructions – for instance, the associate of the expletive in English agrees with T but appears in non-nominative (accusative or partitive) Case ('there **are** only **us** left'). This datum provides evidence that in English T does not assign nominative. This is discussed in Chapter 4.

Another empirical advantage of excluding T from the list of Case assigners comes from the phenomenon of agreement with relative pronouns discussed in Kayne (1995) and Van Gelderen (1997), cf. (24).

(23)   a.

b.

c.
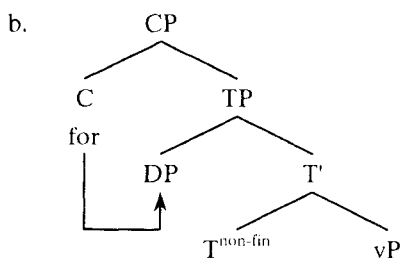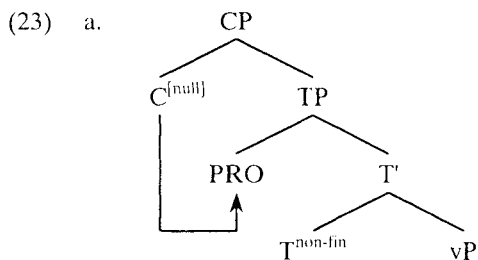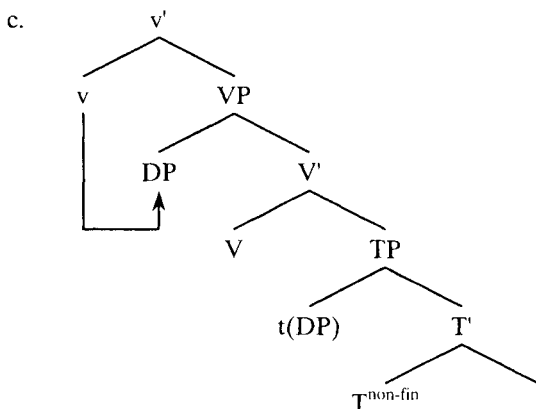
(24)   The people who the boy think are in the garden.

In (24), T agrees with the relative pronoun instead of EA. Van Gelderen (1997) mentions that they are robust for a dialect of English and shows that they are attested throughout the history of English. The properties of this phenomenon are amenable to an account in grammatical terms. Compare (25a) and (25b) (from Van Gelderen's book), taking the judgments to hold for speakers of this dialect:

(25)   a.   The people who the boy t think the girl **know** t are in the garden.
        b.   *The people who t think that John **know** the answer.

(25a) is acceptable while (25b) is not. I would argue that is because 'who' is at some point "close" to 'know' in (25a) but not in (25b) (see the position of the traces). Like so many other agreement phenomena, agreement with relative pronouns depends on a local relation between the agreeing constituents. This strongly suggests that we are dealing with a grammatical phenomenon rather than a parsing error.

   Let's exploit the theoretical consequences of relative pronoun agreement. If nominative Case and agreement with T went hand in hand, EA in (24) and (25a) would have no Case because T and EA do not agree. Thus, nominative Case does not spring from T.

   A plausible analysis of relative pronoun agreement is shown in (26). The wh-phrase stops in Spec,v (on wh-phrases in English stopping in

Spec,v, see Chomsky 1986, 2001a, Fox 2000, López and Winkler 2003). In that position, T can probe 'who' instead of the EA, as shown in (26a). Agreement between T and the wh-word does not prevent EA from raising to Spec,T and getting Case – from C, as shown in (26b). Finally, the wh-phrase raises normally to Spec,C, as in (26c):

(26)   a.   T [$_{vP}$ who [$_{v'}$ the boy$_{[\alpha C]}$ think t]]

            Agree

    b.   C$_{[nom]}$ [$_{TP}$ the boy$_{[nom]}$ T [$_{vP}$ who [$_{v'}$ t(the boy) think t]]]

               Agree
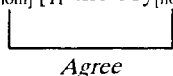
    c.   who C$_{[nom]}$ [$_{TP}$ the boy$_{[nom]}$ T [$_{vP}$ t(who) [$_{v'}$ t(the boy) think t]]]

2.3.4   Default features

In Chomsky (2000, 2001a) and related work, heads with uninterpretable/unvalued features probe in order to value these features. Probing is obligatory in the sense that if the features remain unvalued at the interface, the derivation crashes (see in particular Chomsky 2001a: 5 and discussion above and in Chapter 1). However, the possibility of a probe to assume default features seems to be at odds with this assumption. Consider the following examples:

(27)   a.   Stelpunum   var   hjálpað.
        Girls.the.DAT   was   helped
        'The girls were helped.'
    b.   Þeim   er   kalt.
        They.DAT   is   cold
        'They are cold.'

                           Sigurðsson (1996: 9)

A DP with lexical case being opaque, the unvalued features of T do not find an appropriate goal to value them. However, the result is not an ungrammatical sentence; instead, T simply adopts default values for

person ([3rd]) and number ([singular]).

The first step to understanding where default features come from is to note that Agree is "triggered": the only function of unvalued features is stimulating a certain head to become a probe. A head H does not probe "in order to" value its features; instead, H probes "because" it has unvalued features. If we understand Agree as reactive, it follows that not finding a goal does not necessarily lead to a crashed derivation. Thus, the existence of default forms presents no problem for the theory thus conceived (see Chapter 1 for discussion).

Adopting the notion that default forms are freely available in UG (and therefore English) can help us account for a vexing problem in the theory of grammar. Transitive v sometimes selects for a VP that has a DP complement or a PP complement:

(28)   a. I inspected him   [$_{vP}$ EA v [$_{VP}$ V DP]]
       b. I looked at him   [$_{vP}$ EA v [$_{VP}$ V PP]]

In (28a), v(EA) can agree with and assign accusative Case to the DP, but in (28b) there is no DP. Chomsky's assumptions lead to the mistaken conclusion that (28b) should be ungrammatical, since the ɸ-features are not assigned, or we would have two types of transitive v, which makes the argument for this category circular. Instead, I propose that (28b) is grammatical for the same reason that the sentences in (27) are grammatical: unvalued features do not give rise to ungrammaticality, they simply go default.

Unergatives reinforce this conclusion. Unergatives – which are headed by v(EA), since they introduce an EA – normally do not have a complement DP since they do not select one (or it is incorporated and out of sight, Hale and Keyser 1993). But unergative predicates can assign Case:

(29)   a. Mary laughs often.
       b. Mary laughed the actor off the stage.

Unergative predicates are headed by a v(EA) with ɸ-features and accusative Case. When no DP is in sight, as in (29a), the ɸ-features go default and the accusative Case is simply deleted. As was discussed in López (2001), there would seem to be two variants of v(EA), one that assigns accusative Case and has [αɸ], and another one that does not, and

which one is chosen depends exclusively on which V is selected. At that time I took this piece of evidence to argue against having v as an accusative Case assigner. However, if we avail ourselves of the default possibility, this conclusion can be avoided: there is only one v(EA), with $[\alpha\phi]$ features and [accusative]. If the $[\alpha\phi]$ features are not valued, nothing happens: they can simply be valued as default and [accusative] can be deleted even if it is assigned to nothing.[7]

Once you train your eye to see default forms they pop up everywhere. Take PRO. As is well-known, if PRO can be controlled, it must be. If it cannot be controlled, it adopts an arbitrary reading:

(30) a. I want to PRO find a book in the library.
      b. To PRO find a book in the library can be a dangerous idea.

Take the relationship between PRO and controller to be an instance of Agree, as Landau (2000) argues. If so, arbitrary PRO could be understood as a simple case of adopting default features when there is nothing they can be valued with. Arbitrary SE in Romance may be amenable to the same analysis.

(31) a. Juan se   vio   en el   espejo.
          Juan SE saw.3rd.sg in the mirror
          'Juan saw himself in the mirror.'
      b. Se   vio   a   un hombre caminar sospechosamente.
          SE saw.3rd.sg ACC a man   walk   suspiciously
          'A man was seen walking suspiciously.'

I suggest that we take the SE in (31a) and (31b) to be the same lexical item. In (31a) it forms a dependency with an antecedent, while in (31b) there is no antecedent, with the result that it adopts a default value and the sentence is interpreted as impersonal.

Default case also exists, as can be seen in (32):

(32) Me, I don't appreciate poetry.

---

[7] Bošković (2002) proposes to eliminate the EPP by using a principle that he calls the "Reverse Case Filter" according to which if a category cannot fulfill its Case assigning property, the sentence is ungrammatical. Given the previous discussion, this substitution does not seem possible at the moment.

In (32), there is no Case assigner available for the dislocated pronoun. So it seems that not valuing an [αC] does not lead to ungrammaticality: morphology (understood as in Halle and Marantz 1993) can supply a default form. This is not surprising: since the [αφ] of T/C and v also can be spelled out in a default form, we can posit it as a general property of unvalued features.

However, in other contexts default case is not available (see Schütze 2001 for lucid discussion). Hence the Case filter:

(33)   a.   *John/Me to be late again would be truly amazing.
        b.   *There to be a man hiding in that closet again would be
              embarrasing.

What makes default case available in (32) but not in (33)? It seems that the default strategy for Case is not enough precisely in those contexts where the DP is selected. In (33b) the expletive is selected by v, as hypothesized above, while 'John/me' is also selected. There might be a "visibility condition" at work, as hypothesized by Chomsky (1981), which we can formulate as: "selected D must be assigned Case". On the other hand, 'me' in (32) is not selected by anything – arguably, it is not even integrated into the structure of the sentence. I assume that default case exists only in this sort of environment.

It is worth emphasizing that although all unvalued features may trigger syntactic operations (may be probes), abstract Case remains the "exceptional feature" of the A-dependency system, the only one that has no default option and whose lack of valuation crashes a derivation. It is for this reason that unvalued Case of selected D (and not, unvalued person, number or gender) triggers movement. Likewise Chomsky's P-feature or Case' (López 2003b) that triggers movement to Spec,C has to be valued with a probe, thus becoming the exceptional feature of the A'-dependency system.

2.3.5   Specs as probes

Many of the analyses in this book hinge on the possibility of a spec to be a probe, whether it branches or not. Before I proceed, a few words are in order.

As the reader may recall, Chomsky (2000, 2001a) assumes that a probe must necessarily be a head. This means that if a probe is [+max, −min] it

can't probe. Within strict minimalist hypotheses, this assumption seems to be arbitrary: there is no principled reason why a maximal projection could not also be a probe. If a maximal projection inherits all the features of its head, it should also inherit the feature that triggers probing. Consider the following tree:

(34)

$$Y$$
$$XP = \{X, \{X, ZP\}\}\quad WP$$
$$X \qquad ZP$$
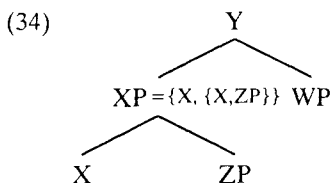
Assume X is a probe with an unvalued feature [αg]. Assume further that ZP cannot satisfy [αg]. XP will inherit it, as part of the label of X. Presumably, XP should also inherit the probe property from X and be able to inspect WP for a valued version of [αg].

However, this is not the end of the story. Collins (2002) has put forth a radical proposal: to do away with labels on phrases from the theory of phrase structure. Thus, a phrase becomes a set of constituents with no label:

(35)

$$\{X, ZP\}$$
$$X \qquad ZP$$
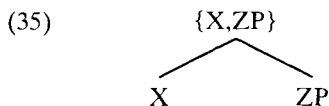
As Collins recognizes, the proposal is at this point speculative – too many analyses have been built on the notion that phrases have labels and it would be a Herculean task to take one at a time and show how a label-less syntax can provide alternative analyses. However, the idea is interesting enough for it to be worth taking into consideration. The question is, is it conceptually plausible to have the features of X probe YP if X is simply a member of the set {X,ZP}? (From now on the labels XP, YP, WP et cetera, where I use them, can be taken as mnemonic devices.)

In structure (36), take W to be a predicate that selects Y and X. Traditionally, this has been represented by means of subcategorization frames, which can be represented as feature structures, as shown in (37).

(36)

WP
{X,ZP}   W'
          W   YP
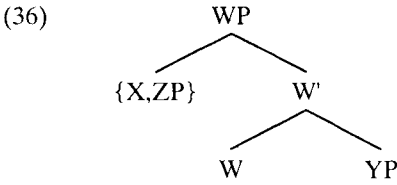
(37)   W [___ x, y]

When W enters the derivation, it immediately seeks to satisfy its
selectional requirement, thus merging with YP and XP successively. Take
Select to constitute a dependency between the subcategorization features
of the selector and the category feature of the selected category:

(38)

WP
{X,ZP}   W'
          $W_{(x,y)}$ YP
        Select   Y   UP
              Select
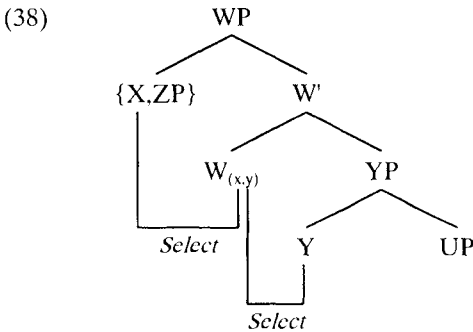
Thus, (W,X) form a dependency based on Select and we can take X and x
to be occurrences of the same feature. I surmise that this allows the
features of X to piggy-back on W when the latter probes Y and Spec,Y.
Thus, X can establish dependencies with Y and Spec,Y.

Let's summarize the main conclusions of section 2.3. We have adopted
the view of Agree as involving a probe and a goal and claimed that Case
assignment is a sub-case of agreement. The Case assigners in English are v
and C, while in other languages T is the Case assigner instead of C. All
features have default versions except for Case (and the P/Case' feature
that triggers A'-movement) and this is the reason why Case triggers
movement. I have argued that maximal projections in spec positions can
be probes.

Assuming a bottom-up application of operations, the sequence of the

derivational cycle so far is as follows: (i) a predicate P enters the derivation, (ii) P merges with the constituents that it selects, (iii) P probes (if it has unvalued features), (iv) Spec,P probes (if it has unvalued features).

2.4   Locality

2.4.1   The problem of locality

Chomsky places two restrictions on application of Agree (see my discussion in Chapter 1):

(i) Relativized Minimality/MLC: A probe p cannot reach goal g if there is another potential goal h closer to p (where h is closer to p than g it means that h c-commands g but g does not c-command h). However, possible goals can be skipped if they are φ-incomplete. An example is the following:

(39)   There is likely to arrive a man.
C…T…[be likely [$_{TP}$ there to^{def} arrive DP]]

T^{def} can probe the DP [1] but, being φ-incomplete (it only has the feature [person]), DP remains active. The expletive probes T^{def} [2]. The matrix T probes and finds the expletive [3]. They agree and the expletive is raised to Spec,T. However since the expletive is also φ-incomplete ([person]), the matrix T must probe again until it finds DP [4]. Since T is φ-complete, the Case of DP is finally valued.

Another datum in which φ-incompleteness is relevant is with regards to participle agreement:

(40)   Las   mujeres   fueron   vistas   en la tienda.
        The   women   were.3rd.pl   seen.fem.pl   in the store
        C…T…[be seen the women in the store]

Since the participle only has [person] and [gender] features, it is also φ-incomplete, thus unable to value the Case of the DP. T can again skip the participle and reach the DP.

(ii) The PIC: A probe which is the head of a phase cannot penetrate another phase, only its edge. However, a probe that is not head of a phase can probe indefinitely. In the structure

(41)   **H1**...H2...[$_{H3P}$ XP [**H3** ... YP]]

where H1, H2 and H3 are all probes and H1 and H3 are heads of phases, the following agreement dependencies can be established: Agree(H3,YP), Agree(H2,XP), Agree(H2,YP), Agree(H1,XP), but crucially not *Agree(H1,YP).

Conceptually, it is not at all clear why phases are opaque to some probes but not others. Empirically, it is clear why. Take the following Icelandic sentence:

(42)   Henni   líkuðu   hestarnir.
        her.DAT   liked.3rd.pl   horses.the.NOM
        'She liked the horses.'

<div align="right">Sigurðsson (2002: 122)</div>

In (42), the IA in situ agrees with T. Somehow, T must be able to reach the IA across the phase boundary (and the intervening dative). Hence the special dispensation on probes that do not head a phase:

(43)   T [$_{vP}$ her$_{dat}$ liked horses$_{[\alpha C]}$]

In my view, it seems clear that it would be preferable to simplify and make the conditions on probing more restrictive. Moreover, as I mentioned in the introduction, the purpose of the phase system is to reduce computational complexity by reducing the size of the search space for probes, but it is not clear that the phase system actually reduces search space. Take example (44):

(44)   A man is likely to seem to appear to begin ...

The matrix T has to be prepared to probe a domain of potentially infinite length. It is not clear to me that a computational system can be designed

that can handle indefinitely long operations. Since the 1970s, long operations have been regarded as a succession of short operations – what we call successive cyclicity. I believe the strategy is the right one; consequently, long distance agreement together with the (weak) PIC should be replaced with a stricter notion of locality coupled with cyclicity so that apparent long distance agreement turns out to be a sequence of short distance dependencies. This is developed in the following section.

2.4.2   A proposal for local Agree

I would like to propose a system that restricts the search space to the minimum. Consider the structure in (45). Take Y to be a head that selects ZP and b, merging with them successively. Take Y to be a probe. There is only one constituent that it can probe: ZP. Probe of Y finishes here.

b is in Spec,Y. Let's assume that it can be a probe too. The probe space is Y', Y and ZP. After b is finished, all the probes are now exhausted within the domain of Y. If no movement takes place, the cycle is finished. No new probing will take place until a new head is merged and the process starts again. Let's assume now that, once a cycle has exhausted a probing domain, this probing domain becomes opaque to higher probes. In this example, Y' is now opaque.

So now the head X merges with YP and a successively. X probes in its c-command domain. However, it can only probe YP and b – the edge of Y. In particular, ZP is inaccessible. Take a to also be a probe. Again, it can only reach YP and b. After X and a finish probing, the domain ({YP,b}) is now exhausted and it will be opaque to higher probes.

This approach means that there is no long distance agreement at all: a probe can only access its complement and the spec/adjuncts of its complement. This is without doubt the most restrictive theory of Agree that can be designed, much more so than the combination of Relativized Minimality/MLC and weak PIC. The question is: does this restrictive framework have enough empirical scope? In other words, how can we account for the amount of evidence that suggests that there are long distance A-dependencies?

We will approach this issue from two directions. Take A and B, forming an A-dependency but obviously not adjacent to one another. I argue that this dependency may have been formed in two possible ways. The first, there is an intervening element C, standing between A and B,

which forms dependencies with both A and B: A, B and C form a *Complex Dependency*. Complex Dependencies turn out to be extremely useful theoretical constructs: in due time, expletive constructions like (39), participle agreement as in (40) and nominative objects with quirky subjects like (42) will receive detailed analyses. The second way that A and B may connect is by Move.

(45)

```
                    XP
                   /  \
                  a    X'
                      /  \
                     X    YP
                         /  \
                        b    Y'
                            /  \
                           Y    ZP
```

2.4.3   Complex Dependencies

The Icelandic examples (46) to (49) exemplify Complex Dependencies. In (46) the adjective (could also be a participle) *sterk-* agrees with a pronoun in number, gender and Case. The latter depends on the Case-assigning head that eventually governs the noun:

(46)   a.   Hann   telur   **sig**   vera   [t **sterkan**]
            He.NOM   believes   himself.ACC to be   strong.ACC
       b.   **Hann**   tel-st   vera   [t **sterkur**]
            He.NOM   believes.REFL   to be   strong.NOM
            'He believes himself to be strong.'

McGinnis (1998: 184)

In (47) a predicate nominal agrees with another nominal, the latter an argument of the former. Notice that the case morphology covaries, indicating again that the case morphology of the predicate nominal depends on which head governs the argument DP:

(47) a. **Hún**   var   kölluð **Kidda.**
          she.NOM was called   Kidda.NOM
          'She was called Kidda.'

                                              Zaenen et al. (1985: 472)

      b. **Hún**   er   góð   **stelpa.**
          she.NOM is   nice girl.NOM

      c. **Við**   töldum **hana**   vera góða **stelpu.**
          we.NOM believed her.ACC be   nice girl.ACC
                                              Sigurðsson (2002: 101)

In the following example, the floating quantifier and the raised NP share number and case morphology:

(48) **Strákarnir**   komust **allir**   í skóla.
      boys.the.NOM got   all.pl.NOM to school
      'The boys all managed to get to school.'

                                              Sigurðsson (1991: 331)

Finally, in (49), a Romanian example, a subject clitic agrees in number, person, gender and case with the subject (see Cornilescu 2000 for detailed discussion).

(49) Mie   mi-au   dat   ele   surorile   mele
      I.DAT I.DAT-have.3.pl given expl.3.pl sisters   my.3.pl
      cadoul.
      present-the
      'My sisters gave me the present.'

                                              Remus Gergel (p.c.)

All these examples instantiate what is essentially the same phenomenon: two constituents share an unvalued Case feature (and maybe other features) which is later valued by a Case assigner:

(50)   T/v $X_{[\alpha C]}$ $Y_{[\alpha C]}$
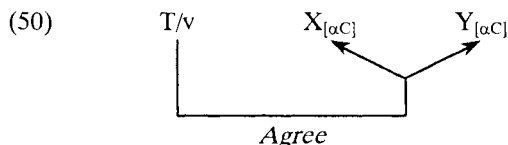
                                    Agree

Let's see how.

Under any version of feature valuation, a principle like Full Sharing is always assumed:

(51)   **Full Sharing**
       If a,b are involved in an Agree (p,g) dependency, feature sharing is
       mandatory.

Full Sharing entails that e.g. if a has a feature that values an unvalued feature of b, feature valuation of b must take place. Probes do not resort to default features as a free option, only when there is nothing available to agree with.

It is important to clarify that Full Sharing does not mean that the whole φ-feature bundle of a, b needs to be shared. Recent work (Rigau 1991, Taraldsen 1995, among others) has shown that the different φ-features act as independent probes, so this meaning of Full Sharing has been falsified. Rather, what I mean is that if two features can agree, they must. "can agree" means that (i) the features are of the same type, (ii) at least one of the features is unvalued, (iii) they are in a c-command configuration, (iv) they are strictly local (as defined in section 2.4.2).

Imagine now a second scenario for a and b. Imagine a and b both have an unvalued feature of the same type:

(52) $a_{[\alpha f]}$ ... $b_{[\beta f]}$
                |_____|
                        Agree
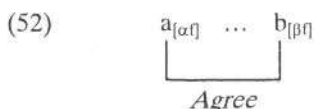
Since neither a nor b has a valued feature, valuation is impossible. However, Full Sharing will not allow their features to acquire different values: since a and b are in an Agree dependency, their unvalued [f] features must be shared. I refer to a dependency formed by shared unvalued features as an *Open Dependency*. I represent Open Dependencies by means of co-indexation of unvalued features. I refer to unvalued shared features as *co-valued features*:

(53) $a_{[\alpha 1 f]}$ ... $b_{[\alpha 1 f]}$
                |_____|
                        Agree
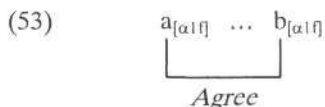
Assume now that a is finally probed by a head that does have a valued

version of [f]. As a consequence, a values its own [αf]:

(54) $H_{[f]}$ ... $a_{[f]}$ ... $b_{[\beta f]}$

         └─────┘└─────┘
         Agree   *Agree*
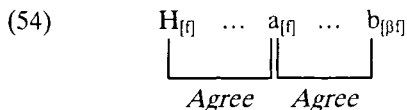
a has now valued its [f] feature. But notice that the dependency with b persists and Full Sharing forces a and b to have the same value for [f]. It follows that b will also value its own [f] with a and H:

(55) $H_{[f]}$ ... $a_{[f]}$ ... $b_{[f]}$

         └─────┘└─────┘
         Agree   *Agree*
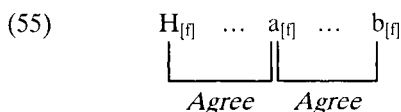
Thus, when a probe reaches an Open Dependency, Full Sharing will affect all three members of the dependency. I refer to this as a *Complex Dependency.*

(56)   **Complex Dependency**
       If a probe P engages a constituent a involved in an Open
       Dependency D, the goal of P is D.

(57) $H_{[f]}$ ... $a_{[f]}$ ... $b_{[f]}$

              └────┐ └─────┘
              │   *Agree*
         └────────┘
         Agree
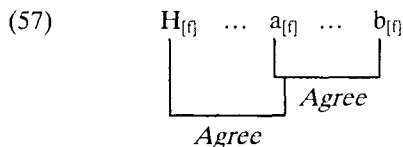
We can understand Agree (p,g) generally as an operation that co-values two sets of features. If one of the two sets is already valued, this value is simply copied on the other set and the [α] symbol is removed. Otherwise, a requirement that the two features co-vary together is forced. As a consequence, a higher probe reaches not a simple constituent but a dependency.

In all the examples above (participles/adjectives, floating quantifiers, subject clitics), two constituents co-value a Case feature, giving rise to an Open Dependency between them, cf. (58).

When a higher probe with a Case feature reaches this dependency, their unvalued Case features are valued at once.

(58)

$$a_{[\alpha C]} \qquad\qquad b_{[\beta C]} \qquad\rightarrow\qquad a_{[\alpha|C]} \qquad\qquad b_{[\alpha|C]}$$

Agree
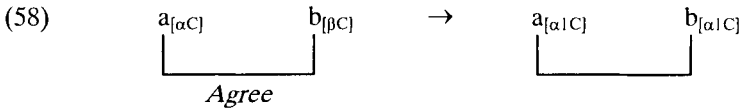
This analysis entails that an unvalued Case can be a probe. In Chomsky's system unvalued features are divided into two categories: those that can't probe and whose only function is to render a DP active (Case), and those that can (all the others). I find this distinction arbitrary and I will not maintain it in this work.

Let's look at the (46)–(49) examples, starting with a participle or predicate adjective. In the examples in (46), repeated here as (59), the Case morphology of a predicate adjective or participle co-varies with that of a DP that is also an argument of this predicate:

(59)   a.   Hann   telur   sig   vera   [t sterkan]   (46)
            He.NOM believes himself.ACC to be strong.ACC
       b.   Hann   tel-st   vera   [t sterkur]
            He.NOM believes.REFL   to be strong.NOM
            'He believes himself to be strong.'

McGinnis (1998: 184)

In (59a), the anaphor *sig* starts out as an argument of the adjective, which is selected by a functional category, a (in parallel with v). I take this functional category, and not the adjectival root, to be the one that bears the morphosyntactic features:

(60)   ...[$_{aP}$ a$_{[\alpha\phi][\alpha C]}$ [1 *sterk- sig*$_{[3rd.sg][\alpha C]}$]]

Both *sig* and the adjective have unvalued Case features, as well as person and number features. *sig* raises to 1, where it can be probed by the head of aP. Thus the person and number of a become those of the noun. Additionally, since they are involved in an Agree relation, their case features are co-valued:

(61)   Agree (a$_{-[\alpha\phi][\alpha C]}$, *sig*$_{[3rd.sg][\beta C]}$) $\rightarrow$ a$_{-[3rd.sg][\alpha|C]}$, *sig*$_{[3rd.sg][\alpha|C]}$

sig is eventually probed by the matrix v. v has an [accusative] feature which gets copied onto *sig*. Since *sig* and the adjective have co-valued their Case features, the adjective automatically also values its [αC] as [accusative].

(62)   Agree $(v_{[\alpha\phi][acc]}, sig_{[3rd.sg][\alpha C]}) \rightarrow v_{[3rd.sg][acc]}, sig_{[3rd.sg][acc]} \cdots a\text{-}_{[acc][3rd.sg]}$

Agree
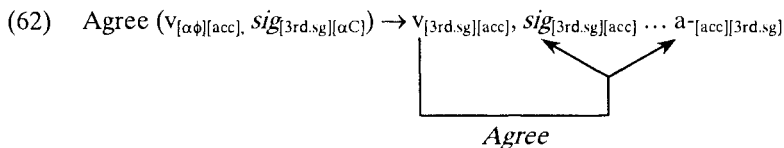
In (59b), McGinnis, following Marantz (1984), argues that *hann* is an argument of the adjective. If so, the adjective and the pronoun will also co-value their Case features. Then, the pronoun raises spec to spec until it is probed by the matrix C or T (I do not want to make a commitment yet as to what functional category assigns nominative in Icelandic). C/T has a [nominative] feature that gets copied onto *hann*. By virtue of feature co-valuation, the adjective/participle ends up [nominative] too.

As you may recall, Chomsky (2001a) argues that (59) is an instance of long distance agreement in which the participle/adjective, which is not φ-complete, can be bypassed by the upstairs probe. φ-completeness is also relevant with regards to predicate nominals in Icelandic:

(63)   a.   **Hún**   var   kölluð   **Kidda**.   (47)
             she.NOM was called Kidda.NOM
             'She was called Kidda.'

                                                       Zaenen et al. (1985: 472)

        b.   **Hún**   er   góð   **stelpa**.
             she.NOM is   nice girl.NOM

        c.   Við   töldum   **hana**   vera góða **stelpu**.
             we.NOM believed her.ACC be   nice girl.ACC

                                                         Sigurðsson (2002: 101)

Recall that in Chapter 1 I argued that Chomsky's system, based on φ-completeness, could not handle examples like this. Take the initial position:

(64)   a.   C/T$_{[nom]}$ be called [$_{SC}$ hún$_{[\alpha C]}$ Kidda$_{[\beta C]}$]
        b.   v$_{[acc]}$ believe be [hana$_{[\alpha C]}$ góða stelpu$_{[\beta C]}$]

According to Chomsky's logic, for T or v to reach the second nominal, the first one must be φ-incomplete, the latter defined as lacking [person]. It is a tall order to argue that a nominal may have no person feature.

Within my assumptions, we can have both nominals simply co-value their Case features:

(65)   [$_{SC}$ hún$_{[\alpha1C]}$ Kidda$_{[\alpha1C]}$]
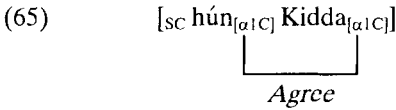
Agree

When *hún* raises and gets Case, its value can be copied on the second nominal, unproblematically:

(66)   C/T$_{[nom]}$ DP$_{[nom]}$ DP$_{[nom]}$
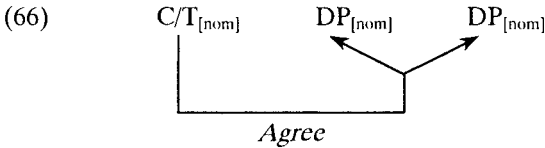
Agree

Consider now the floating quantifier example in Icelandic. A moved DP and the stranded quantifier agree in φ-features and their Case morphology co-varies as well:

(67) **Strákarnir**   komust **allir**   í skóla.   (48)
      boys.the.NOM   got   all.pl.NOM to school
      'The boys all managed to get to school.'

Sigurðsson (1991: 331)

I take it that the DP *strákanir* is initially merged as a complement of the floating quantifier. The floating quantifier probes the DP and they co-value their respective Case features:

(68)   [$_{QP}$ *allir*$_{[\alpha1C]}$ [$_{DP}$ *strákanir*$_{[\alpha1C]}$]]

Agree
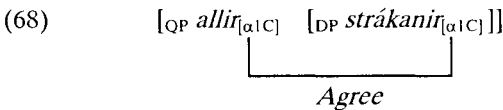
The DP moves out of the QP and ends up being probed by C/T. Since the DP and the floating quantifier have co-valued their Case feature, [nominative] Case gets to be assigned to the two of them:

(69)   C/T$_{[nom]}$ DP$_{[nom]}$ FQ$_{[nom]}$

Agree
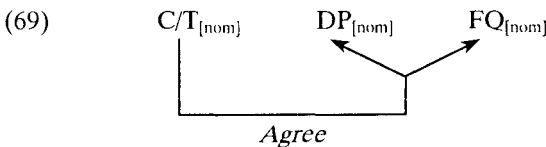
Finally, I discuss the Romanian subject clitic example (49 above):

(70)   Mie   mi-au   dat   ele   surorile mele
       I.DAT   I.DAT-have.3.pl   given expl.3.pl sisters   my.3.pl
       cadoul.
       present-the
       'My sisters gave me the present.'

                                                    Remus Gergel (p.c.)

I assume that the subject clitic in Romanian is a pure D with unvalued ϕ-features and unvalued Case. Thus, the clitic probes the EA and values its ϕ-features and co-values its unvalued Case:

(71)   Agree $(Cl_{[\alpha\phi][\alpha C]}, EA_{[\phi][\beta C]}) \rightarrow Cl_{[\phi][\alpha 1C]} \ldots EA_{[\phi][\alpha 1C]}$

Then, T probes the (Cl,EA) dependency and copies its ϕ-features and assigns nominative Case.[8] Uninterpretable features delete:

(72)   Agree $T_{[\alpha\phi][nom]}, (Cl_{[\phi][\alpha 1C]}, EA_{[\phi][\alpha 1C]}) \rightarrow T_{[\phi][nom]}, (Cl_{[\phi][nom]}, EA_{[\phi][nom]})$

2.4.4   Move

Let's take stock of what we have up to this point. The derivational cycle has been defined so far as the following sequence: (i) a predicate P enters the derivation, (ii) P merges with the constituents that it selects, (iii) P probes (if it has unvalued features), (iv) Spec,P probes (if it has unvalued features). Agree is defined as an extremely local relation involving a head, its complement and the spec of its complement, no exceptions. In this section, I propose that Move is likewise strictly local, unable to go beyond the nearest spec. After Move has applied, the derivational cycle is completed and becomes opaque.

I start with a brief review of Chomsky's (1993, 1995, 2000, 2001a) evolving approaches to motivate Move or Attract to provide some

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[8] Dobrovie-Sorin (1994) argues that Romanian is a DCL in the sense used in this work.

background to my own solution.[9]

In Chomsky (1993), constituents moved to satisfy their own formal requirements – to get Case, in other words – within the principle called Greed. Greed rules out (73), because the moved item does not achieve anything by moving to the subject position of the matrix clause:

(73)   *John seems t is happy.

However, the existence of successive cyclic movement proved to be a challenge for Greed. In the examples in (74), I indicate intermediate traces in places where the moved element stops for breath but does not satisfy any licensing requirements:

(74)   a. Where did you think t that Peter bought it t?
        b. John is believed t to be likely t to be t happy.

In order to account for the existence of successive cyclic movement, a DP in search of a Case or a wh-word in search of an appropriate wh-head should be allowed to stop in intermediate positions, even if no feature checking or Case assignment took place in these intermediate positions (although Chomsky 1995 briefly suggests that successive cyclic movement only takes place if there is overt morphology). Take the following configuration:

(75) $T_{[\alpha\phi]} \dots Ptc_{[\alpha\phi]} \dots IA$

In French and Italian, IA agrees with the participle only if IA raises to a higher position, so we infer that it stops somewhere nearby. However, IA only gets Case when near T, so Greed would tell us that there is no reason for it to stop in an intermediate position.

To put it in Chomsky's words (1995: 261): "Move raises α to a position β only if morphological properties of α itself would not otherwise be satisfied in the derivation". So, the IA stops in Spec,Ptc because otherwise it would never reach Spec,T.

This formulation fits in what Collins (1997) calls a Global Economy

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[9] Several interesting proposals are not going to be discussed explicitly in this section, among them Collins' (1997) Last Resort and Lasnik's (1995) Enlightened Self-Interest.

framework because in order to know if a derivational step is permissible one must let the derivation proceed until it is finished. Global Economy was considered to be inadequate if computational considerations enter the picture – in general, operations that can "look ahead" to future steps of a derivation should be suspect. An optimal analysis of the displacement phenomenon should include successive cyclic movement organically without having to weaken the motivation for movement and introduce computational complexity.

In Chomsky (1995) on, it is proposed that motivation for movement rests on the functional category with which the DP agrees. In Chomsky (1995) the operation Attract Feature was suggested, later abandoned.[10] In Chomsky (2000), Move is seen as the combination of Agree (p,g) and Merge of (a copy of) the goal in the spec position of the probe. The idea is that the (p,g) relation is sufficient to delete the uninterpretable features of probe and goal, except for one, the selectional EPP feature of the probe. In order to delete the EPP feature, the goal is pied-piped into the spec position of the probe. Thus, the application of Move presupposes a previous Agree operation and is triggered by a selectional requirement of the probe. Within this model, it still seems that successive cyclic movement must be stipulated in some form. Assuming phases and the PIC, an account of (74a) requires stipulating optional EPP features in Spec,v and Spec,C, which are licensed if they "have an effect on outcome" (Chomsky 2001a). It is easy to see how this takes us back to the Global Economy problems that Collins discussed.

The ungrammaticality of (73) must also be stipulated: if the head triggers movement, there is no principled reason why T can't probe in its c-command domain, find 'John' and agree with it. So, what went wrong? According to Chomsky, although the features of the probe and the goal are of the same type and therefore can match, they can't agree, the reason being that the Case feature of the DP has already been valued and deleted. However, it is not clear why this should be so. As Chomsky points out, the valued Case feature of a DP should probably delete, but its φ-features, which are interpretable, should not delete. If φ-features do not delete, they should presumably be accessible for a probe. It is simply

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[10] "Attract Feature" was very hard to define and raised difficult problems. For instance, as Frampton and Guttman (1999) point out, it is unclear what kind of chain results from feature movement. Moreover, if a head detects a feature that matches, thus establishing a relation between attractor and attractee, it is unclear why attraction is further required.

stipulated that a DP with [αC] can agree whereas a DP with its Case valued can't. I believe the theory would improve if we could dispense with this distinction between Match and Agree – whenever a probe finds a goal with the appropriate features, Agree should take place. In this respect, the former Move-by-Greed framework seemed to fare a little better with (73), since all we had to say was that a DP with all its features satisfied has no motivation to move.

To sum up, neither Move nor Agree + Pied-pipe integrate successive cyclic movement without stipulation and without assuming Global Economy. Moreover, the latter approach cannot prevent A-movement from a finite clause without a series of stipulations. The challenge that I undertake here is to conceptualize displacement in such a way that it satisfies these theoretical desiderata.

Let me introduce my approach to this problem by means of two metaphors. The first one is the "tension" metaphor, which I borrow from Frampton and Guttman (1999). The presence of an [α] feature creates a tension in the structure built by Merge and the computational system tries to release it before proceeding to the next step. Tension is released by valuing the [α] feature.

The "tension" metaphor needs to be complemented with a "reaction" metaphor. We can compare syntactic movement to a chemical reaction: putting two substances together may unchain a reaction which sometimes gives as a result a product that is not stable yet and requires further reaction until a final stable product is obtained. As in syntactic movement, the reacting substances do not know that the product of their initial reaction is not the final stage, but the initial reaction takes place regardless. I propose to view successive cyclic movement as "intermediate" reactions. Regarding movement as a reaction helps us to stick to the fundamental idea that all syntactic operations must be motivated without resorting to Global Economy.

In Chomsky (2000, 2001a), movement is a consequence of agreement. Contrariwise, I want to propose that movement takes place when Agree fails. Concretely, Move is triggered by the instability created by [αC] features that is resolved when they are valued in a (p,g) relation. Thus, the ultimate reason why there is movement is actually the locality of the Agree operation together with the instability created by [αC] features.

Take configuration (76). YP has a [αC] in need of valuation and X does not have the relevant Case assigning feature that could value [αC] and delete it.

(76)

```
        XP
       /  \
      X    YP[αC]
```
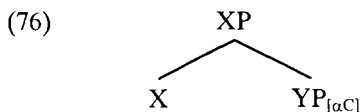
Under these circumstances, [αC] of YP can't be probed. Furthermore, [αC] does not have anything to probe. It is then that YP must move. There is really only one option for movement:

(77)

```
            XP
          /    \
      YP[αC]    X'
              /    \
             X    t(YP)
```
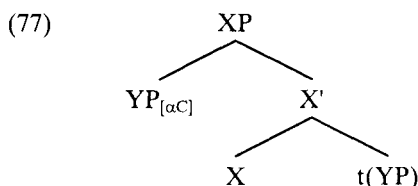
Obviously, this new configuration does not resolve the problem of the unvalued Case feature. But the point is, YP could not know that.

I conceptualize Move as Copy+Merge. YP's reaction to having an [αC] in its feature structure is to make a copy of itself. This copy of YP merges immediately at the root under the assumption that Copy+Merge is simply one operation, the first part of which leads automatically to the second (as in Collins 1997 or Chomsky's 2001b "internal merge").

I further assume a general ban on vacuous operations: this prevents YP from moving into Spec,X more than once. This ban on vacuous operations may also be involved in preventing self-merge. In Chomsky (1995) it is stipulated that the following sequence of operations is prohibited:

(78)   1. Copy α
        2. Merge (α, α) = {α, {α,α}}

I suggest that both remerge into Spec and merge with oneself should be ruled out by the same principle.

Let's now take the XP of (77) to be selected by another head, Z. Z may have a Case feature. If so, it can probe YP and value it. If not, YP will have to move again, this time to Spec, Z. Successive cyclic movement is thus derived from the cyclic nature of the Merge–Agree–Move sequence

of operations.

(79)

```
                    ZP
                  /    \
                Z       XP
                       /   \
                 YP[αC]      X'
                            /  \
                          X     t(YP)
```
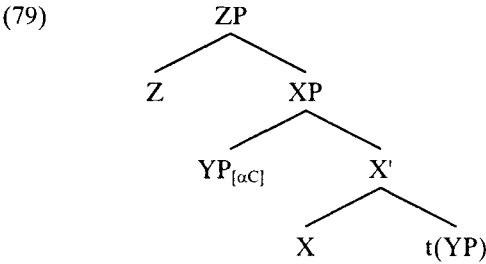
The ungrammaticality of (73) is now expected: the DP 'John' has already valued its [αC] downstairs and reached equilibrium. Nothing forces it to move again and, given the local nature of Agree, it is too far down to be probed by the matrix T. My analysis does not require "freezing" effects as an additional stipulation, since they are incorporated into the system. Consequently, it does not require a distinction between Match and Agree. Since we do not need "freezing", we have incorporated the advantage inherent in the Greed system, but notice that we do not incorporate its main disadvantage, Global Economy. Global Economy entered the fray because movement was seen as taking place in a relatively broad space (a sentence) and a filter was felt to be necessary to make sure that the moving items would go to the right place. But in the cyclic system developed here this caution is unnecessary. Movement of x occurs if x has an [α] feature and there is only one place where it can go. There are no alternative derivations that need to be compared, hence no Global Economy.

Finally, consider how this view on Move is coherent with Agree: they are both reactions triggered by [α] features.

To conclude, we have taken one more step on our articulation of the derivational cycle. Now we have the following sequence: (i) A predicate P enters the derivation, (ii) P merges with the constituents it selects, (iii) P probes, (iv) Spec,P probes, (v) Compl,P or or the spec of Compl,P raises to Spec,P. Within this model, there is no covert movement understood as a post-spell-out cycle, since a cycle C, complement of predicate P, is effectively closed when a new predicate R selects P. I adopt the idea that apparent covert movement involves spell-out of the trace (Groat and O'Neil 1996).

2.4.5   Movement chains

Chomsky (1993) proposes the copy theory of movement, i.e. the hypothesis that what we had been calling 'trace' is actually a copy of the moved item. He argues that this is conceptually superior to our previous conception of a trace as an independent syntactic object because the copy theory allows us to maintain *Inclusiveness*. Let's assume that traces are copies of their antecedents. A question has sometimes been asked that has not, to the best of my knowledge, received a careful answer, namely, what is the connection between the copies that form a chain? As pointed out by Roberts (1998), once the uninterpretable features of the head of a chain are deleted, we need to know what we are going to do with their copies in the foot of the chain. Presumably, they should delete too; the question is what mechanism are we going to use for this purpose?

I propose that feature co-valuation is exactly what we need. Assume structure (80a), in which XP is a constituent that has moved leaving a copy behind. The copy of XP also has a copy of the unvalued features of the head of the chain. Moreover, the unvalued features of XP and its copy are co-valued and this is what makes XP and its copy form a chain, as shown in (80b). I can annotate this using numbered indices, as mentioned above:

(80)   a. $XP[\alpha] \dots copy(XP[\alpha])$
       b. $XP[\alpha 1] \dots copy(XP[\alpha 1])$

This co-valuation of features is uncontroversial: if XP and its copy did not have their features co-valued they would not be copies of each other. Notice also that the requirements of locality and c-command are met. Thus, when the features of XP are valued by a probe, those of its copy are too, by co-valuation, and can delete.

2.5   Agree and Move

In this section I discuss some issues raised by the theory of Agree and Move developed in sections 2.3 and 2.4, and should thus be considered a sort of parenthesis in the progression of the chapter. Sections 2.5.1 and 2.5.2 discuss Chomsky's (2000) suggestion that Move be integrated within the Agree operation, and the conclusion is that they are as a matter of fact

separate operations. Section 2.5.3 discusses superraising.

2.5.1 Occurrences: can we get rid of movement?

In recent work in the minimalist program a chain is taken to be a sequence of identical elements, called occurrences (Chomsky 2000: 114–116, Chomsky 2001a: 39–40). Occurrences are defined in terms of their context: in the simplest case, their sisters. So, if we take the sentence 'John was kissed', the two occurrences of 'John' are shown in the following example:

(81)   a.   'John was kissed'
       b.   {K1(=T-be kissed), K2(=kiss)}

Heads that "attract" are said to have a property P that determines that they head an occurrence. P is taken to be EPP for A-movement. In this particular example, T has the EPP feature. Thus, T now probes as usual in its c-command domain and reaches its goal, 'John'. However, now Move is replaced by a mark on T that indicates that it is an occurrence of 'John'. Frampton et al. (2000) annotate this mark by means of an index on the EPP, which they call a pointer. The Agree process works like this (adapting the notation somewhat):

(82)   a. $T_{[\alpha\phi]EPP[]}$ $[_{vP}$ v kill $John_{j[\phi][\alpha C]}]$
            Agree (T,John):
       b. $T_{[\phi]EPP[j]}$ $[_{vP}$ v kill $John_{j[\phi][nom]}]$

Movement per se does not even take place in narrow syntax at all. Instead, in the phonological component a decision is to be made as to what occurrence is spelled out: in English, the top one.

It seems to me that conceptually this has points in common with traditional approaches to chain formation. Once we realize that marks (or pointers) or indices are basically the same thing (harmless technology to express a relation), we can see that the main substantive difference is that the traditional approach co-indexes the links of the chain while Chomsky co-indexes a probe with a syntactic object in its Merge position. Notice that in either case, this co-indexing takes place on the basis of shared features of some kind.

Chomsky's approach, however, has one very interesting point: he gets rid of movement once for all on the basis that what we perceive to be movement is simply an expression of Agree. On my view, movement takes place because there is no agreement. The issue is empirical: can we find evidence that Move really takes place only as a consequence of Agree or can we see Move in the absence of Agree?

2.5.2   Move does not involve Agree

Chomsky wants to make Move become a part of Agree – or even to eliminate Move as a syntactic operation altogether. In this section I present empirical argumentation that Agree and Move are two distinct operations.

I start by letting him explain it himself:

"...the operation Merge, which takes two syntactic objects (α,β) and forms $K(\alpha,\beta)$ from them. A second [operation] is an operation that we can call Agree, which establishes a relation (agreement, Case checking) between an LI α and a feature F in some restricted search space. [...]. A third operation is Move, combining Merge and Agree. The operation Move establishes agreement between α and F and merges P(F) to αP, where P(F) is a phrase determined by F...and αP is a projection headed by α. P(F) becomes the specifier (Spec) of α ([Spec, α])" Chomsky (2000: 101). This hypothesis makes two very specific predictions.

The first prediction is that if we see Move taking place, Agree must have taken place previously – or, the logical equivalent, if there is no Agree there is no Move. This prediction is not confirmed. As Baker (1988) explains, when there is noun incorporation, the noun that incorporates does not agree with or receives Case from the predicate that it incorporates into. Interestingly, if the noun has a possessor phrase, it is this phrase that ends up agreeing and receiving Case from the verb. Consider the Mohawk examples (83a) and (83b). In (83a) the predicate 'white' agrees with the noun 'house', in number and gender (neuter). In (83b), with 'house' incorporated into 'white', the predicate instead agrees with the possessor 'John'.

(83)   a.   Ka-rakv ne sawatis hrao-nuhs-a?
             3rd.n.white John   3rd.m.house SUF
             'John's house is white.'

b. Hrao-nuhs-rakv ne sawatis
3rd.m.house.white   John
'John's house is white.'

(84)
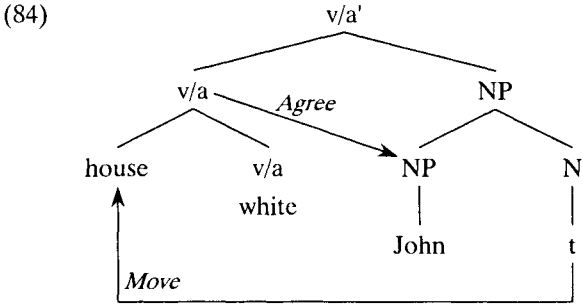
So the constituent that moves does not agree, the constituent that agrees is the one that does not move. Notice that, intuitively, this fact seems to suggest that my approach is the correct one: lack of agreement leads to movement. In (83b), the probe (presumably, some light verb or adjective) agrees and assigns Case to the spec of its complement, forcing the complement itself to incorporate to become fully licensed (as Baker argues, incorporation frees a nominal from the Case filter).

The second prediction of Chomsky's approach is the following: if Move truly is simply Agree+Merge, then Agree and Move should be subject to the same restrictions, islands in particular. If Agree does not respect islands, then Agree and Move turn out to be different operations after all. Coordination structures, subjects and adjuncts are all strong islands for movement. However, agreement across these islands is possible.

Let's start with coordination. As is well-known, agreement of an external head with one of the conjuncts in a coordinate structure is possible, as is discussed extensively in Camacho (2003) and Johannessen (1998). The following example is taken from Camacho (2003). The language is Moroccan Arabic:

(85)   Msa   Umar w   Ali.
       Left.3rd.sg Omar and Ali
       'Omar and Ali left.'

As is also well-known, movement of one coordinate stranding the other is ungrammatical (Ross 1967). This is surprising if Move is nothing but Agree + Merge (notice that if we try and rescue this idea by imposing conditions on Pied-pipe, we are in fact led to the conclusion that Pied-pipe is a distinct operation, with distinct properties).

The following tree shows subject and adjunct configurations:

(86)
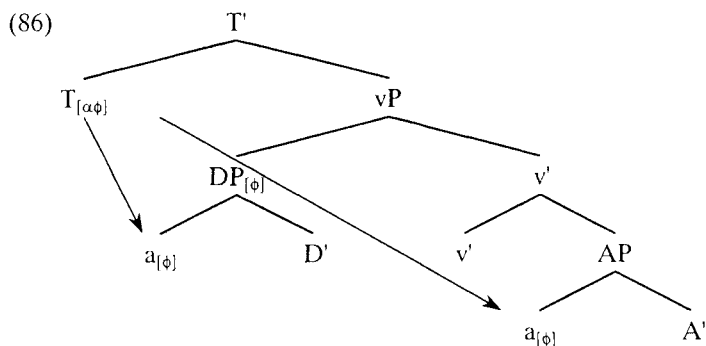
DP is the EA of v, AP is an adjunct. $a_{[\phi]}$ is a spec. Can T agree with either $a_{[\phi]}$? Chomsky predicts that it should not be possible: extraction is not possible out of a subject or an adjunct. Since Agree is the *only* dependency between syntactic objects, the appearance of displacement being only the reflex of an EPP feature on the probe, it follows that where displacement is not possible, Agree is not possible either.

Chomsky's prediction turns out to be incorrect. It seems that position $a_{[\phi]}$ can be occupied by a constituent agreeing with T. Consider the following examples (87a is in Spanish, 87b is from Den Dikken 2001):

(87)   a.   María toca   el   piano [PRO desnuda].
              Maria play.3d.sg the piano   naked.sg.f
        b.   The participants' identity are to remain a secret.

Let's consider (87a) first. In this example, the secondary predicate agrees with the EA and with T. Following a long tradition of analyses, I take the secondary predicate to include a PRO controlled by a main clause argument (see Stowell 1981). Take control to be the outcome of an Agree dependency between a probe in the matrix clause (T or v) and PRO (and the adjective would agree with the latter), as in Landau (2000). Within these assumptions, T and PRO would form an Agree dependency

although a secondary predicate is an adjunct and therefore an island for movement.[11]

In the next few paragraphs I discuss the more complex (87b). In this example, a constituent in the spec of the subject agrees with T. Although rare, this is a grammatical phenomenon that takes place in C_{HL}. As will become clear in a minute, it is subject to grammatical restrictions and it has consequences at the C-I interface.

The following diagram represents the structure of (87b). The DP2 'the participants' is an argument of the N 'identity' and raises to Spec,D1, cf. (88).

Chomsky's framework cannot provide an analysis of this example. Let's start with movement of DP2 to Spec,D1. According to Chomsky's (2000, 2001a) assumptions, Move combines Agree and Merge: so if DP1 is in Spec,DP2, then D1 must have probed DP2, matched their features and pied-piped it to its spec. However, it does not seem likely that the features of D1 and D2 agree, since their φ-features are as a matter of fact different (one is singular, the other is plural).

(88)
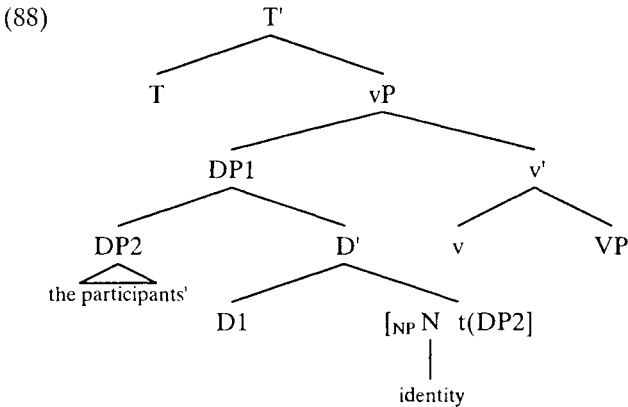
Second, consider how Agreement between DP2 and T could happen. Since DP2 and T agree, then if something must move to Spec,T, that must

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[11] Not all analyses of secondary predication include a PRO in it. Since Williams (1980), a second tradition has the main clause subject do double duty as subject of the secondary predicate. In my view, this approach is incompatible with the Internal Argument Hypothesis. See Neeleman and van de Koot (2002) for a recent proposal and Winkler (1997) for a thorough review.

be DP2. However, this conclusion is wrong: DP1 is actually what raises to Spec,T, not DP2 – further evidence that agreement and movement are independent. Moreover, DP1 is an eligible goal for T, so it should never be bypassed to agree with DP2. Finally, DP2 cannot raise out of DP1 (Huang's 1982 Condition on Extraction Domains). This suggests that the conditions for Move and the conditions for Agree are different: DP2 can agree with T in Spec,D1 even though it can't raise out of it.

None of these is an issue within my framework. First, since Move does not depend on Agree, there is nothing strange about DP2 raising to Spec,D1 although D1 and D2 do not agree. Additionally, since Agree and Move are distinct operations, there is nothing strange either about the conditions on Move being more strict than the conditions on Agree. Moreover, the fact that DP2 and T agree does not lead us to expect that DP2 will move to Spec,T – on the contrary, since movement happens when Agree fails. DP2 values its Case within DP1 but DP1 itself has unvalued Case. It follows that DP1 must move to Spec,T where it will get [nominative] from C. Finally, the locality of Agree as defined in section 2.3.3 does not prevent DP2 from being probed by T – only the complement of D1 is opaque from an external probe.

The following examples, also lifted from Den Dikken (2001), put the issues in sharper focus:

(89)   a. The identity of the participants are to remain a secret.
        b. The key to all the doors are missing.
        c. *The key to few doors are missing.

The first question is how the DPs 'the participants' and 'all the doors' get to agree with the main verb. The second question is why (89c) is ungrammatical.

As for (89a, b), Den Dikken proposes that the formal features of these DPs adjoin to the highest D (an analysis along the lines of Chomsky 1995):

(90)   [$_{DP1}$ the +FF(D2) key to [$_{DP2}$ all the doors]] are missing

Den Dikken shows that 'all the doors' takes wide scope over 'the key' (for each door there is a key...), confirming the raising analysis. The raising of these formal features must be of the QR type: a quantifier that is

restricted to narrow scope readings cannot raise, which accounts for the ungrammaticality of 'the key to few doors are missing'. In other words, if there is raising of the quantifier (or its features), there can be agreement, otherwise not. These facts confirm that agreement between T and DP2 is dependent on movement – not the opposite. Moreover, it confirms that we are dealing with a grammatical phenomenon, not just a processing error, since it depends ultimately on the availability of QR and its effects (wide scope) can be perceived in the C-I interface.

Den Dikken's feature attraction analysis is steeped in the framework of Chomsky (1995), now abandoned. Let's see if the sentences in (87) and (89) can be integrated into my framework. I propose that DP2 moves to Spec,D1 (overtly or covertly), spec by spec in the manner articulated above. Den Dikken's scope facts are thus expressed in the same structure as (88) above. What motivates displacement of DP2 to Spec,D1? Consider the configuration (91).

(91)
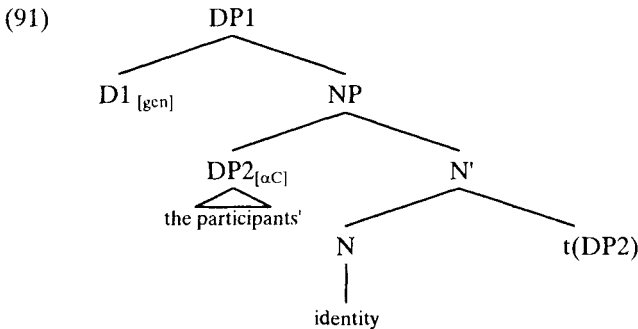
Assume that spec-to-spec movement has placed DP2 in Spec,N. Further, assume that genitive Case is assigned roughly along the same lines as nominative or accusative. $D1_{[gen]}$ can probe and finds two goals, NP and DP2. It can agree with NP, in effect copying its φ-features. However, under the assumption that Case is a feature of D and not of N, NP is not assigned [gen], which remains available for DP2. Thus, DP2 gets Case in Spec,N.[12]

We are not finished, since we need to have DP2 in Spec,D1. Case theory does not seem to motivate this displacement, so a different account

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[12] Now, DP1 also must have [αC], so it can be assigned nominative/accusative. Probably DP should include one more functional layer.

must be found. Den Dikken proposes that it is a form of QR. Recently, Hornstein (1999) and Bruening (2001) have proposed analyses of QR in which features of v and T are involved. Following their lead, let's assume that DP2 is merged with a [qr] feature that drives movement to Spec,D1. In that position, it is probed by T, which values the [qr] feature of DP2.[13]

Let's summarize this section:

(i)   Movement of a constituent takes place in the absence of agreement: the incorporated noun does not agree with the head it incorporates into. DP2 moves to Spec,D1 although they do not agree.

(ii)   Agreement can take place *after* movement has taken place: T can only agree with DP2 if DP2 moves to Spec,D1, overtly or covertly.

(iii) The edge of an island may be visible for an external probe even if nothing can be extracted out of it.

The conclusion that (i) thru (iii) lead to is, to my mind, clear: Move cannot be the combination of Agree + Merge, Move is in fact independent of Agree. Rather, Agree can be the consequence of Move, not the cause. (i)–(iii) constitute, in effect, some of the main assumptions of my framework. Thus, the phenomena discussed in this section provide striking evidence in favor of my approach and against Chomsky's.

2.5.3   Superraising

It would seem that there is a trade-off between a theory in which functional categories trigger movement (Attract, Agree + Pied-piping) and a theory in which the caseless DP does (Greed, Reaction) concerning which aspects of the theory come for free and which aspects must be stipulated. In section 2.4.4, we saw how successive cyclic movement was an organic part of my approach, while Chomsky (2000, 2001a) needs to postulate a series of optional EPP features to carry a constituent from the edge of one phase to the edge of the next phase. Moreover, we also saw that my approach does not need "freezing effects" to account for simple examples like '*John seems is happy'. But "freezing effects" are also at

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[13] A separate issue is how to account for CED effects within the Minimalist Program. Two proposals that I am aware of – Uriagereka (1999), Johnson (2003) – are, I think, largely compatible with my own framework. However, a detailed discussion would take us too far afield.

play in Chomsky's account of superraising:

(92)   a.   It seems that it is likely that a man arrived.
       b.   It seems to t be likely that a man arrived t.
       c.   A man seems to be t likely to arrive t.
       d.   *A man seems that it is likely to arrive t.
       e. T_1 seem that it T_2 be likely to arrive a man.

In (92a) we have a sentence with two expletives as subjects of two raising predicates. In (92b) the lower raising predicate is nonfinite and, as a result, the expletive has to raise to the matrix Spec,T. In (92c) only the higher predicate is finite and the DP in the matrix Spec,T is actually an argument of the lowest predicate. (92d) exemplifies superraising: the DP 'a man' has raised to the matrix Spec,T, "skipping" an intermediate finite T. A representation of (92d) before movement is in (92e).

According to Chomsky, (92d) is analyzed as follows. The matrix T_1 probes into the subordinate clause until it finds the goal 'it', which has matching features. T_1 and 'it' can't agree because 'it' has valued and deleted its Case feature against T_2, but they can match, so the probe is interrupted and can never reach 'Mary'. Hence, from (92e) we can't derive (92d).

How would superraising be accounted for within my framework without stipulating Relativized Minimality as an independent principle? Consider structure (93), where we can take a to be an expletive, X to be 'be' and b to be 'a man':

(93)

```
                    XP
                   /  \
              a_[α]    X'
                      /  \
                     X    YP
                         /  \
                    b_[β]    Y'
                            /  \
                           Y    …
```
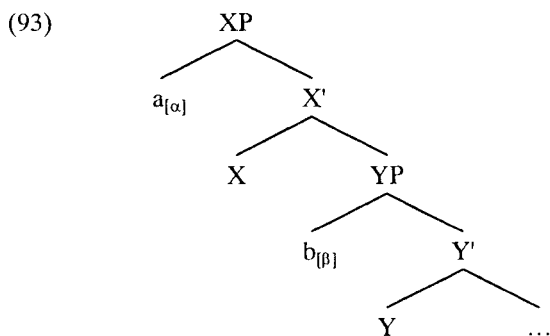
a and b have unvalued features of the same type – Case, for example. The system must prevent b from skipping a and raising to a higher Spec,X in a

phrase structure that allows for multiple specifiers.

These are the theoretical possibilities that my system allows:

(i)   X values [β]. In that case, having no motivation to move, b simply stays in place. I believe this is what is involved in (92d): 'be' in English has the ability to assign Case (Belletti 1988, Lasnik 1992), so 'a man' has no motivation to raise to the matrix Spec,T_1.[14] Starting off from structure (94a), 'a man' raises to a position where it can be probed and receive Case from 'be', as in (94b). The expletive in Spec,be then raises to Spec,T_2. The result is (94d), with expletive spelling-out as 'there' rather than 'it' because of their distributional patterns:

(94)   a. T_1 seem that T_2 Expl be likely to arrive a man.
        b. T_1 seem that T_2 Expl be a man likely to arrive t.
        c. T_1 seem that Expl T_2 t be a man likely to arrive t.
        d.   It seems that there is a man likely to arrive.

(ii)   X does not value [β]. The field is now open for a to probe and find b. In that case, [α] and [β] are co-valued. From now on, b does not raise, since the two unvalued features form a "chain", and only the higher link raises:

(95)

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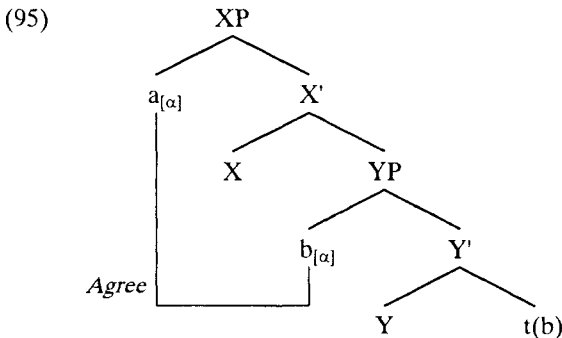
[14] 'be' does not always assign Case, or (92c) would never take place. 'be' only assigns Case in English when it selects a D (an expletive) in its spec. That is, the Case assigning properties of 'be' depend on its selectional properties, roughly as predicted by Burzio's generalization. Discussion of this issue is in Chapter 4.

The Icelandic sentence (96) exemplifies (95):

(96) Það   mundu   margir   vera gáfuð.
      there seemed   many.NOM   be   gifted
      'Many seemed to be smart.'

<div align="right">Hrafnbjargarson (p.c.)</div>

In (96), the expletive has its features co-valued with *margir*, the expletive raises and gets nominative Case. By co-valuation, *margir* also gets nominative Case. A thorough discussion of this and other examples is in Chapters 3 and 4.

One tricky aspect of superraising is that the ideal account of (92) has to rule in (96b, c), in which 'John' has bypassed the experiencer (see McGinnis 1998):

(97) a. It struck me that John was insincere.
      b. John struck me as t being insincere.
      c. John seems to me t to be insincere.
      d. T strike me as John being insincere.
      e. T seems to me John to be insincere.
      f. It seems to him that Peter is intelligent.

'John' can leapfrog 'to me' in (96c) because the latter is a PP, hence not a constituent with unvalued Case (although 'me' has to raise to Spec,*to* countercyclically because co-indexing 'me' and 'Peter' in (96f) leads to a condition C violation). McGinnis concludes that 'me' in the 'strike' example (96b) must be the complement of an abstract preposition.

Consider an alternative account of (96b), represented in (98). Take X to be a head merged with an extra morpheme, call it w, with the ability to assign Case – say abstract dative Case. w could value $[\alpha]$ and $[\beta]$ of 'me' and 'John'. However, w is too deeply embedded to c-command and probe 'John'. But the unvalued Case of 'me' can probe w and value and delete its Case feature against it. In that situation, b can indeed move to Spec,X, leapfrogging (to use McGinnis metaphor) a, cf. tree diagram (98). Since 'me' has Case, 'me' and 'John' are not going to be co-valued and 'John' can (must) raise, leapfrogging 'me'. As a matter of fact, in Chapter 3 we will see abundant empirical evidence from Spanish that this type of derivation exists in C_{HL}.

To conclude: either the two DPs co-value their features or one of them

has already valued (and deleted) its Case, so the other one can leapfrog it. My approach rules out superraising inherently.

(98)
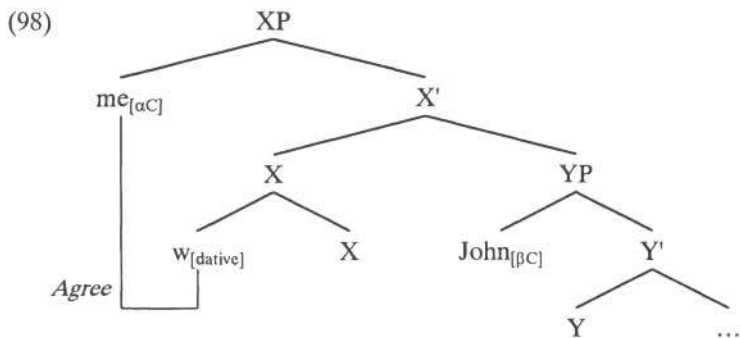
2.5.4 Conclusions

Let's again take stock of what we have. Sections 2.3, 2.4 and 2.5 develop a derivational cycle consisting of the following steps:

(99) (i)   A predicate P enters/initiates a derivation.
   (ii)   P merges with the constituents it selects.
   (iii) If P has unvalued features, it probes.
   (iv)   If a constituent in Spec,P has unvalued features, it probes.
   (v)   If Compl,P or a constituent in the spec of Compl,P has unvalued features, it moves to Spec, P.

The cycle ends here. No probe will be able to access the probe domain (c-command domain) of P. Further, I have argued that superraising can be captured adequately within my model, that movement chains can be understood in terms of feature co-valuation and that Move is not Agree + Pied-pipe, rather, Move takes place when Agree fails.

There is some information missing from (99): we still do not know if and when features are deleted and when Spell-out takes place. This is addressed in the following section.

2.6 Features

Although talking about features being plus or minus interpretable and their different fates at the interfaces has become standard, our understanding of the ±Interpretable notion remains intuitive. This would not necessarily be a problem per se, except that the standard conception hides two problems that I discuss below. As I will show, these problems will vanish once our intuitions are made more explicit. My conclusions are going to be that (i) feature deletion of morphosyntactic [–interpretable] features takes place as part of the valuation operation and (ii) Spell-out takes place each time a cycle is completed, only deterred by the presence of unvalued features.

Part of this section is about exploring the old idea that LIs are brought into the derivation with morphosyntactic (henceforth MS), phonetic and semantic features in separate matrices, as in Chomsky (1965, 1981). However, unlike the traditional lexicalist approach, these feature matrices may have unvalued or valued features and they communicate, so that a valuation of an MS feature may immediately be copied onto the semantic and phonetic matrices.[15]

2.6.1 Valuation + Spell-out + Deletion

Chomsky (1995, 2000, 2001a) distinguishes between [+Int] and [–Int] features, the distinction dependent on whether or not they provide instructions for the C-I system. [+Int] features have an interpretive import: examples are [number] and [person] for nominals. Whether a nominal refers to an individual or to a plurality, to the speaker, addressee or a third party is certainly relevant for C-I (as for [gender], it is hard to tell; below I conclude that it is [+Int] too).

Let's take the [plural] feature as an example. To say that a nominal is plural entails the following, within Chomsky's model of grammar: this nominal has been assigned a [plural] morpheme, as it is drawn from the lexicon and placed in an LA.[16] Eventually, this nominal reaches the

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[15] For an independent development of semantic feature matrices, see D'Alessandro (2004).

[16] See Carstens (1991) and Ritter (1991), among others, for analyses in which [number] is assigned to nominals in the computational system. I do not pursue this option in this book.

interfaces. At the P-A interface, the module Morphology (Halle and Marantz 1993) attaches a vocabulary item – say [-es] – to the nominal suffix with a plural label At the C-I interface the nominal will be interpreted as referring to more than one individual. It seems, from minimalist writings in general, that narrow syntax only handles MS features, which are translated into semantic and phonetic representations. As I articulate in this section, this view is simplistic.

Tense and, under certain conditions, participles, can also exhibit number morphology. However, this is clearly an instance of a [−Int] feature, since neither T nor Ptc refers to an entity that can be characterized as singular or plural. Tense and the participle obtain their [±plural] by agreeing with a nominal. How this agreement takes place has been subject to several analyses throughout the 1990s. In the most recent proposals (Chomsky 2000, Pesetsky and Torrego 2001), T and Ptc would be brought into the numeration with unvalued ϕ-features. These unvalued features turn them into probes, with the ability to search within their c-command domains for elements that have valued versions of these features. Once a nominal with a [±plural] feature is found, T or Ptc can value their own [αnumber] feature as [±plural]. After this has taken place, the structure is ready for Spell-out. However, the resulting structure cannot yet be made accessible to C-I. The reason is the principle of Full Interpretation: there cannot be superfluous symbols in representations (Chomsky 1986, 1995, among others). Thus the [±plural] feature on Ptc and T must be deleted because it is [−Int]. Correspondingly, the [±plural] feature on nominals must remain because it is [+Int]. Deletion is integrated as part of Spell-out in Chomsky (1995): Spell-out in effect removes the [−Int] features from the structure. In Chomsky (2000, 2001a, b) Spell-out takes place at specified points called (strong) phases (see Chapter 1).

This model contains a serious bug. How does Spell-out or the computational system know that a feature is interpretable or not? Only C-I knows that. Thus, C_{HL} can only know if a feature is [+Int] if it is endowed with a capacity of "look-ahead". Chomsky (2000) addresses this issue and provides an answer of sorts: Spell-out knows that a feature is [−Int] because it is unvalued. That is, the set of unvalued features and the set of uninterpretable features are perfectly coextensive, in his view (different from mine, since Case on v and T/C is valued from the start but uninterpretable, see section 2.3.1). As a first approximation, Spell-out targets unvalued features for deletion. However, unvalued features

cannot be deleted until they are valued. So first, unvalued features must be valued, then they can be spelled out. But once they are valued, uninterpretable features are indistinguishable from interpretable ones. So, Chomsky suggests that valued features must be deleted "shortly after" valuation. It is as if being unvalued is a stain that fades gradually.

Epstein and Seely (2002) take Chomsky to task about this – they correctly argue that "shortly after" valuation [–Int] and [+Int] features are already indistinguishable. Instead, they propose that Deletion and Spell-out is an integral part of the valuation rule: the three processes constitute one operation. This is consistent with Epstein et al.'s (1998) radical derivational approach, which argues that the computational system interfaces with the interpretive modules after every application of a transformational rule.

However, it is not clear to me how Epstein and Seely's idea can be implemented in the case at hand. Assume that a head H has two unvalued features which must be valued against two different constituents – say, a wh-determiner that needs to value Case against a Case assigner and also has the [wh] feature that needs to be valued in the CP area. When does Spell-out of the wh-phrase take place? The Epstein and Seely solution would require that it takes place twice, once after every application of Agree or Move. But notice that the first application of Spell-out of H would be blocked due to the presence of the second, still unvalued, feature on H. If we impose a condition on Spell-out so that it applies on a structure S iff no unvalued features are left on S, then Spell-out takes place only after both features of H have been valued. However, we find ourselves back at square one: if Deletion of a feature [f] is really integrated with the valuation of that feature, it is not clear how it can also act on a feature [g], that was valued by an earlier rule application of Agree. Moreover, C_{HL} does not know if [g] is [–Int] or not, which was the original problem.

2.6.2   Misleading MS features

There is another serious bug with the way features work in the model just sketched. It is problematic to assume that there is a direct mapping between morphosyntactic (MS) features and an interpretation in the C-I module. Take the Spanish word *gente* 'people'. It refers to a plurality of people, but morphosyntactically it is singular (feminine singular, to be

more precise). This is shown in the following example:

(100) La   gente   está   equivocada.
       The.sg.f people is.3rd.sg wrong.sg.f
       'People are wrong.'

Notice that the determiner shows up in the third person singular feminine, the copula in third singular and the participle in singular feminine, all of them agreeing with the noun *gente*. *'gente'* can also be morphologically plural, although to my ear the meaning is the same, the plural form adding only a rhetorical flavor:

(101) Gentes   de todos los países   vienen   todos los años
       People.pl from all the countries   come.3rd.pl all the years

       a ver   al   papa.
       see   ACC.the pope
       'People from every country come every year to see the pope.'

When the noun *gente* becomes co-referent with something in the discourse, we get a different phenomenon, shown in the following examples:

(102) La gente_i   está equivocada.
       the.f people.sg.f   is   wrong.sg.f.
       pro_i Piensan/??piensa que pro_i llegarán/??llegará tarde.
       think.3rd.pl/sg   that arrive.fut.pl/sg   late
       'People are wrong. They/*she think they will be late.'

(103) La   gente_i   no   va   a llegar   a tiempo…
       the.f people.sg.f not go.3rd.sg arrive,inf on time
   … *La_i/los_i   vi   hace   un rato   en el supermercado
       her/them saw.1st.sg makes a while   in the supermarket
       'People will not be on time. I saw *her/them in the supermarket a little while ago.'

(102) and (103) show that outside the clause boundary, the preferred form of the verb is plural. It is very difficult to get the meaning in which people will be late with the singular form of the verb. Moreover, in (103) we see that an accusative clitic referring to *gente* must be masculine, the default

gender (Harris 1991). It seems that, beyond the clause boundary, agreement is *ad sensum* (AS), dependent on the meaning of the controller, not its MS. If the word *gente* is dislocated, MS agreement is cancelled again:

(104) La   gente$_i$, pro$_i$ están todos equivocados.
       the.f people   are   all   mistaken
       'The people, they are all wrong.'

AS agreement does not involve the operation Agree (p,g,), such that p c-commands g in a reduced space. But AS agreement is real agreement since the form of the anaphoric element depends on (the meaning of) an antecedent. This suggests that both MS and AS agreement are components of the grammar, operating at different levels (sentence grammar and discourse grammar, respectively).

The Portuguese word *gente* involves a double mismatch: although the form is third person singular, its meaning is first person plural:

(105) A   gente se   quer   muito.
       the.sg.f people SE   love.3rd.sg much
       'We love each other very much.'

But again, coreferent constituents in discourse will show up in the "right" form:

(106) A   gente$_i$ se   quer   muito. pro$_i$ Vamos   nos
       the.sg.f people SE   love.3rd.sg much.   FUT.1st.pl CL.1st.pl
       casar.
       get-married.inf
       'We love each other very much. We are going to get married.'

This mismatch between the MS φ-features of a noun and the actual meaning of the noun is a problem for the theory of features assumed in the minimalist program. In the minimalist program, a noun is merged with certain φ-features, which are [+interpretable] and thus are mapped onto C-I. But *gente*'s MS [number] is [–plural], although the meaning of the word is plural, and this plurality shows up in discourse relations. This means that C-I ignores the MS feature [–plural] and instead is sensitive to the *semantic* plural feature of the noun.

The evidence presented by *gente* leads to two conclusions. The first one is that the minimalist idea that LIs in C_{HL} only have MS features that map onto corresponding semantic features in C-I if they are [+interpretable] is simplistic. The second conclusion is that we must separate the MS features involved in the derivation from the semantic features that are read by C-I. Most of the time MS and semantic features match, sometimes they do not, and our theory must account for both.

Before we continue, let me first show that this phenomenon is different from *pluringulars*, of the type studied by Den Dikken (2001). A pluringular is exemplified in (107):

(107)   The committee has/have decided to look into the issue.

The pluringular noun can trigger plural agreement on T, not just in discourse like *gente*. As Den Dikken shows, the pluringular may trigger plural agreement on the verb while concord must remain singular:

(108)   a.   This committee have decided.
         b. *These committee have decided.

Den Dikken's analysis of pluringulars involves a plural *pro* selecting for the DP 'the committee':

(109)
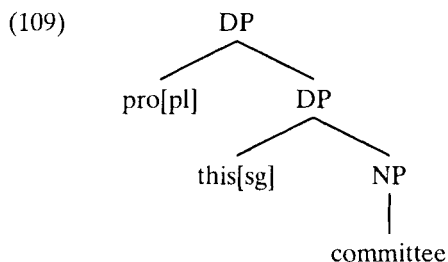
The Spanish word *gente* looks like English 'committee', but it seems to lack the top pro[pl], so it can only trigger concord and sentence agreement in the singular. The source of AS agreement across clausal boundaries is not explained with the pluringulars concept.

To conclude this section: the Spanish word *gente* can be brought into the derivation with a singular number, which values the unvalued [αnumber] of all the constituents that depend on it: adjectives, determiner

and T. This singular number, however, is not [+Int]. As a matter of fact, it would better if it were absent from the representation that feeds C-I, or the final interpretation of the sentence would come out wrong. So, it should be deleted. However, how does Spell-out or C_{HL} in general know that the [singular] number on the noun *gente* must be deleted while the [singular] number on *puente* 'bridge' must not? It seems to me an unsolvable problem within either Chomsky (2000) or Epstein and Seely (2002)'s approaches to MS features.

2.6.3 MS features and semantic features

I posit that every lexical item contains a semantic feature matrix and an MS feature matrix. Moreover, I propose that the two matrices can communicate. Take the word *puente* 'bridge' and the feature [number] as an example, further assuming, for simplicity, that [number] can be [singular] or [plural] (ignoring dual).

I assume that among the semantic features of *puente*, there is an indication that it is a count noun, and hence can be singular or plural ([±plural]). This is indicated with a [αnumber] in the semantic feature matrix. This [αnumber] has a correspondent in the MS matrix:

(110)   puente 'bridge'

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          ┌────────┴────────┐
         sem              MS
    [–animate]
    [αnumber]       [αnumber]
        ...              ...
```
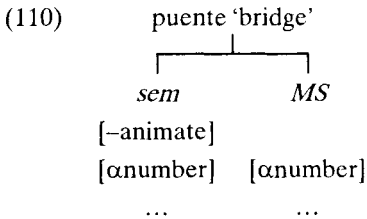
Notice that it is to be expected that there be cross-linguistic variation concerning which semantic features are also expressed as MS features. So, in some languages, semantic [αnumber] may not have an MS correlate, so nouns always show up in an invariant form, triggering no agreement. Interpretation of a noun as singular or plural would be free, entirely dependent on context. In (110) I exemplify this with the feature [–animate], a semantic feature without MS expression in Spanish.

At some point, the MS [αnumber] feature is valued as [±plural]. Following Chomsky, let's assume this happens when the lexical item

enters the derivational space. The value that is assigned in the MS matrix is copied onto the semantic matrix:

(111)

puente 'bridge'		puente 'bridge'	
sem	*MS* $\Longrightarrow$	*sem*	*MS*
[–animate]		[–animate]	
[αnumber] ← [plural]		[plural]	[plural]
...	...	...	...
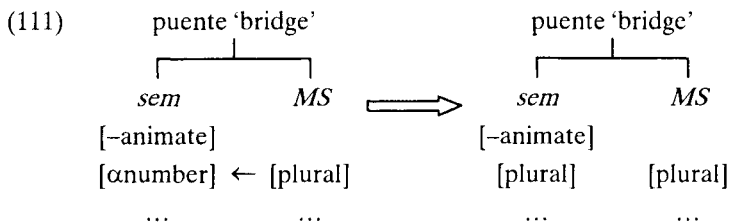
T and Ptc also have a [αnumber] in their MS matrix (in some languages) but, unlike nouns, they have no correspondent in their semantic matrix:

(112)

	T/Ptc	
sem		*MS*
		[αnumber]
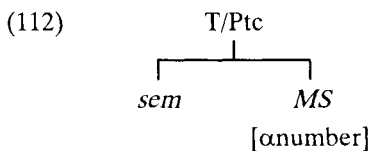
Agreement of the nominal with T and Ptc is carried out roughly along the lines of Chomsky (2000, 2001a): by probing in their c-command domains for a valued feature of the same type. Once this valued feature is found, it is copied on their feature structure:

(113)

	T/Ptc	
sem		*MS*
		[plural]
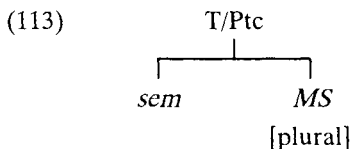
Let's now turn to Spanish *gente*. The difference between *gente* and *puente* is that while the latter can be singular or plural, the former is inherently plural, since it can only refer to a plurality of individuals. We annotate it in its semantic feature matrix:

(114)   gente 'people' (Spanish)

sem		*MS*
[plural]		[αnumber]
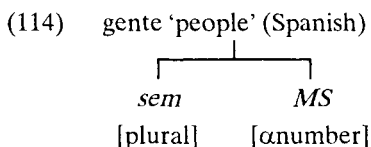
gente also has an MS feature matrix with an unvalued number feature, like any other noun. However, if the MS feature is valued as [singular], this value cannot be copied onto the semantic feature matrix, since there is no slot available for it (no [αnumber]). Thus, the MS singular feature can participate in intra-sentential agreement relations but it will eventually be absent in C-I. Only the semantic feature [plural] remains with the item after syntax and is involved in discourse anaphoric relations.

A similar reasoning can apply to [person] and the Portuguese word *gente*. This word has in its semantic matrix the features [plural], [1st] which, of course, remain after any MS features are deleted.

Let's return to the issue of inter-sentential coreference, exemplified in (106), repeated here:

(115) A   gente se   quer   muito. Vamos   nos
       the.sg.f people SE   love.3rd.sg much. FUT.1st.pl CL.1st.pl
       casar.
       get-married.inf
       'We love each other very much. We are going to get married.'

As mentioned, when anaphoric relations involve items in different sentences, the anaphoric constituent refers to the semantic values of [number] and [person] of its antecedent, not its MS value.

I take it that inter-sentential coreference relations are regulated by Discourse Models (DMs) like those utilized in Discourse Representation Theory (Kamp and Reydel 1993). A DM may have stored the concept 'people' as a referent, together with the semantic matrix, but not the MS features, which are irrelevant (or deleted) at this point. In the second sentence in (115), the *pro* subject can be singular or plural and controls singular or plural agreement on T and ptc. If *pro* is [plural], it can be co-indexed with the referent 'gente', giving us the effect of AS agreement with [plural] features.[17]

Let me discuss [±animate] for a second: it is an inherent feature of a noun and part of its *sem* matrix but it it is not an MS feature in Spanish,

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[17] Derivational approaches to Principle B, like Kayne (2002), are not compatible with this state of affairs. Kayne proposes that a pronoun and its antecedent are merged together as a constituent and then the R-expression raises to its surface position. This analysis applied to example (115) would predict that the verb and the participle in the subordinate clause should exhibit singular feminine morphology.

although it is in many other languages. The fact that [±animate] is not an MS feature in Spanish does not mean that it has no presence in the grammar. For instance, animate nouns can be antecedents of overt nominative pronouns, while inanimates can't (as described in traditional grammars like Campos 1994):

(116) a. Vi   una mujer. Ella es muy interesante.
        'I saw a woman.   She is very interesting.'
      b. Vi   una película. *Ella es muy interesante.
        'I saw a   movie.   She is very interesting.'

However, there are no traces that [±animate] plays any role in intrasentential relations.[18] This datum is accounted for if we assume that (i) the feature [±animate] is part of the semantic matrix, (ii) [±animate] is not part of the MS matrix, (iii) DMs access semantic matrices while sentence grammar accesses only MS matrices.

2.6.4 Structure

There is already a long tradition of scholars who have argued that so-called third person should be considered simply no-person (Anderson 1982, Noyer 1997 from the point of view of morphology, Sigurðsson 2000, 2003 from the point of view of syntax). I adopt this assumption.

I further adopt the assumption that MS features form a geometry akin to what is found in the realm of phonology (Harley and Ritter 2002, Béjar 2003). The following, inspired by Béjar (2003), will suffice for our purposes. It takes as datum a language with a paradigm of first, second and third persons:[19]

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[18] With an exception in the clitic system of one dialect, as described in Ormazábal and Romero (2001) and discussed in Chapter 3.

[19] Béjar (2003) adds a feature π, of difficult definition, to every D. She argues its presence is detected in intervention effects. I omit it for my purposes because I do not need it at any point. Notice also that this feature geometry is hypothesized to be on the goal. No claims of a similar feature geometry on the probe are being made.

(117)

D	D	D
|	|	
[participant]	[participant]	
	|	
	[addressee]	
1st	2nd	3rd
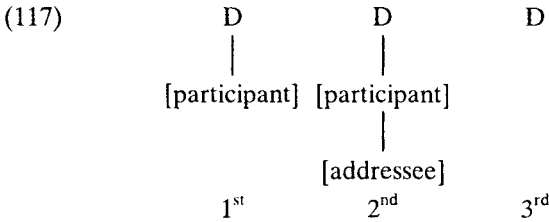
The feature [participant] refers to whether a D is a speaker or addressee in the speech act. Further, a participant can be an [addressee] or not. Finally, a D can be devoid of any [person] features. These correspond to the traditional first, second and third persons.[20]

Let's now turn to number. Although plural morphology appears on a probe whenever we have a goal that refers to a plurality of things, the feature [singular] appears in three distinct situations:

1. Singular count nouns.

2. Mass nouns (with some lexical exceptions, like 'oats').

3. Default, when no nominal is available for agreement.

So, "singular" morphology on the probe does not correlate with "singularity" on the goal. Rather, I surmise, so-called singular morphology is simply a default form, adopted when nothing with a number feature is around.

Thus, I suggest that the feature geometry strategy be applied to [number] (see Cowper 2003):

(118)

D	D	D
	|	|
	[plural]	[plural]
	|	
	[minimal]	
singular	dual	plural
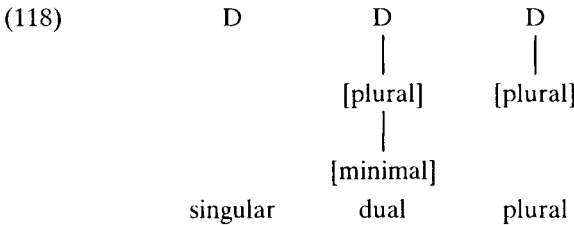
Thus, a singular D is simply a D without a number feature. Notice that as a consequence, a singular third person nominal simply has no φ-features. A probe that hits on a third person singular DP finds no features to agree with. The features on T that traditionally have been called [3rd.sg] should

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[20] Alternatively, one could define first as being [participant] and [speaker], and second as being simply [participant]. I choose one over the other arbitrarily.

actually be reformulated as [default]. In other words: it is not the case that the default form is spelled out as [3rd.sg]. Neither [3rd] nor [sg], nor the combination [3rd,sg] exist as features.

Both dual and plural share a feature, [plural]. Dual is formed by adding one more feature [minimal]. It is a well-known fact that languages that have dual all have plural (Corbett 2000, Greenberg 1963: 94) – this is expected with this hierarchy. It would be curious and in need of explanation that a language had the combination [plural, minimum] but not the simplex [plural].

However, the most recent and extensive study of [number], Harbour (2003), does not assume a geometry like the one suggested here. Instead, he argues that the features involved in number are binary, which he calls [±singular] and [±augmented]. They form a grid like the following (see Harbour 2003, Ch. 3):

(119) [+sg], [+aug] → ∅
      [+sg], [−aug] → singular
      [−sg], [+aug] → plural
      [−sg], [−aug] → dual

There are, I believe, some disadvantages with assuming this grid. First, it does not capture the entailment [+augmented] → [−singular]. The result is that the grid includes an impossible feature combination: [+singular, +augmented]. Second, it is unclear why so many languages lack the [−sg,+aug] combination: the grid would expect it to be as common as the others. In particular, we would like the feature system we adopt to capture the fact that languages with dual always have plural, which this grid does not. Finally, one should wonder why [person] and [number] are organized so differently: one with privative features, the other with binary ones. Therefore, I adopt a feature geometry like the one above, with privative features for [person] and [number].[21]

Let's turn briefly to the semantic matrix. Mass nouns simply have no number feature. Count nouns have a semantic [αnumber] and can value it by copying a [plural] feature from the MS matrix, as shown above. Alternatively, if there is no [plural] in the MS matrix of the count noun,

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[21] To be fair, Harbour (2003) is engaged in the description and analysis of the Kiowa noun class system, which I am not attempting to do here. I postpone the issue for future research.

the semantic number is valued as default at the C-I interface.

Before I finish this section, it is necessary to discuss briefly what is meant by "default". The question is, what exactly happens when a probe does not find a feature in the goal that can value its unvalued feature? There are two possible approaches. The first one would leave the [αF] unvalued in C_{HL} and would feed the module Morphology as is. A default affix would simply be the vocabulary item supplied by Morphology when a feature is not valued. There would be no [default] feature in C_{HL}.

In the second approach, the operation Agree(pg,) would include a mechanism to assign the value [default] when an unvalued feature has not been valued after probing. This approach lifts the burden from Morphology, since it does not have to deal with unvalued features. For the purposes of this book, I will assume the second approach (but there might be cross-linguistic variation, see Béjar 2003).

2.6.5 Gender

The category "gender" plays very little role in this monograph, but a few words are in order simply for completeness.

The properties of the category gender are well-known. Gender seems to be another feature that can be interpretable sometimes and sometimes not. This is because gender may correlate with natural sex – feminine for female entities, masculine for males – but it is not always the case: even a diehard Freudian analyst would not be able to find anything male about bridges or female about springs, but the former is masculine in Spanish while the latter is feminine (*puente/fuente*). Sometimes the grammatical gender actually contradicts natural sex: in German female entities are feminine and male entities are masculine but the word *Mädchen* means 'girl' although, due to its morphology (the neuter suffix –*chen*), its grammatical gender is neuter (to Mark Twain's immense amusement). Should we then treat gender as a semantic feature or purely as an MS feature? We have one way to test the difference: as suggested above, MS features are deleted at the sentence level and only semantic features can participate in discourse relations. According to this criterion, inherent gender, but not morphological gender, should be semantic, cf. (120–122).

(120) shows that the neuter gender of *Mädchen* is an MS feature that disappears in the DM. Later anaphoric reference uses the "real" gender, i.e. feminine. It seems that for words like *Mädchen* we should posit

feature matrices like (123).

(120)   Das   ehrgeizige Mädchen ist   ziemlich leistungsorientiert.
        the.n ambitious   girl.n   is   quite   performance-oriented
        Manchmal wirkt sie   fast   verbissen.
        sometimes seems she   almost dogged

        Remus Gergel (p.c., found in
        www.prosieben.de/comedy/ak2004/schueler/verena)

(121)   El   puente es bonito. Lo   vi   limpio el otro día.
        The.m   bridge is pretty.m. Cl.m saw.1st.sg clean.m the other day
        'The bridge is pretty. I saw "him" clean the other day.'

(122)   La   fuente es bonita. La   vi   limpia el otro día.
        The.f   spring is pretty.f. Cl.f saw.1st.sg clean.f the other day
        'The spring is pretty. I saw "her" clean.f the other day.'

(123)   Mädchen 'girl'
                 ┌───────┴───────┐
                sem   *MS*
             [feminine]   [neuter]

Although unusual, it seems to be an empirical reality that an MS and a semantic feature can be contradictory. Plausibly, this could be limited to morphologically complex words:

(124)   Mad$_{[fem]}$ + chen$_{[neuter]}$ → Mädchen$_{[neuter]}$

As for *puente* and *fuente*, notice that their gender regulates not only the grammatical relations within the sentence but also inter-sentential relations (notice in particular that in (122) there is no resort to the default masculine form of the clitic). Somewhat unexpectedly, it seems our best choice is to consider their gender also a semantic feature, cf. (125).

   Thus, it seems that in order to be a member of what I have called "the semantic feature matrix" a feature needs only to be potentially interpretable. In other words, even if associated with the wrong noun, it suffices that gender might be associated with sex (or any other classificatory concept) to allow it to belong to the semantic feature matrix of a noun.

(125)   puente 'bridge'
             ┌──────┴──────┐
          sem   *MS*
        [masculine]   [masculine]
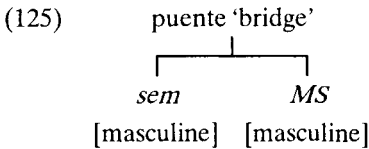
Finally, there are those nouns whose gender inflection does correlate with sex in the real world: as Spanish *niño* 'boy' and *niña* 'girl'. The most parsimonious analysis would list these words as one lexical item with unvalued gender:

(126)   niñ- 'child'
          ┌──────┴──────┐
       sem   *MS*
     [αgender]   [αgender]
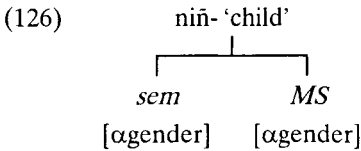
When the lexical item is drawn into the derivational space, the MS matrix is assigned a value [±feminine] which is copied on the semantic matrix.

2.6.6   The phonetic matrix

As Chomsky (1995: 229) says: "the mapping to PF...eliminates formal [i.e. syntactic] and semantic features". The question is how this "elimination" is implemented. Pursuing the line of thinking of the previous section, we can assume that an LI also includes a phonetic feature matrix. Assume further that the phonetic matrix can also have unvalued features and, consequently, that it can communicate with the MS matrix.

So, let's take it that the noun *puente* is assigned the value [plural] on its MS matrix as it is selected to be part of a derivation. This value is copied immediately onto the phonetic matrix as well as the semantic matrix, as shown in (127).

Tense and participles can be assumed to also have an unvalued number feature in the phonetic matrices. When their MS feature is valued in agreement with a DP, their phonetic feature is also valued, as shown in (128).

The phonetic feature [plural] is the one that will eventually be used by PF to assign it a representation that can be used by the A-P modules. In other words, the operation Spell-out consists simply of tearing away the

phonetic matrix.

(127) a.

puente 'bridge'

sem   *MS*   *phon*

[αnumber] ⇐ [plural] ⇒ [αnumber]

b.

puente 'bridge'

sem   *MS*   *phon*

[plural] ⇐ [plural] ⇒ [plural]

(128) a.

T/Ptc

sem   *MS*   *phon*

...   [plural] ⇒ [αnumber]

b.

T/Ptc

sem   *MS*   *phon*

...   [plural] ⇒ [plural]
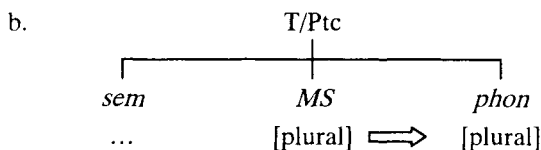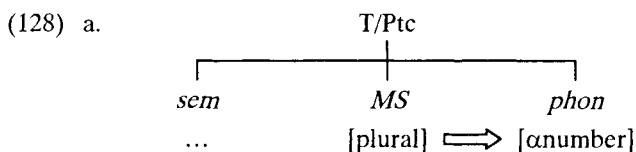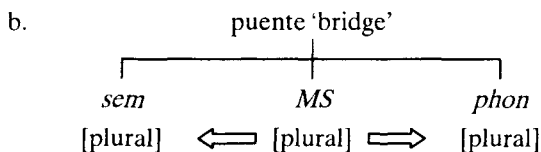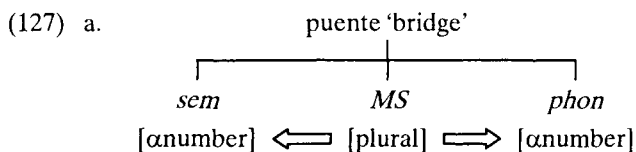
2.6.7   Feature deletion

Notice that once the phonetic and semantic features have a value, the MS feature becomes useless, which leads us into the next issue: Deletion of MS features.

In minimalist theorizing, MS features are part of C_{HL} and do not belong in C-I – Full Interpretation requires that they disappear before a syntactic structure maps onto C-I. Deletion of MS features would then be an operation built within the set of operations that map C_{HL} onto C-I (Chomsky 1993 onwards).

However, in my system this reasoning does not necessarily maintain its strength. The mapping operation can be conceived as simply extracting the semantic matrix from the lexical item. Mapping to C-I would be no different from mapping to PF, and for the same reason that the presence

of MS features without phonetic content does not interfere with Spell-out, the presence of MS features without semantic content should not interfere with the syntax–semantics mapping either. Given the possibility that C-I can simply look into the semantic matrix and ignore the MS matrix, it does not look like Full Interpretation would force deletion of MS features.

However, MS feature deletion could be forced by a reading of what Economy conditions amount to. MS features are useless once they are copied on the semantic and phonetic matrices. This means that if the features that are valued are not deleted at once, C_{HL} will have to carry them for no reason, presumably draining the computational resources of the system. If we assume that C_{HL} is built with regards to basic notions of efficiency and economy, it should include a mechanism to get rid of these features as soon as they become useless. In other words, I propose to incorporate Epstein and Seely's idea that Deletion is part of the operation that values features (although, unlike them, I keep Deletion and Spell-out separate).

Thus, the feature valuation mechanism includes an operation that copies the valued feature on the semantic and phonetic matrices and another one that deletes all the participating MS features. The exception made for [+interpretable] features can now be formulated as follows:

(129)   MS features with a semantic correspondent cannot be deleted.

The intuitive import of (129) is that semantic features make their corresponding MS features more "resistant" to deletion. (The opposite hypothesis, that semantic features need MS features to survive in C_{HL}, is disconfirmed by the fact that semantic features without MS expression may show up in discourse, like the [animacy] constraint in Spanish mentioned above.)

Deleting all [–interpretable] features at once puts stringent restrictions on possible analyses. Take the case of multiple nominatives in Japanese. Chomsky (1995) and Ura (1996) claim that when we have more than one constituent with nominative Case, each of the constituents checks/values this Case against T in a separate Spec,T. Within my framework, this analysis is not possible: once T has assigned [nominative] to one constituent, the feature disappears at once. A different analysis of multiple nominatives is necessary (and provided in Chapter 3).

2.6.8   Spell-out of closed cycles

So, when does Spell-out take place? Notice that MS feature deletion is dependent on valuation, not Spell-out. Since the MS feature is copied onto the phonetic matrix, Spell-out (stripping the phonetic matrix) can take place pretty much any time after that. Following the same economy/efficiency guidelines that led us to delete MS features as soon as possible, we may conclude that C_{HL} has no desire to carry useless phonetic matrices. It follows that Spell-out should take place as early as possible. At the end of each cycle, all the features are valued or, if this is not possible, they acquire [default] values. So, Spell-out can take place after every cycle is finished – except for the features that trigger movement, which have no default.

As mentioned, abstract Case is exceptional – if a DP cannot value its [αC] it cannot go default: the DP needs to move or the result is an ungrammatical sentence. So are the A'/P-features that trigger movement to Spec,C: a default option is again not available. Thus, every cycle can spell out provided that these features are not contained in it. We can express it in the most general manner like this:

(130)   A cycle with no α-features spells out.

After a cycle has been probed and features have been valued (even as default), PF inspects it; if there are no unvalued features in the cycle (really, [αC] or the feature that triggers movement to Spec,C), Spell-out applies. Otherwise, it does not.

For clarity, consider the three types of situations depicted below (as usual EA is the external argument, merged in Spec,v, IA is a constituent merged in Compl,V). There are two cycles in these structures: VP and vP:

(131) $[_{VP}$ IA$_{\alpha C1}$ $[_{V'}$ V t(IA$_{\alpha C1}$)]]

(132) $[_{vP}$ EA$_{\alpha C2}$ $[_{v'}$ v$_{\text{acc}}$ $[_{VP}$ IA$_{\text{acc}}$ V t(IA$_{\text{acc}}$)]]] $\rightarrow$ transitive v

(133) $[_{vP}$ IA$_{\alpha C1}$ $[_{v'}$ v $[_{VP}$ t(IA$_{\alpha C1}$) V t(IA$_{\alpha C1}$)]]] $\rightarrow$ unaccusative/passive v

In (131), the VP includes an unvalued Case feature. So VP does not spell out. In (132), the Case of the IA has been valued, copied on the phonetic matrix and, as indicated by the strike-thru, deleted from the MS matrix.

The VP can spell out. However, the vP includes an EA with unvalued Case, so the vP cannot spell out. Finally, in (133) the v does not assign Case, so the IA raises to Spec,v. Neither VP nor vP can spell out.

As I show in more detail in the next section, in the case of ordinary transitive sentences, Spell-out of VP will take place right after vP is built and IA has valued its Case feature. Spell-out of TP will take place after CP is built and the subject has valued its own Case feature. Thus, my system in which Spell-out takes place after [αC] is valued and deleted coincides extensionally with Chomsky's phases (recall that in Chomsky's system the edges of phases spelled out with the next phase). One difference between Chomsky's system and mine is that in my system the points of Spell-out are derived from the properties of the structure involved while in Chomsky's the phases are, arguably, arbitrarily defined.

With unaccusatives and passives, we are going to see that the Case of the object is not valued at the vP level (as in 132), so Spell-out will be delayed until later (again as in Chomsky's approach). The more interesting cases involve expletive constructions: we are going to find cross-linguistic variation: VP spells out in some languages but not others – but this will have to wait until Chapter 4.

2.6.9   The Derivational Cycle (final version)

With the incorporation of what we have learned in this section, the complete Derivational Cycle now looks like this:

(134)   (i)   A predicate P is selected.
        (ii)   P merges with the constituents it selects.
        (iii)   If P has unvalued features, it probes.
        (iv)   Valued MS features are copied on the semantic and phonetic matrices and deleted from the MS matrix.
        (v)   If a constituent in Spec,P has unvalued features, it probes.
        (vi)   Valued MS features are copied on the semantic and phonetic matrices and deleted from the MS matrix.
        (vii')   Spell-out of Compl,P if there are no α-features.
        (vii")   If a constituent in the edge of Compl,P still has α-features it moves to Spec,P.

Let's now go back to the problems that I discussed in 6.1 and 6.2. Recall

that Chomsky wanted to have the [–Int] features deleted while keeping the [+Int] ones in C-I. This was difficult to implement because Deletion could not know which features were [–Int] and which ones were [+Int]. Within the model sketched above, with parallel and bonded MS and semantic feature matrices, the MS features that are not bonded to semantic features are deleted as soon as they are valued. There is no risk of "look-ahead".

Epstein and Seely (2002) wanted to have Spell-out+Deletion apply after every transformational operation. This ran into trouble with a head that has two unvalued features, since we could not spell out a structure after only one feature was valued because the other one was still unvalued. And you could not spell out after all features are valued because, as in Chomsky's system, Spell-out could not know if the feature valued earlier was [+Int] or [–Int].

Let's see how this is not a problem with me, using the wh-determiner again as an example. A wh-determiner has a P-feature (or Case') together with its unvalued Case feature, as shown in (135.1). At some point, the wh-determiner gets Case, say nominative, as shown in (135.2). The H assigning nominative could be T or C, depending on the language. Finally, the WH word values its [αP] against a head in the left periphery, here generically indicated as C:

(135) 1. $C_{[P]} \ldots H_{[nom]} \ldots WH_{[\alpha P][\alpha C]}$
       2. $C_{[P]} \ldots H_{[nom]} WH_{[\alpha P][nom]} \ldots t(WH_{[\alpha P][nom]})$
       3. $C_{[P]} WH_{[P][nom]} \ldots H_{[nom]} t(WH_{[P][nom]}) \ldots t(WH_{[P][nom]})$

Assume, as is implicitly done, that the entire lexical item spells out at once. The question is whether the wh-determiner can spell out in step (135.2). The answer is no, because the [αP] is still to be valued. Spell-out has to be delayed until (135.3). This is a problem for Epstein and Seely because if Spell-out takes place in (135.3) it could never know that the [nominative] feature on the wh-determiner is [–Int]. In my system, [+Int] features are bonded with equivalents in the semantic and phonetic matrices, while [–Int] features are linked only to the phonetic matrix. When [nominative] is valued, it is copied on the phonetic matrix and deleted from the MS matrix. Since there is a [αP], the structure does not spell out. When [αP] is valued, it is copied on the phonetic matrix and deleted from the MS matrix. Now, there are no unvalued features in the structure, so PF can strip the phonetic matrix – i.e. spell out.

2.7 Analyses

2.7.1 Accusative Case and transitivity

The purpose of this section is to show how local Agree and reactive Move, together with some current assumptions concerning the role of v in assigning accusative Case, can account for some data that have remained recalcitrant after several years of intensive investigation.

Consider (136a) and (136b), which represent, respectively, the steps involved in building a regular transitive vP and the resulting structure. In derivations I omit some pieces of information to avoid making them too cumbersome: (i) I do not include category labels on phrases, (ii) I only include MS features in step 6 (and whenever there is an Agree operation); it should be understood that it includes copying of MS features on the semantic and phonetic matrices, (iii) I omit features on traces:

(136) a.

1. Merge $(V, IA_{\{[\alpha C][\phi]\}}) = \{V, IA_{\{[\alpha C][\phi]\}}\}$
2. Copy $IA_{\{[\alpha C][\phi]\}}$
3. Merge $(IA_{\{[\alpha C][\phi]\}}, \{V, t(IA)\}) = \{IA_{\{[\alpha C][\phi]\}}, \{V, t(IA)\}\}$
4. Merge$(v_{\{[acc][\alpha\phi]\}}, \{IA_{\{[\alpha C][\phi]\}}, \{V, t(IA)\}\}) =$
   $= \{v_{\{[acc][\alpha\phi]\}}, \{IA_{\{[\alpha C][\phi]\}}, \{V, t(IA)\}\}\}$
5. Merge $(EA_{\{[\alpha C][\phi]\}}, \{v_{\{[acc][\phi]\}}, \{IA_{\{[\alpha C][\phi]\}}, \{V, t(IA)\}\}\}) =$
   $= \{EA_{\{[\alpha C][\phi]\}}, \{v_{\{[acc][\phi]\}}, \{IA_{\{[\alpha C][\phi]\}}, \{V, t(IA)\}\}\}\}$
6. Agree $(v_{\{[acc][\alpha\phi]\}}, IA_{\{[\alpha C][\phi]\}}) = \{v_{\{[acc][\phi]\}}, \{IA_{\{[acc][\phi]\}}, \{V, t(IA)\}\}\}$
7. Delete features $= \{v_{\{[\text{acc}][\phi]\}}, \{IA_{\{[\text{acc}][\phi]\}}, \{V, t(IA)\}\}\}$
8. Spell out VP

b.
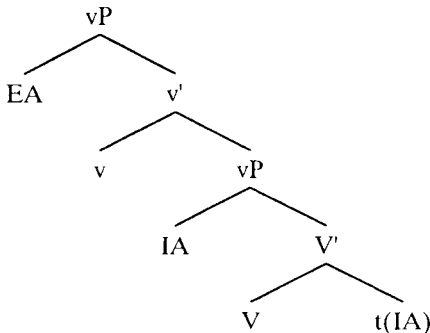
Let's decode the information contained in (136a). In line 1, the verb merges with IA, which bears valued φ-features and an unvalued Case feature. The unvalued Case feature forces it to move, implemented here as Copy+Merge (Collins 1997), as represented in lines 2 and 3. In line 4, the light verb merges with VP, with unvalued φ-features and a valued Case feature. In line 5 EA merges with v' and gets a θ-role. The light verb and IA may agree now, with the result that their unvalued features are now valued, as shown in line 6. Deletable features are deleted at once, as shown in line 7. VP has no unvalued features: it can spell out, as shown in line 8.

One positive result of my framework is that it derives the adjacency requirement on Case assignment (see section 2.3.2). Consider the following sentences (that I cite from Johnson 1991):

(137) a. *Chris ate slowly the meat.
       b. Chris talked slowly to Gary.

The direct object must be adjacent to the main verb while a prepositional complement does not have such a requirement. Johnson argued that adjacency comes from the combination of two movement operations: (i) movement of the lexical verb to a functional category that governs VP (the functional head could be v in our terms), (ii) movement of the DP to Spec,V, where this functional category (v for us) assigns Case under government. This seems the only available option if we want to preserve Emonds' (1976) and Pollock's (1989) conclusions that the English verbal complex never raises to INFL overtly. But why should the object move to Spec,V? Within my framework it follows directly from the locality of Agree and spec-to-spec movement.

Within Chomsky's (1995, 2000, 2001a) assumptions the datum shown in (137) receives no analysis. Chomsky (2000, 2001a) has v agree with IA in situ and optionally pied-pipe it to Spec,v if the language allows for object shift. Chomsky's system gives us two options, neither of which predicts the right word order: (i) if IA raises overtly to Spec,v, we would have the word orders Obj-Subj-V or Subj-Obj-V (with tucking-in), which are unattested in English; (ii) if IA raises covertly, the adjacency requirement is left unaccounted for unless an adverb creates an intervention effect on covert IA movement (an implausible assumption, although briefly discussed by Chomsky 1995). Overt short movement to Spec,V seems descriptively to be the most adequate solution.

A second interesting empirical result of my analyses involves the role of Spec,V in causative constructions in Romance as well as Raising to Object/ECM constructions in English. It has been known since Postal (1974), that an ECM subject can bear two θ-roles (if the matrix predicate does have a second θ-role to assign), as exemplified in (138a–d), taken from Bošković (1997). (138a, b) show that the verb 'estimate' selects for a DP that expresses quantity; the same restriction is apparent in (138c, d), which suggests that the ECM subject is selected and assigned a θ-role. López (2001) additionally argues that chains with two θ-roles are found in Romance causative constructions. In the Spanish example (138e) the causee argument *a Pedro* is shared by the subordinate and the matrix predicates, receiving θ-roles from both:

(138) a. Sue estimated Bill's weight.
       b. *Sue estimated Bill.
       c. Sue estimated Bill's weight to be 150 pounds.
       d. *Sue estimated Bill to weigh 150 pounds.
       e. Juan le   hizo   a   Pedro reparar
          Juan CL.3rd.sg make-PAST.3rd.sg DAT Pedro repair
          el coche.
          the car
          'Juan made Pedro fix the car.'

This datum is accounted for if we assume spec-to-spec movement. As the ECM subject or the causee raises to Spec,V, it stops at a spec where it can be probed by the θ-assigning verb. The tree in (139) represents the causative structure (see López 2001 for argumentation showing, in particular, that causatives are not control constructions).

It is not clear how this would follow from Chomsky's recent proposals. Although he maintains movement to Spec,T^{def} to satisfy the EPP, he includes no mechanism in which a lexical verb can assign a θ-role to the spec of the complement. Then, the causee is probed by v and eventually raised to Spec,v, so the causee is never a spec of *hacer* either. Thus, in Chomsky's theory of movement the causee or ECM subject is never in a configuration where it can be selected by the matrix predicate.

IA and ECM subject movement to Spec,V should probably be distinguished from Icelandic object shift, which targets a position higher than the base position of EA, has very particular restrictions on its application and a semantic import of referentiality/specificity (Bobaljik

(139)
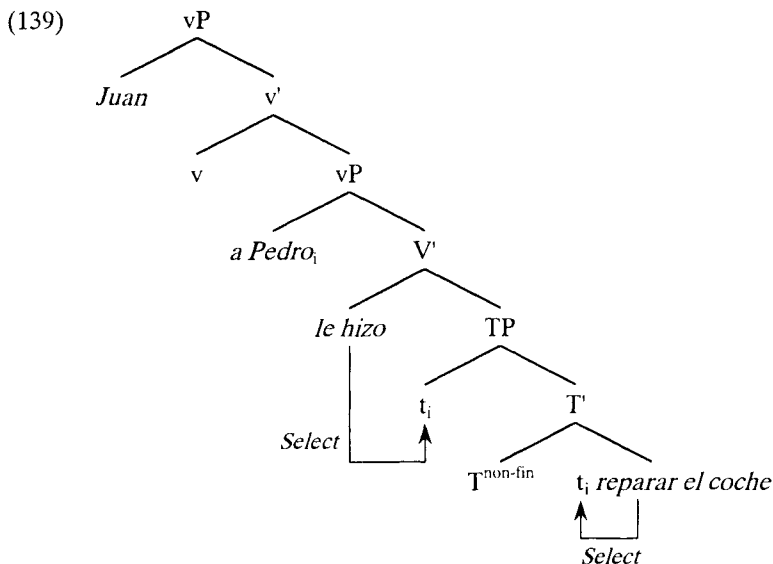
and Jonas 1996, Collins and Thráinsson 1996, Holmberg 1999). As I suggested above, object shift might be another instance of application of the same feature [f] that triggers movement to Spec,T in Finnish. However, at this point I do not have further thoughts on this.

2.7.2 Nominative Case

Let's proceed with the derivation of an ordinary transitive sentence. After a vP structure like (136) is completed, the Case feature of EA is still unvalued. (140a) shows the relevant final structure, with the EA in Spec,T, and (140b) the relevant steps. T merges and probes EA and values its own ϕ-features (140b.1). However, T can't value EA's Case (in English), and this forces EA to raise to Spec,T. Then C merges with TP. With EA in Spec,T, C probes EA and values its own ϕ-features while it values the EA's Case feature (140b.2). Notice that at this point, neither TP or CP contain unvalued features. Thus, the [–interpretable] features delete from the MS matrix and both TP and CP can spell out.

(140) is the structure of the solution for the simplest case. Let us now consider cases in which the DP that is generated in complement position (IA) raises to Spec,T, as shown in (141).

(140) a.
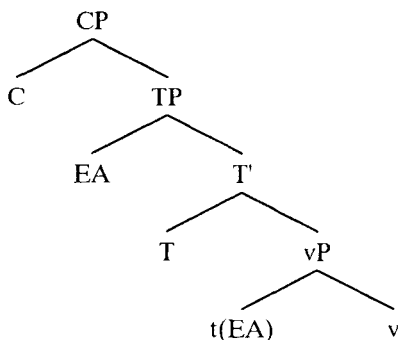
b.
1. $\text{Agree}(T_{[\alpha\phi]}, EA_{[\phi][\alpha C]}) \rightarrow T_{[\phi]} \dots EA_{[\phi][\alpha C]}$
2. $\text{Agree}(C_{[nom][\alpha\phi]}, EA_{[\phi][\alpha C]}) \rightarrow C_{[nom][\phi]} \dots EA_{[\phi][nom]} \dots T_{[\phi]}$

(141) a. A lady passed away.
   b. A book is on the table.
   c. The body was discovered by a lady.

In (141a), we have the $v(\emptyset)$ variant without EPP. $v(\emptyset)$ does not assign Case and the IA shows up in Spec,T. The DP raises to 3 going through 1 and 2.

(142) [C [3 T [2 v [1 pass-away IA]]]]

The same can be said of the copulative construction in (141b). In my representation in (143), I assume that the copula selects a Small Clause:

(143) [C [2 T [1 be [$_{SC}$ IA on the table]]]]

The passive is the most complicated example, as shown in (144).

(144) [C [4 T[3 be [2 participle [1 discover- IA]]]]]

(144) expresses the assumption that passive participles consist of a VP shell and (possibly) functional categories related to it, but crucially no v, as is transparently visible in Absolute Small Clauses (López 1994, 2001). Additionally, Blight (1997) and Göbbel (2003) have used adverb position

data to show that the participle in passive constructions is in a position lower than the active verb's.

(145) a. John (*poorly) built the house (poorly).
       b. The house was (poorly) built (poorly).

(146) a. Mary (*beautifully) played the flute (beautifully).
       b. The flute was played (beautifully) by Mary (beautifully).

They argue that the adverb is uniformly adjoined to a projection of V. In active sentences, the verb raises to v, leaving the adverb to its right. In passive sentences, the participle does not raise to v and the adverb appears to its left. The light verb ends up spelled out as 'be':

(147) a. $[_{vP}$ EA v + V $[_{VP}$ IA $[_{V'}$ adv t(V) t(IA)]]]
       b. $[_{vP}$ v $[_{VP}$ t(IA)$[_{V'}$ adv Ptc t(IA)]]]

Let's go back to (144). The verb 'discover' is selected by a participle, which is itself selected by the copula 'be'. Let's take the participle to have unvalued ϕ-features. The IA is merged with a $[\alpha C]$ that forces it to raise to 1. In 1, IA can be probed by the participle, valuing the latter's ϕ-features. IA continues raising successively through 2 and 3. In 3 it can be probed by T, thus valuing the $[\alpha\phi]$ of T. Finally, IA stops at 4, where it can value its Case with C.

Kayne's (1989) facts about participle agreement in French follow naturally. Kayne showed that a participle in this language agrees with an IA provided that the latter has raised, either as an instance of wh-movement, clitic movement or, as in this case, A-movement to subject position. In my terms, there is participle agreement with an IA that stops in 1, but not if it stays in situ, because of locality of agreement. If position 1 is not filled because nothing raises into it, we get a default form of the participle, without a set of ϕ-features (although the comparative facts are complex, see Law (2003) for an analysis). As Chomsky (2001a) himself notes, Kayne's findings receive no account in his system. Since he allows the participle to probe IA in its c-command domain regardless of the intervening distance, he cannot explain why agreement shows up only when IA raises.

2.8   Conclusions

In this chapter I put forth a theory of A-dependencies based on the following basic three assumptions:

(i)   Local Agree: a probe can only reach the edge of its complement.
(ii)   Reactive Move: triggered by unvalued features on the goal, raising is spec-to-spec until it can be probed by a head with the right feature set.
(iii)   Complex Dependencies: they allow us to account for agreement between one probe and two goals, an apparent situation of long distance agreement.

Along the way, I have made an effort to clarify some points that remain obscure in contemporary syntactic theory: the role of MS features, their valuation, deletion and Spell-out, the conditions for default, and cross-linguistic variation concerning the position of subjects.

Let's now return to some of the conclusions reached in the introductory chapter. At that point, I aligned myself with Frampton and Guttman's (2002) suggestion that a crash-proof system is strongly desirable. Additionally, I showed how Chomsky's (2000, 2001a) framework is in many ways the opposite of a crash-proof system – as a matter of fact, it generates many derivations that never yield a grammatical sentence. A second property of Chomsky's framework that I criticized is the complicated assumptions that were necessary in order to maintain long distance Agree and movement by Attract/Pied-piping:

(i)   LAs/numerations: Although, according to Chomsky, they reduce the complexity of C_{HL} computations, they are a construct that allows for many, really infinite, doomed derivations for each good one (Frampton and Guttman 2002).
(ii)   Phases: Phases can be of infinite length, given the possibility of embedding raising predicates. This means that the distance between a probe and a goal can be indefinitely long.
(iii)   Long distance agreement: In order to impose locality, Chomsky (2000, 2001a) needs (a) MLC and (b) PIC. The MLC was weakened by the notion of ϕ-completeness. Moreover, the MLC is checked at the end of the phase, which again raises the specter of allowing for doomed derivations to proceed over a potentially long stretch. The

PIC itself has to be weakened, so T can agree with an IA in situ and assign it nominative Case.

(iv) Movement by Attract/Pied-piping: In order to obtain successive cyclic movement, a series of EPP features needed to be postulated. Given that failure of just one condemns a derivation, we again find that the system can generate many bad derivations. If we insert a "Have and Effect on Output" condition, then we have a system with a dangerous dose of look-ahead.

(v) Selection: Although Chomsky (2000, 2001a) maintains a Select mechanism in combination with Merge, Chomsky (2001b) chooses to leave Merge free, the results checked at the interface with C-I. This again increases the number of crashed derivations. Moreover, the Selection stipulations concerning T, C and T^{def} are complicated and unnatural.

(vi) Feature deletion and Spell-out: Unvalued/uninterpretable features are spelled out and deleted after valuation. However, there is nothing in the system that can tell an [+Int] from a [−Int] after the latter has been valued. Moreover, the notion of [±Int] is in much need of articulation.

In contrast, my framework compares favorably in every respect:

(i) I do not use LAs/numerations. Instead, every P is drawn directly from the Lex. This eliminates one source of crashed derivations.

(ii) I maintain Select and extend it to expletive–associate relations. By changing Case theory, the need to postulate a T^{def} disappears and selectional requirements become simpler. Select eliminates many potentially crashed derivations.

(iii) Since there are no LAs, there are no phases. Instead of a phase, we have a cycle around a predicate P, a much smaller domain. Opacity is without exceptions. Dependencies are always local.

(iv) Agree and Move are reactive operations "blind" to their consequences. Consequently, they must be extremely local, taking place within the cycle. This integrates successive cyclic movement without increasing exponentially the number of nonconvergent derivations. MLC, PIC and their consequences (ϕ-completeness) become unformulable.

(v) The assumption that LIs have communicating MS, semantic and phonetic feature matrices allows us to articulate a more realistic

approach to the role of features in C_{HL} and to avoid the cul-de-sac that feature deletion lead us to in Chomsky and Epstein and Seely's approaches.

So, what is left? First, we still have the issue of IAs that agree with T across a quirky subject. This is discussed in Chapter 3, where I show that the notion of Complex Dependency not only accounts for this pattern of apparent long distance agreement but also is able to derive the person–number restrictions that have given rise to an impressive amount of work. Interestingly, it will also be shown that where the IA is shown to agree with T locally, the person–number restrictions disappear. In Chapter 4 I show that expletives are also quirky subjects, that they give rise to person–number restrictions in English and present an analysis in which the expletive is a quirky subject embedded in a Complex Dependency.

Finally, recall that in the introduction I discussed Chomsky's Merge-over-Move principle (or more generally the principle that simple operations preempt complex ones). Merge-over-Move depends heavily on LAs/numerations, since Merge preempts Move only if there is an expletive in the LA (otherwise, there would never be any movement). Moreover, I showed that the piece of evidence that Chomsky presents, based on English expletive constructions, cannot be transported into Icelandic. An alternative analysis that holds for both languages becomes necessary. This is executed in Chapter 4.

3

Complex Dependencies: Nominative Objects

3.1 Introduction

In the previous chapter I developed a theory of A-dependencies based on a strict version of locality: only the complement and the spec of the complement can be probed. Having set up the playing field in these spartan terms, the first issue on the agenda is what to do about nominative objects, which would seem to involve a long distance dependency. The purpose of this chapter is to show that the concept of Complex Dependencies, also introduced in Chapter 2, is perfectly adequate to account for this phenomenon and obtain a wide range of empirical consequences.

I study four different types of constructions: (i) indefinite SE in Romance, (ii) quirky subjects in Icelandic, (iii) quirky subjects in Spanish and (iv) double nominative predicates in Japanese. What all of these have in common is that they have objects that, contrary to expectations, show up in nominative Case. (i) and (ii) have another intriguing property in common: the so-called person–number restrictions on tense agreement. In this latter context, I briefly discuss the *me-lui constraint on clitic/agreement affix combinations.

Take the Icelandic examples (1):[1]

---

[1] Glosses and translations of the Icelandic examples are as in the cited sources. As a consequence, some minor inconsistencies may be detected by the attentive reader.

(1) a. Honum   var   hjálpað.
         he.DAT was helped

Zaenen et al. (1985)

     b. Henni   leiddust   strákanir.
         she.DAT bored.3rd.pl boys.the.NOM
         'She found the boys boring.'

Sigurðsson (1996: 25)

An argument with an oblique case (dative, accusative or genitive, henceforth DAT) sits in Spec,T like any other object, as shown by multiple authors (Thráinsson 1979, Sigurðsson 1989, etc.). In a subset of cases (example 1b), we have an internal argument (henceforth IA, following Chapter 2's usage) sporting nominative case and agreement with T, but with a twist: IA has to be third person. First or second person IAs would make the sentence ungrammatical:

(2) Henni   **leiddumst** / ?*leiddust / ?* leiddist   við.
     she.DAT bored.1.pl / .3rd.pl   / .3rd.sg   we.NOM

Sigurðsson (1996: 28)

If instead of an object we have an ECM subject, the ECM subject can be first or second person but cannot agree with T.

The third person restriction that affects nominative IAs in Icelandic is found in Romance indefinite SE constructions (Taraldsen 1995) and possibly in dative-accusative clitic or agreement combinations (Boeckx 2000, Anagnastopoulou 2003). Similar but intriguingly different restrictions are also found in expletive and locative constructions in English:

(3) a. *There am only me.
     b. *There are only you, Chris.
     c. There is only me/you.
     d. There are/is only us/you guys.

In English expletive and locative constructions, first and second person singular are also out unless T appears in a default form, but the plural forms are fine, with or without agreement (discussed in Chapter 4).

Putting aside clitic/agreement combinations for the moment, what constructions with restrictions seem to have in common is the following: between the agreeing heads (T and IA) there is some element (SE, quirky

subject, expletive, locative) which disturbs the dependency making it ungrammatical with some person/number combinations but not others. This is unexpected within simple assumptions: under the MLC (Chomsky 1995) or any other version of Relativized Minimality (Rizzi 1990), either a constituent breaks a dependency or it does not – it should not do so sometimes. Correspondingly, gallons of ink have been spilled trying to account for it.

To make matters more complex, quirky subjects in some languages do not impose any restrictions on the nominative IA. That is the case of type (iii) constructions in Spanish (with an interesting exception discovered by Rivero 2004, which I discuss in section 3.6):

(4)   Me   gustas   tú.
       me.DAT   like.2nd.sg   you.NOM
       'I like you.'

I will argue that indefinite SE and Icelandic quirky subjects exhibit person–number restrictions as a by-product of a complex dependency involving a probe (T or v), the SE or quirky subject (which I consider to be external arguments, EA) and the nominative IA, coupled with the features (or rather, lack thereof) of the EA. Correspondingly, the Spanish quirky subject does not have a person restriction because no such Complex Dependency exists.

Japanese nominative objects are included here as further evidence that nominative IAs may involve Complex Dependencies. I will show that the properties of double nominatives in Japanese, which seem paradoxical as described by Koizumi (1995) and Yatsushiro (1999), turn out to follow directly if we assume that T, EA and IA are tied into one Complex Dependency.

3.2   Why the person–number restriction is not a simple problem

Before I proceed to my analysis, it may be a good idea to argue that a theory of agreement based on simple dependencies cannot produce a principled analysis of person–number restrictions.

A starting point for any analysis of this phenomenon is the assumption that examples like (2) show evidence that person and number agreement

proceed independently (Rigau 1991, Jónsson 1996, Schütze 1997, Boeckx 2000, Sigurðsson 2000, 2002).

(5)

```
                    NumP
         ┌───────────┴───────────┐
        Num                    PersonP
         │            ┌───────────┴───────────┐
         │          Person                    TP
         │            │            ┌───────────┴───────────┐
         │            │            T                      vP
         │            │                         ┌──────────┴──────────┐
         │            │                       EA_DAT                  v'
         │            └──────┬──────┘                      ┌──────────┴──────────┐
         │                 Agree                           v                    VP
         │                                                           ┌──────────┴──────────┐
         │                                                           v                  IA_NOM
         └────────────────────────────────────┬────────────────────────────────────────┘
                                             Agree
```

(6)

```
                    PersonP
         ┌───────────┴───────────┐
       Person                    XP
         │            ┌───────────┴───────────┐
         │          EA_DAT                   NumP
         └──────┬──────┘          ┌───────────┴───────────┐
              Agree              Num                      vP
                                  │            ┌──────────┴──────────┐
                                  │          t(EA)                  v'
                                  │                      ┌──────────┴──────────┐
                                  │                      v                    VP
                                  │                                ┌──────────┴──────────┐
                                  │                                v                  IA_NOM
                                  └───────────────────┬──────────────────────────────┘
                                                    Agree
```
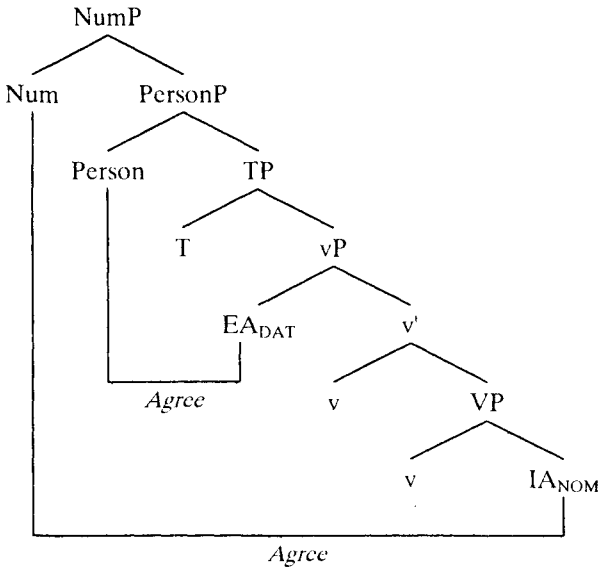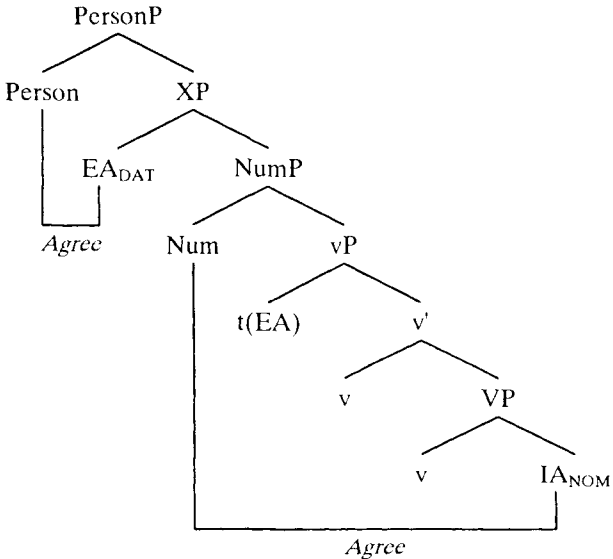
Some authors even argue that [person] and [number] head distinct categories (Haeberli 2002, Sigurðsson 2000, 2003, Taraldsen 1995). For instance, in Sigurðsson (2000), it is proposed that a person head probes and agrees with the dative constituent, while number head skips over it and agrees with the nominative as shown in (5). Alternatively, Sigurðsson (2002) proposes that the Person head is higher than Number (as in Haeberli 2002, Sigurðsson 1996, Taraldsen 1995). DAT raises to some unspecified position in between the two where it can be probed by Person. The field is now free for Number to probe the nominative IA, cf. (5) and (6).

The details of execution are missing (in particular, how Num is prevented from probing DAT in situ, why and how DAT raises). What is interesting to us now is that this sort of approach, without further assumptions, would predict that the following sentence schema should be possible, contrary to fact:

(7)   ?*Him.DAT T$_{[3rd.pl]}$ please we.NOM
        (Intended meaning: he is pleasing to us)

That is, probing of DAT by Person would yield [third] while probing of number by Num would give us [plural]. The result: T exhibits a third person plural morpheme with a first person plural nominative IA. Clearly the two probes cannot be too independent. The tricky part is how to make them work together to rule out (7).

I choose Anagnostopoulou (2003) as an example of a careful attempt to make the two probes work separately but not too separately. Using the Checking Theory of Chomsky (1995), her analysis is articulated as follows:

(i)   She adopts a vP structure in which the experiencer argument is an EA while the nominative theme is an IA.
(ii)   [person] and [number] features in T undergo separate checking relations.
(iii)   Following the principle of Attract closest, the dative argument raises to Spec,T.
(iv)   The dative argument checks the [αperson] of T (but not the [αnumber] feature). This is because [dative] is inherently [animate] (Boeckx 2000) and the feature [animate] can check [person]. However, the feature [animate] has no phonetic matrix in Icelandic, so it ends up showing up as [3rd person]. This is the

reason why T exhibits [3rd person] morphology.

(v)   T attracts the object covertly (presumably, without creating a problem for minimality). The object can check [αnumber]. Since T is already third person, the object must also be third person, otherwise the derivation crashes. That is, the [person] features of T and IA have to match.

Assumptions (i), (ii) and (iii) are unexceptionable and, as we will see, I adapt them in some form to my own framework. (iv) and (v) are more difficult. (iv) seems to be falsified: inanimate dative subjects can be found:

(8)   Bókunum   var   skilað   óopnuðum
         books.the.DAT   was   returned   unopened.DAT.pl
         'The books were returned unopened.'

Hrafnbjargarson (p.c.)

(v) is also controversial: the object needs to match both its [person] and [number] features with T. However, [person] and [number] are separate syntactic entities in Anagnostopoulou's own approach, since they trigger separate checking relations. Given that [αperson] was checked by DAT, why is there a requirement on the object to match [person] with T again? To put it in the terms of the framework we are using: if [αperson] and [αnumber] are separate probes, why should valuing of [αnumber] be prevented by a mismatch in [person], giving rise to (7)? Anagnostopoulou provides three answers to this question without deciding on any one of them.

One possible answer is that [person] and [number] form an embedded structure in nominals, with [number] included in [person]. As a consequence, the object cannot check [number] if [person] is still present. This approach does not carry over to the probe–goal framework, at least not directly. There is no reason why a [person] feature should stand between an [αnumber] probe and a valued [number] feature if indeed [αperson] and [αnumber] are independent probes.

Alternatively, she suggests that first and second person pronouns "fuse" [person] and [number], making them just one complex feature. Finally, she proposes that [number] might be an inherent feature of first and second pronouns; as a consequence, the [number] features cannot function on their own without being associated with [person]. Again, either assumption is hard to implement in the probe–goal framework: the

probe [αnumber] should be able to detect the [number] feature of the goal, whether it is fused or inherent to the [person] feature.

In terms of coverage, Anagnostopoulou's approach leaves out the Spanish data exemplified in (4). Nonetheless, I agree with Anagnostopoulou that her proposals are reasonable, within her feature-checking framework. However, it is also fair to say that her attempts at forcing the object and T to match their [person] features are purely data driven. One could just as reasonably make the opposite assumptions ([person] and [number] are never fused in the syntax, or [number] is not inherent in 1/2 pronouns, or maybe both assumptions are correct but have no effect on whether a probe can find the feature it is looking for in the goal) with opposite empirical results (no person–number restriction). The real challenge, as has always been in generative grammar and more so in minimalism, is to present an analysis in which the data derives from assumptions that can be argued to be an integral part of the architecture of C_{HL}.

Thus, I agree with the first part of the statement of this family of analysis: the dative argument is responsible for the third person morpheme on T, there is some dependency between DAT and T. What is missing from these accounts is one way to derive, from universal principles, that once T is defined as third person, the nominative IA has to follow suit.

3.3   Complex Dependencies and the person–number restriction

The notion of Complex Dependency was presented in Chapter 2 to deal with data in which a probe seemed to agree with two goals simultaneously. In (9) through (12) are the examples I discussed. The constituents in **bold** agree at least in Case morphology, indicating that just one probe assigned Case to the two of them:

(9)	a.	Hann	telur	**sig**		vera	[t **sterkan**]
		He.NOM	believes	himself.ACC		to be	strong.ACC
	b.	**Hann**	tel-st			vera	[t **sterkur**]
		He.NOM	believes.REFL			to be	strong.NOM
		'He believes himself to be strong.'					

McGinnis (1998: 184)

(10) a. **Hún**   var kölluð **Kidda.**
          she.NOM was called   Kidda.NOM
          'She was called Kidda.'

                                                Zaenen et al. (1985: 472)

      b. **Hún**   er góð **stelpa.**
          she.NOM is   nice girl.NOM

      c. Við   töldum **hana**   vera góða **stelpu.**
          we.NOM believed her.ACC be   nice girl.ACC
                                                Sigurðsson (2002: 101)

(11) **Strákanir**   komust **allir**   í skóla.
      boys.the.NOM got   all.NOM.pl.m to school
      'The boys all managed to get to school.'

                                                Sigurðsson (1996: 331)

(12) Mie   mi-au   dat   **ele**   **surorile** **mele**
      I.DAT I.DAT-ave.3.pl given expl.3.pl sisters   my.3.pl
      cadoul.
      present-the
      'My sisters gave me the present.'

                                                Gergel (p.c.)

In (9), an adjective or participle agrees in number, gender and case with a noun. The case ultimately depends on which case-assigning head eventually governs the noun, T/C for nominative, v for accusative. In (10), agreement in case morphology is between two nominals. (10b) and (10c) show how the case of the predicate nominal co-varies with that of its argument. In (11), the floating quantifier and the raised DP share gender, number and case morphology. Finally, in (12) a subject clitic agrees in number, person, gender and case with the subject.

The analysis of all these cases is, as shown in Chapter 2, essentially the same. First, two terms (the ones that I highlighted in bold) form an open dependency based on their unvalued Case features (and possibly other features too):

(13) $a_{[\alpha 1 C]}$ ... $b_{[\alpha 1 C]}$
        |_____|
            Agree

The main principle that regulates this and any other dependency is Full Sharing:

(14)   **Full Sharing**

If a,b are involved in an Agree (p,g) dependency, feature sharing is mandatory.

Full Sharing ensures that adopting default values is really a last resort strategy. But it has further consequences too. As the derivation proceeds, a higher probe P with a valued Case feature finds a and assigns it Case. However, since a and b form a dependency, Full Sharing forces b to adopt the same Case value as a. In effect, P reaches the (a,b) dependency rather than just one of its terms, forming a Complex Dependency:

(15) $P_{[C]}$ ... $a_{[C]}$ ... $b_{[C]}$

                                    Agree

            Agree
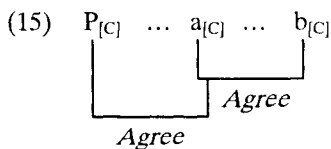
(16)   **Complex Dependency**

If a probe P engages a constituent a involved in an open dependency D, the goal of P is D.

My main hypothesis is that T, the quirky subject/SE and the IA form a Complex Dependency and, further, that this accounts for the person–number restriction. Still taking (14) as the basic structure, assume P = T/C or v, a = SE/quirky subject, b = IA. Full Sharing would lead us to predict that they should all have the same [person] and [number] features. What [person] and [number] features should SE/quirky subject have? Since they fail to trigger any sort of agreement, it is fair to assume that they have no φ-features that can be accessible to an external probe. If SE/quirky subject and the IA have to share all features, we would expect the IA to be third person singular, under the assumption that 3rd person = no person and singular = no number (as argued in Chapter 2, section 2.6).[2] However, this expectation is not fulfilled in the case of [number]: as shown in example

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[2] In Chapter 2, section 2.6 I argued that [+person] should be interpreted as [participant] and [+number] as [plural]. For the discussion I will maintain the more familiar terminology.

(1b), T and IA can be plural although the quirky subject is numberless.

I articulate this reasoning with the help of example (17). Take SE and quirky subject to need abstract Case regardless of the lexical case borne by the latter (on quirky subjects needing abstract Case, see Jónsson 1996 among others). In this example, EA represents a quirky subject or SE and forms a dependency with another nominal (IA) based on co-valued Case features. T probes the dependency formed by the two nominals:

(17)   1.   Agree $(EA_{[\alpha C]}, IA_{[\beta C]}) \rightarrow EA_{[\alpha C]}, IA_{[\alpha C]}$
        2.   Agree $(T_{[\alpha \phi]}, (EA_{[\alpha C]}, IA_{[\alpha C]}))$

Since EA and IA form a dependency, their unvalued Case features are co-valued. T probes this dependency. Full Sharing would now force T, EA and IA to have the same [person] and [number] features. This is true for [person], as shown in example (2): EA has no [person] feature, IA is third person and consequently also has no [person] feature.

The interesting feature is [number]: T and IA can be plural while EA, by assumption, has no number feature. This means that T can agree with just one of the members of the dependency with respect to [number]. How can this be?

Richards (1998) discovered another principle that regulates dependencies. He called it *Minimal Compliance*:

(18)   **Minimal Compliance**
        For any dependency D that obeys constraint C, any elements that are relevant for determining whether D obeys C can be ignored for the rest of the derivation for purposes of determining whether any other dependency D' obeys C.

Richards (1998: 601)

If we take Full Sharing to be a constraint (in a broad sense) that applies to agreement dependencies, then it follows that Minimal Compliance should affect Full Sharing. This allows an unvalued feature of T to agree with only EA or IA if a previous agreement dependency has linked all three respecting Full Sharing.

Let me articulate these remarks. So far we have taken the unvalued ϕ-features on a probe to be a syntactic unit. We could instead take them to be two separate items, [αperson] and [αnumber], following the lead of the aforementioned authors (Sigurðsson 2000, etc.). T comes into the

derivation with [αperson] and [αnumber] (rather than [αφ]). Each of these is a distinct probe. Let's further assume that they are structured in the following way, with number adjoined to person (see Rigau 1991, Taraldsen 1995, Anagnostopoulou 2003):[3]

(19)   [αperson]

              [αnumber]   [αperson]
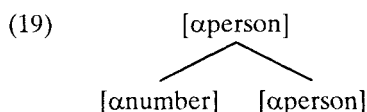
If this is the correct structure, we can assume that person c-commands and is able to probe the complement of T while number does not. Only after [αperson] is valued and deleted from the structure does [αnumber] c-command the complement of T.

Let's see now what happens when the features of T probe the dependency formed by EA and IA in (17). Given the structure in (19), [αperson] goes first. Since there are two nominals in the domain of T, [αperson] must establish an Agree relationship with each of them. Assume IA is third person (=no person). Then [αperson] of T probes the dependency, finds no [person] features and adopts the value [default]. Assume now that IA is first or second person. The absence of person on EA would trigger the [default] value, but the presence of $[1^{st}/2^{nd}]$ on IA would trigger the corresponding value in T. This, I propose, is the source of the ungrammaticality of (2).

Technically, I propose to implement it as follows. I take C_{HL} to be "dumb", unable to see what feature values it is handling and unable to prevent any copying of features. Likewise, there is nothing in the feature structure of a lexical item that prevents the copying of aberrant feature combinations. The result is that T ends up with the feature structure [person [default][$1^{st}/2^{nd}$]], i.e. the quirky subj/SE triggers [default] while the features of IA are copied. This is then fed into Morphology. Morphology, however, has no vocabulary item that can match the [person] value of T. If a vocabulary item is chosen that can match $[1^{st}/2^{nd}]$, this is too much specification for [default] (Distributed Morphology allows for "undermatching" but not "overmatching", see Halle and Marantz 1993).

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[3] Harley (1994) argues for this hierarchy and so does Reuland (2001). Hanson et al.'s (2000) analysis of pronouns has both of them dependent on a common node but not on each other. If the latter are right, the structure of features on probe and goal would be somewhat different. Exploring these options is beyond the limits of this book.

On the other hand, a vocabulary item that can't match [person] is beaten by one with it. There is no good solution to the quandary and the result is a failure to spell out.[4]

Assume now that the [person] dependency has succeeded and [αnumber] is the probe now. Take IA to be singular. Neither EA nor IA has any [number] features, so [αnumber] finds no [number] features and adopts the value [default]: T spells out as third person singular. Assume IA is plural. The probe [αnumber] finds EA and IA in its domain, one with a number feature, the other one without. Full Sharing would force the probe to copy the features of both EA and IA, except for Minimal Compliance. Since Full Sharing was already respected with the feature dependency [person], it does not need to be respected anymore. Thus, T could (hypothetically) agree with either EA (which has no φ-features, so T would show up as [default]) or with IA (and appear in plural form). Thus, Minimal Compliance allows for dependencies that would otherwise be forbidden. However, when agreement with IA is possible, it is forced. This is a consequence of how the operation Agree works. Probing leads to automatic feature valuation if it finds something that can do the job. Only if there is nothing, does it go default – default is truly a last resort mechanism. In this case, IA has a [number] feature that can value [αnumber] of T. EA, I insist, has no [number]. Thus, T appears as [plural].[5]

Thus, my conceptual tool-kit consists of three ingredients: open dependencies based on co-valued features, Full Sharing and Minimal Compliance. Of crucial interest is that all three assumptions are independently needed: Full Sharing and co-valuation are conceptual

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[4] Occasionally, the same form can fit two places in the paradigm. For instance, Icelandic *hefir* from *hafa* 'have' is second and third persons. I assume that unless the coincidence is systematic, we are dealing with homophonous but distinct vocabulary items. In the other Icelandic tenses, second and third persons are clearly distinct (Jónsson 1966). However, homophony does have some effect: a 2nd person form homophonous with a 3rd person is felt to be more acceptable than one that is not (Sigurðsson 1996). I take this to be evidence for the claim that the person restriction is a failure of vocabulary insertion.

[5] One could wonder if Minimal Compliance could not act a second time and allow [αnumber] of T to agree with quirky subj/SE instead of IA. The answer is no. As Richards explains, Minimal Compliance acts to give a "pass" to a dependency that would otherwise fail because of a violation of a UG principle. But in this instance, we have a choice between two grammatical options, beyond the purview of Minimal Compliance.

necessities, all three have substantial and independent empirical support.

Sections 3.4 and 3.5 discuss indefinite SE and Icelandic quirky subjects respectively and their goal is to show how the person–number restrictions follow from my framework. Section 3.6 is devoted to Spanish quirks and shows that they do not exhibit person–number restrictions because they do not enter any Complex Dependencies. Section 3.7 discusses the *me lui* constraint briefly, since it has been recently argued that it belongs in the same category as the restrictions on quirky subjs (Boeckx 2000, Anagnostopoulou 2003). Finally, section 3.8 discusses double nominatives in Japanese.

3.4   Indefinite SE

3.4.1   Introduction: Raposo and Uriagereka (1996)

We start with "indefinite SE", presumably the simpler type. The following are two examples (all the examples from Raposo and Uriagereka's paper are in European Portuguese).

According to Raposo and Uriagereka, sentences with "indefinite SE" are interpreted as "impersonal" (to use the traditional grammarians' expression). They involve, to use Cinque's (1988) formulation, an existential quantifier binding the external argument. Hence the translation as "someone or other bought sausages".

(20) a. Ontem   compraram-se   demasiadas salsichas no
         yesterday bought.3rd.pl.SE too.many   sausages   at.the
         talho Sanzot.
         butcher S.
         'Yesterday someone or other bought too many sausages at the
         Sanzot butcher shop.'

      b. Essas salsichas compraram-se   ontem   no
         those sausages bought.3rd.pl.SE yesterday at.the
         talho Sanzot.
         butcher S.
         'Yesterday someone or other bought those sausages at the
         Sanzot butcher shop.'

                                    Raposo and Uriagereka (1996: 750)

In these constructions – which can be constructed on any type of verb – we have the famous and ubiquitous SE in combination with a theme argument. This theme argument should in a normal sentence be a direct object. However, in combination with SE, it turns out optionally to agree with T. Our immediate inclination would be to assume that this is a form of passive, with SE absorbing the external θ-role and the accusative Case while the theme argument (the IA, following our terminology) becomes promoted to Spec,T and, to all syntactic purposes, to subject (Burzio 1986, Cinque 1988). This promotion could be overt, as in (20a), or covert as in (20b). However, Raposo and Uriagereka argue carefully that this analysis will not do. In particular, the evidence they gather suggests that IA never raises to Spec,T.

For instance, subjects in Spec,T can never be bare NPs. We can see that the bare NP *sausages* is found in object position in (21a), but in subject position, be it in passive (21b) or active (21c), it is always ungrammatical.

(21) a. O   Nestor compra   salsichas no   talho Sanzot.
          the Nestor buy.3rd.sg sausages at.the butcher Sanzot
          'Nestor buys sausages at the Sanzot butcher shop.'
      b. *Salsichas são   compradas no   talho Sanzot.
          sausages are   bought   at.the butcher Sanzot
      c. *Salsichas custam   caro   no   talho Sanzot.
          sausages cost   expensive   at.the butcher Sanzot
                                        Raposo and Uriagereka (1996: 760)

However, the IA in (20) can be a bare NP, in preverbal or postverbal position. This is shown in the following examples:

(22) a. Vendem-se salsichas no   talho   Sanzot.
          sell.3rd.pl.SE sausages at.the butcher Sanzot
      b. Salsichas, vendem-se no   talho   Sanzot.
          sausages   sell.3rd.pl.SE at.the butcher Sanzot
                                        Raposo and Uriagereka (1996: 761)

(22b) indicates that the preverbal IA is probably not in the regular subject position – Spec,T – but rather in a topic position.

This conclusion is reinforced by word order data in wh-question sentences. In Portuguese, when we have a wh-phrase fronted to Spec,C, a

subject will follow the wh-phrase, as exemplified in (23a). A topic, instead, precedes the wh-phrase, as shown in (23b). The IA of an "indefinite SE" construction (23c) precedes the wh-phrase, again suggesting that it must be a topic:

(23)   a. Em que loja esses livros foram   comprados?
            in   what store those books were.3rd.pl bought
            'In what store were those books bought?'

       b. Esses livros a quem entregaste?
            those books to whom gave.2nd.sg
            'Those books to whom did you give?'

       c. Esses livros em que loja se compraram?
            those books in   what store SE bought.3rd.pl
            'Those books, in what store someone or other bought them?'
                                   Raposo and Uriagereka (1996: 764)

Raposo and Uriagereka's analysis involves a clause structure with two functional categories above TP. From the bottom up, the first functional category is what they call F, whose role is to license "affective" operators (see Uriagereka 1995). F also has the ability to attract T. Immediately c-

(24)
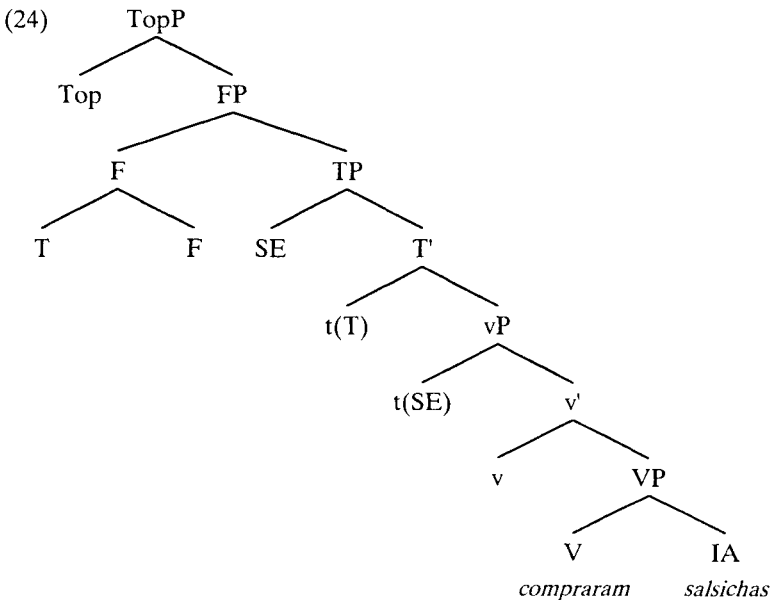
commanding FP is a Topic Phrase.

Further, they propose that SE is merged as the external argument of the sentence and it is SE that moves to Spec,T. Additionally, T moves to F (I omit V-to-v-to-T movement for simplicity), as shown in (24).

According to Raposo and Uriagereka, SE is a pure D without φ-features. Even the Case feature of SE is somewhat defective, according to them, since it can be satisfied as a null Case. This null Case is checked by [+finite] T which is also presumed to lack φ-features precisely when there is an SE in the structure. Where does the nominative Case on IA and agreement come from? They propose that F is the nominative assigner. F and IA are able to establish a dependency across SE that will provide for mutual satisfaction of unvalued features. SE does not intervene between F and IA because of its lack of φ-features.

They present the following argument for the lack of connection between T and IA. Chomsky (1995) shows the following contrast between French and English:

(25)   There walked into the room three men without introducing themselves.

(26)   *Il est entré trois hommes sans   s' annoncer.
          it is   come three men   without SE identify

Chomsky (1995: 274)

That is, the IA is able to c-command into the adjunct clause in English but not in French. Why is there this contrast between English and French? The key, Chomsky argues, is that the formal features of IA raise to T in English but not in French (as can be seen by the fact that the IA agrees with T in English but not in French). It is this higher position of IA's features that allows them to c-command into the adjunct and control the PRO.

Raposo and Uriagereka show that the IA in an indefinite SE construction cannot control into an adjunct, despite the fact that there is agreement:

(27)   *Espancaram-se   os presos   antes de fugir.
          spanked.3rd.pl-SE the prisoners before of escape.inf

This shows, they claim, that IA is not connected with T.

Let us look at their analyses in detail. There are four situations to consider (examples from Raposo and Uriagereka 1996: 785): First, the IA can be focused:

(28)   MUITAS SALSICHAS se compraram   no   talho   Sanzot!
        many sausages   SE bought.3rd.pl at.the butchery Sanzot
        'Someone or other bought many sausages at Sanzot's.'

Second, IA may stay in situ:

(29)   Compraram-se   demasiadas salsichas no   talho   Sanzot.
        bought.3rd.pl-SE too-many   sausages at.the butchery Sanzot
        'Someone or other bought too many sausages at Sanzot's.'

Third, the IA can be fronted, functioning as a topic:

(30)   Essas salsichas compraram-se   no   talho   Sanzot.
        those sausages bought.3rd.pl-SE at.the butchery Sanzot
        'Someone or other bought these sausages at Sanzot's.'

Finally, IA may be silent:

(31)   Compraram-se   no   talho   Sanzot.
        bought.3rd.pl-SE at.the butchery Sanzot
        'Someone or other bought (them) at Sanzot's.'

Let's start with the focussed example. They argue that F comes into the numeration with two sets of features. The first set is the [+Affected] feature, responsible for the focus interpretation. The second set is the one involved in the A-dependency: nominative Case and unvalued φ-features. SE raises to Spec,T, where a "defective" or null Case is assigned. Then IA raises to Spec,F, where it gets nominative and the affected interpretation.

In (29), IA apparently remains in situ. Here, they claim that F is [–Affected] and only the formal features of IA need to raise for Case/agreement purposes. In (30), IA is merged in Spec,Top and is connected with a *pro* in object position. The formal features of *pro* raise to F, which again is specified as [–Affected].

Finally, a similar analysis holds for (31): the formal features of *pro* raise to F.

3.4.2 A critique of Raposo and Uriagereka (1996)

I agree with some aspects of Raposo and Uriagereka's analysis. The idea that SE is merged in Spec,v is extremely plausible, since the appearance of SE drives out the external argument.[6] I also agree that SE must enter an agreement dependency with T, since it is the closest c-commanded D. Notice that whenever SE can be fit into a paradigm – when it acts as a reflexive, for instance – it always fits the third person spot, which suggests that SE has no [person] feature:[7]

(32)   Reflexive/reciprocal pronouns in Spanish

	singular	plural
1st	me	nos
2nd	te	os (dialectal)
3rd	se	se

Notice also that reflexive SE can appear in the plural side, suggesting that SE is also numberless.

However, in other respects, Raposo and Uriagereka's analysis looks somewhat strained. First, their account of why SE creates no minimality effects between T and IA is unsatisfactory. They claim that a plain D without any ϕ-features is too impoverished to give rise to minimality effects. But expletives – presumably very impoverished constituents too – do give rise to these effects:

(33)   a.   *A man seems there to be t in the garden.
        b.   *A man seems that it is likely to t win.

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[6] Alternatively, SE could be an affix on v and EA could be *pro*. The relationship between SE and *pro* would be based on Select. That is, SE would be specified in the lexicon as selecting a phonetically null D. This approach might be preferable when considering the full range of SE functions. For our purposes, the simpler analysis suffices (see Mendikoetxea 1999 for a recent detailed survey of the issues).

[7] Bonet (1994) argues that reflexives pair up with first and second pronouns – [+person] pronouns – and not with third person – non-person – pronouns. Anagnostopoulou (2003) concludes that reflexives are [+person], including third person reflexives, a paradoxical result. One possible approach to the puzzling properties of reflexives is to let anaphors have a [αperson] feature. This [αperson] would more likely pair up with the [1st/2nd person] pronouns since 3rd person pronouns are simply devoid of a [person] feature. Hence the similar behavior of 1st, 2nd and reflexive pronouns described by Bonet.

Moreover, if SE is satisfied with null Case (due to its impoverished nature), it should be available in nonfinite clauses. This is not the case (as known since Zubizarreta 1982; see Cinque 1988 for detailed discussion). The following examples are in Spanish:

(34)   a. Sería   bueno para todos   que el gobierno
           be.cond good   for everyone that the government
           trabajara   más.
           work.3rd.sg more
           'It would be good for everyone if the government worked
           harder.'
       b. Sería   bueno para todos   que se trabajara   más.
           be.cond good   for everyone that SE work.3rd.sg more
           'It would be good for everyone if people worked harder.'
       c. Trabajar más   sería   bueno para todos.
           work.inf more   be.cond good   for   all
           'Working harder would be good for everyone.'
       d. *Trabajarse   más   sería   bueno para todos.
           work.inf.SE more   be.cond good   for   all
           'For people to work harder would be good for everyone.'

(34a) shows an ordinary use of the verb *trabajar* 'work' and (34b) shows an example with indefinite SE in a finite clause. (34c) shows that *trabajar* can be found in nonfinite clauses while (34d) shows that the indefinite SE is unavailable in nonfinite subject clauses. SE is available in raising non-finite clauses:[8]

(35)   Parece   no haberse   trabajado lo suficiente.
       seem.3rd.sg not have.inf.SE work.ptc it enough
       'It seems that people have not worked hard enough.'

It is a well-known property of raising clauses that a constituent merged as an argument of the infinitive can be licensed by the matrix finite T/C or v. So, in (35) I claim that SE is licensed by the finite T/C of the matrix clause while (34d) shows that [null] Case is insufficient to satisfy the [αC] of SE.

Second, Raposo and Uriagereka argue that SE is raised to Spec,T

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[8] Provided that, as Cinque (1988) shows, the subordinate predicate is transitive or unergative.

attracted by the EPP feature of the latter. Apart from the empirical difficulties raised by EPP-driven movement (see Chapter 2), one could be led to believe that something that is visible to a syntactic feature like the EPP should simply be generally visible to syntactic operations and constraints, like Relativized Minimality. In other words, if SE is good enough to be attracted by the EPP of T then it should be good enough with regard to Relativized Minimality.

Third and finally, recall that they show that IA cannot control into an adjunct clause:

(27)   *Espancaram-se   os   presos   antes   de fugir.
        spanked.3rd.pl-SE the prisoners before of escape.inf

This shows, Raposo and Uriagereka claim, that IA is not connected with T. However, there is something unclear about this argument. I take it that the ability of IA to control into an adjunct in (25), repeated here, follows because raising of formal features somehow extends the c-command domain of IA at LF:

(25)   There walked into the room three men without introducing
        themselves.
(26)   *Il est entré trois hommes sans   s'   annoncer.
        it is   come three men   without SE identify

                                                Chomsky (1995: 274)

It should follow that if the formal features of IA are found in an even higher position (F or Top), control into an adjunct should be even easier. It could be countered that there is a property about T that F or Top do not have which is connected with control into adjuncts – however, there should be some explicit description of that property. This description is absent in Raposo and Uriagereka's article. Moreover, in a periphrastic passive sentence, adjunct control by the derived subject is also impossible, although it is clearly sitting in Spec,T and agreeing with it:

(36)   *Los presos   fueron azotados antes   de huir.
        the prisoners were   spanked before of escape.inf
        (Cf: *the prisoners were spanked before escaping)

This reveals that the ungrammaticality of (27) is orthogonal to IA being in

a dependency with T or not.

The reason for the ungrammaticality of (27) and (36) is unclear to me at this point. I suggest that control into adjuncts requires not only being in a dependency with T (or higher) but also bearing a θ-role with a potential for agentivity. Thus, the argument of 'walk' can be an agent if animate, while the IA of a passive sentence or indefinite SE can only be construed as patient.

To sum up: Raposo and Uriagereka's analysis of SE seems to endow it with near-contradictory properties: sometimes visible enough to be attracted, sometimes so evanescent that IA can raise above it without being short-circuited by Relativized Minimality. Instead, SE is clearly licensed by a fully fledged finite T/C. Moreover, their only argument, based on adjunct control, that IA is not connected with T turns out to be unclear too. On the other hand, their arguments that preverbal IA is not in Spec,T but in a focus or topic position hold. The structure they propose for indefinite SE clauses seems to be on the right track but, once it is clear that SE does receive nominative Case from C/T, the source of the nominative Case on IA and agreement between T and IA becomes mysterious:

(37)   C/T [$_{vP}$ SE v [$_{VP}$ IA$_{[nom][\phi]}$ V ...]]
        | |___| *Agree* |
        | |?
        |_____|
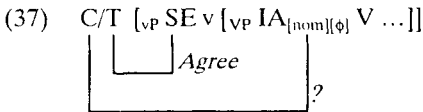
Mysterious, that is, unless we adopt Complex Dependencies.

3.4.3   Agreement and the person–number constraint

Finally, there is a fact that Raposo and Uriagereka do not discuss at all: IA has to be in the third person (Taraldsen 1995, who also saw the connection with Icelandic quirky subjects). The following examples are in Spanish.

(38)   a. Se vieron   unos lingüistas en el mercado ayer.
           SE saw.3rd.pl some linguists   in the market   yesterday
           'Some linguists were seen in the market yesterday.'

    b. *Se   vimos   unos lingüistas en el mercado ayer.
       SE saw.1st.pl some linguists   in the market   yesterday
       (Intended meaning: Some of us linguists were seen in the
       market)
    c. *Se   visteis   unos lingüistas en el mercado ayer.
       SE saw.2nd.pl some linguists   in the market   yesterday
       (Intended meaning: Some of you linguists were seen in the
       market)

In other contexts, the phrase *unos lingüistas* is compatible with 1st or 2nd
person agreement:

(39)   Unos lingüistas vimos/visteis/vieron   un gran melón.
        some linguists saw.1st.pl / 2nd.pl /3rd.pl a   big   watermelon
        'Some (of us / of you) linguists saw a big watermelon.'

This example shows that the ungrammaticality of (38b, c) cannot be due
to a mismatch between the features of T and those of the IA.

    If we replace SE for first or second person pronouns the sentences
remain ungrammatical (with the impersonal meaning, these sentences are
grammatical if understood as reflexive), cf. (40).

    The fact that SE is third person (as in the paradigm shown in (32)) and
the fact that IA has to be third person in indefinite SE constructions
cannot be chance.

(40)   a. *Nos   vimos   unos lingüistas en el mercado ayer.
           Cl.1st.pl saw.1st.pl some linguists   in the market yesterday
           (Intended meaning: Some of us linguists were seen in the
            market)
      b. *Os   visteis   unos lingüistas en el mercado ayer.
           Cl.2nd.pl saw.2nd.pl some linguists   in the market yesterday
           (Intended meaning: Some of you linguists were seen in the
            market)

(41)   Compra-se   sempre demasiadas salsichas no   talho   Sanzot.
       buy.3rd.sg-SE always too.many   sausages at.the butchery Sanzot
       'People always buy too many sausages at Sanzot's.'

                        Raposo and Uriagereka (1996: 750)

There is a parallel construction in Spanish and Portuguese with SE in which there is no agreeement and IA gets accusative Case, cf. (41).

Raposo and Uriagereka, following Cinque's analysis of Italian *si*, claim that the nonagreeing construction has different properties, and they do not include it in their analyses. Their putative differences are shown by the translations provided: the agent of the agreeing construction is an arbitrary individual or set of individuals while the agent of the nonagreeing construction is generic, they claim. I feel no such difference in Spanish; for me the constructions with SE, whether they include agreement or not, may have arbitrary or generic agents, depending on the presence or absence of the classic inductors of genericity (see Mendikoetxea 1999 for extensive discussion). João Costa (p.c.) reports the same intuitions in Portuguese.[9]

Interestingly, if there is no agreement, the construction can go with first or second person pronouns:

(42)   Ayer   se   nos/os/las   vio
        yesterday   SE   Cl.1st.pl/2nd.pl/3rd.pl.fem   saw.3rd.sg
        en el mercado.
        in the market
        'Yesterday, we/you/they were seen in the marketplace.'

The point that I want to drive home is the following: the restriction to third person IA comes about if and only if IA exhibits subject agreement AND there is a SE in between T and IA. Why should this be the case?

3.4.4   The proposal

I propose that the presence of agreement between T and IA and the person–number constraint associated with it actually reflects a Complex Dependency that involves T, SE and IA. When there is no agreement

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[9] D'Alessandro (2004) shows that there is a subtle but real meaning difference: the agreeing version is an accomplishment while the nonagreeing one is an activity (her data are taken from Italian but the tests for aktionsart translate readily into Spanish). The model developed in these pages is not designed to account for this difference, so I will not try, referring instead to D'Alessandro's work. Her analysis includes a more complex l-syntax than I do but I think it is otherwise compatible with my assumptions.

there is only a simple dependency between T and SE while IA agrees only with v.

Let's start with the agreeing construction. Take IA to be a normal DP with full ϕ-features and a θ-role. Take $v(\emptyset)$ to be a standard-fare unaccusative light verb without Case or a θ-role for its spec but with an EPP feature. $v(\emptyset)$ merges with a VP that may include an IA. SE is an expletive with [αC] but no person or number features (which, as we know, is spelled out as third singular[10]). Merging SE in Spec,v satisfies the latter's EPP. Further, I claim that the unvalued Case feature of SE is a probing feature.
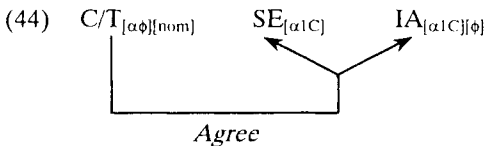
The unvalued Case feature of IA forces it to move to Spec,V, where $v(\emptyset)$ does not assign Case. Then SE probes IA, with the result that they co-value their Case features:

(43) $[_{vP} SE_{[\alpha 1C]} v(\emptyset) [_{VP} IA_{[\alpha 1C]} V t(IA)]]$

             Agree
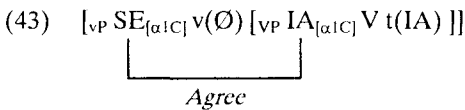
Since SE has no person or number features, these do not participate in the dependency.

The (SE,IA) dependency can now be probed by C/T:[11]

(44) $C/T_{[\alpha\phi][nom]}$ $SE_{[\alpha 1C]}$ $IA_{[\alpha 1C][\phi]}$

              Agree

C/T has [$\alpha\phi$] features and is also the [nominative] Case assigner. Now recall the principle of Full Sharing: if two features are of the same type and one of them is unvalued, a dependency is established based on the valuing or co-valuing of features.

The feature [αperson] of T probes first, assuming the structure of the

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[10] Although in Italian it governs plural agreement on participles, I do not know why.

[11] For the time being I remain neutral as to whether T or C assigns Case in Spanish and Portuguese. For arguments that T is the assigner in Spanish, see section 6.2. As for Portuguese being a DCL in the sense of Chapter 2, section 2.3, see Costa (2000).

probes in (19). If IA is third person, T finds no contradictory features and can value its [αperson] feature as [default]. However, if IA is first or second person, the [αperson] of T finds a contradictory specification of features in its goal: SE has no [person], IA is 1/2. Full Sharing forces copying them all, but the resulting feature structure, [$_{person}$ [1/2][default]], can find no matching lexical item in Morphology. This leads to ungrammaticality. It follows that IA cannot be first or second person.

Let's assume that IA is third person and the [αperson] probe has succeeded. It's [αnumber]'s turn to probe now. Full Sharing should force the same [number] features on SE and IA. Since SE has no [number] IA should not have [number] either (should be singular). However, Minimal Compliance tells us that once a constraint has applied to a dependency, that constraint can be subsequently ignored. Therefore the [number] dependency does not require [αnumber] of T to agree with both terms of the goal. Consequently, it can agree with only one of them: IA can be plural even if SE is numberless. Recall that the default strategy is really so: if you can value a feature do it, otherwise go default. Take IA to be plural. Going with SE forces [default] on T, while going with IA actually values the [αnumber]. Thus, T ends up plural.

The four types of cases discussed by Raposo and Uriagereka (exs (28) to (31)) can be analysed without further stipulations. When IA is focus or topic, we can assume that another feature (what Chomsky (2000) calls P-feature) triggers movement of IA to a suitable position in the left periphery. If IA is neither focus or topic, it simply stays in situ. In particular, I correctly predict that IA will not raise to Spec,T, as argued by Raposo and Uriagereka: once it forms an open dependency with SE, it is the latter, the higher instance of [αC], which will continue raising, as discussed in Chapter 2.
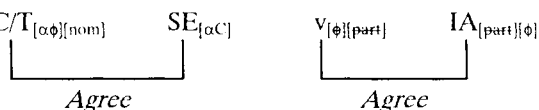
The criticisms leveled against Raposo and Uriagereka's approach are easily avoided with my analyses. My first criticism was addressed at the indeterminate nature of SE: recall that it was supposed to be attractable by the EPP but unable to create intervention effects. Within my analysis, SE is a regular D, in need of Case like any other, which explains why it can raise to Spec,T. IA cannot "skip" over SE, instead, they establish a dependency. SE cannot be found in nonfinite clauses (other than raising clauses) because like any other D except PRO it cannot be satisfied with [null] Case.

Let's take now the nonagreeing SE construction, exemplified in (41). Let's assume that the only feature that differentiates this construction

from the agreeing one is that now we have a different version of the light verb, v(EA), a transitive predicate with an external argument and partitive or accusative Case. With this feature configuration, we would have IA value the φ-features of v and v assign Case to IA. v's features and the Case feature of IA delete at once (as argued in Chapter 2, section 2.6). Only the φ-features of IA survive:

(45) 1. Agree $(v[\alpha\phi][part],IA[\phi][\alpha C]) \rightarrow v[\phi][part]...IA[\phi][part]$
      2. Deletion: $v[\phi][\overline{part}]...IA[\phi][\overline{part}]$

It is now SE's turn to probe, triggered by its [αC]. Notice that it finds no [αC] to co-value, since the one belonging to IA has already disappeared. Thus, SE and IA form no dependency. T is merged and probes. It finds SE:

(46)

$$C/T_{[\alpha\phi][nom]} \qquad SE_{[\alpha C]} \qquad \qquad v_{[\phi][part]} \qquad IA_{[part][\phi]}$$

$$\underbrace{\phantom{C/T_{[\alpha\phi][nom]} \qquad SE_{[\alpha C]}}}_{Agree} \qquad \qquad \underbrace{\phantom{v_{[\phi][part]} \qquad IA_{[part][\phi]}}}_{Agree}$$

SE gets [nominative] from C/T while C/T finds no φ-features and adopts the default form. Agreement between T and IA does not happen simply because T and IA are never in a dependency. Consequently, IA is free to be second or first person.

This analysis then depends on the agreeing SE being an expletive-like element meant to satisfy the EPP of v(Ø) while the nonagreeing SE is an external argument of v(EA). Evidence that this is the case involves their controlling properties. As we saw above, IA cannot control into an adjunct clause. However, the SE in the nonagreeing construction can, as can be seen in the following Spanish example:

(47) Se   azotó   a   unos prisioneros antes de encerrarlos
      SE   flogged.3rd.sg ACC some prisoners before of lock-up.them
      de nuevo.
      of new
      'Some prisoners were flogged before they were locked up again.'

(48) *Se   azotaron   unos prisioneros antes de   encerrarlos
      SE   flogged.3rd.pl some prisoners before of   lock-up.them
      de nuevo.
      of new

Without doubt, in order for a constituent to be a controller it must have a θ-role (or at least be a quasi-argument). The fact that SE can control in (47) but not in (48) suggests that in the former, but not the latter, SE is a fully fledged argument.[12]

3.5   Quirky subject constructions in Icelandic

This section[13] is divided into the following subsections. 3.5.1 discusses some of the properties of quirky subject constructions in Icelandic. 3.5.2 argues that at least some of the time, the nominative Morphology on IA is the consequence of a Complex Dependency involving T, the quirky subject and IA. When this configuration is in place, the person–number restriction emerges. 3.5.3 uses the Complex Dependency framework to provide an analysis of dative intervention, thus strengthening the current approach. 3.5.4 shows that there is some evidence that the nominative Case on IA comes from v (Sigurðsson 1996, 2003), some of the time. 3.5.5 concludes that both possibilities are available in the Icelandic speech community, with their distribution subject to speaker variation (without rejecting the possibility that some speakers could have both in their mental grammars).

3.5.1   Core properties

The core properties of quirky subjects (henceforth DAT) and nominative objects/ECM subjects (henceforth NOM) in Icelandic are well-known due to intensive investigation for the last fifteen years or so (see Thráinsson 1979, Zaenen et al. 1985, Sigurðsson 1989, 1996, 2002, Taraldsen 1995, Boeckx 2000 among many others). They can be summarized thus:

    1. It appears in three types of constructions. First, it involves some

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[12] Dobrovie-Sorin (1993, 1998) argues that agreeing SE is accusative, while the nonagreeing one is nominative. She attributes the absence of the latter construction in Romanian to lack of nominative SE in this language. In my terms, it could be attributed to SE always being an expletive in Romanian.

[13] An early version of this section appeared as López (2003a). There have been some changes to the analysis presented in that article, particularly concerning raising predicates.

psych predicates, with an external argument which is the experiencer and an internal argument which is a theme.

(49)   Henni   líkuðu   hestarnir.
       she.DAT   liked.3rd.pl   horses.the.NOM
       'She liked the horses.'

Sigurðsson (2002: 122)

(50)   Henni   leiddust   strákanir
       she.DAT   bored.3rd.pl   boy.the.NOM.pl
       'She found the boys boring.'

Sigurðsson (1996: 1)

Second, quirky subjects can also be seen in passives of Double Object Constructions in which the IO raises to Spec,T:

(51)   Henni   voru   gefnir   hattarnir.
       she.DAT   were.3rd.pl   given.NOM.pl   hat.the.NOM.pl
       'She was given the hats.'

Sigurðsson (1996: 27)

Finally: raising clauses with a dative experiencer and a nominative subject in the nonfinite clause:

(52)   Konunum   fannst   þaer   vera   gáfaðar.
       Women.the.DAT   seemed   they.NOM   be   gifted
       'The women thought they were smart.'

Taraldsen (1995: 317)

(53)   Það   virðist   sumum   málfraeðingum   Jón   vera
       there   seemed   some   linguists.DAT   Jon.NOM   be
       duglegur.
       intelligent
       'Jon seemed to some linguists to be intelligent.'

McGinnis (1998: 51)

In (52) the experiencer raises to Spec,T. In (53), the expletive is in Spec,T while the experiencer remains in situ. Mostly, I discuss (49), (52) and (53), trusting that my conclusions extend to (51).

2. I stop for a second to discuss the structure of these predicates, starting with psych verbs. I take the quirky subject to be the EA of an

applicative light verb that I call v(EXP). v(EXP) takes a VP as complement. The V that heads the VP takes an IA (see McGinnis 1998, Anagnostopoulou 2003, among others):

(54)

```
                      vP
              ┌───────┴───────┐
          EA_DAT              v'
          henni        ┌──────┴──────┐
                   v(EXP)            VP
                   likuðu      ┌──────┴──────┐
                               V          IA_NOM
                             likuðu      hestarnir
```
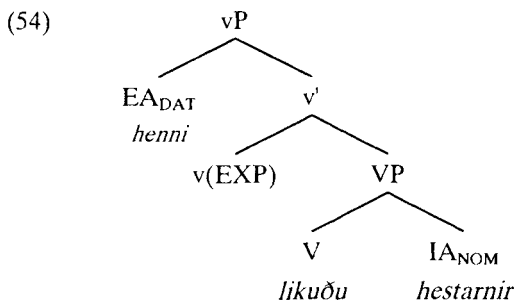
The lexical verb in (54) may be a psychological verb, in which case the IA is a DP, with a theme θ-role and – eventually – nominative Case. The lexical verb can also be 'seem', in which case the IA is a finite or a raising clause.

The structure above vP requires some discussion. The main difference between Icelandic and English is the possibility of the former to have Transitive Expletive Constructions (TECs). TECs are discussed in detail in Chapter 4 but a few words are in order here. I claim that in Icelandic the φ-features of T may appear heading a separate category which, following a long tradition, I call AgrP (Bobaljik and Thráinsson 1998, among others), cf. (55).

Both possibilities are present in the grammar of Icelandic. When we have (55a), we have a normal clause. When we have (55b), we have a TEC. Unlike other linguists working on this topic (see Bobaljik and Jonas 1996, for instance), I claim that there is no reason why an expletive should merge in Spec, Agr (Agr and expletive do not value any features and there is no selection in either direction, as far as I can tell). Instead, I claim that the expletive merges in Spec,T. The intuitive idea is that T requires something nominal in its domain – a requirement that can be satisfied by the φ-features adjoined to T or, if the latter form a separate projection, by some constituent of category D: an expletive (hence TECs).[14] Thus, I

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[14] Merging of expletives with T is not a universal. In particular, in languages where expletives only appear in passive or unaccusative clauses the expletive is merged in Spec,v, as mentioned in Chapter 4, section 4.2. Again, I have to postpone a full discussion to Chapter 4.

maintain the intuition, most explicitly expressed in Bobaljik and Thráinsson (1998), that TECs depend on having separate Agr and T projections. Finally, I assume that in Icelandic C is the Case assigner: the position Spec,T in (55a) is reserved for subjects and the position Spec,Agr in (55b) is reserved for expletives associated with subjects (see, for instance, Bobaljik and Jonas 1996). Thus, Icelandic is not a DCL in the technical sense used here.

(55) a.   RegularT

b.   SplitT

(56)
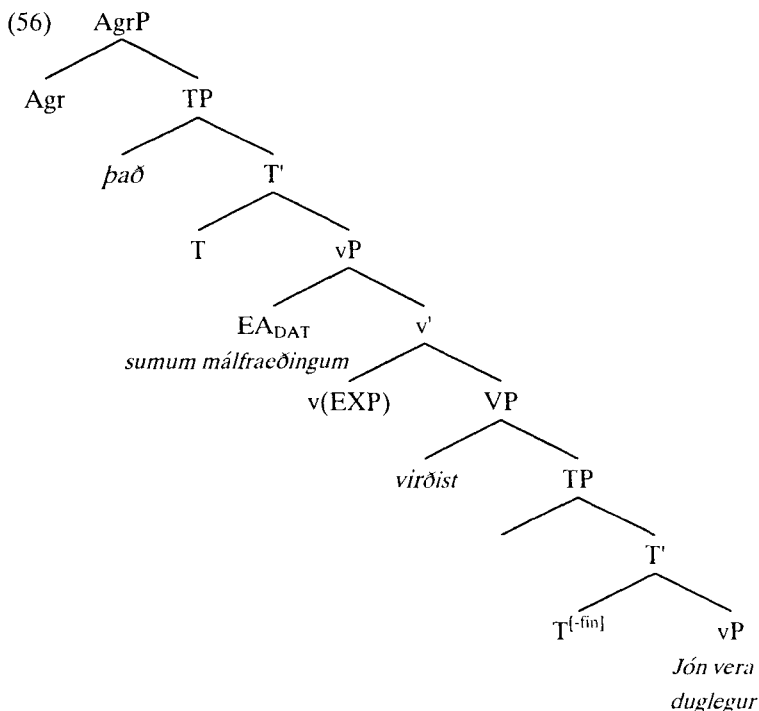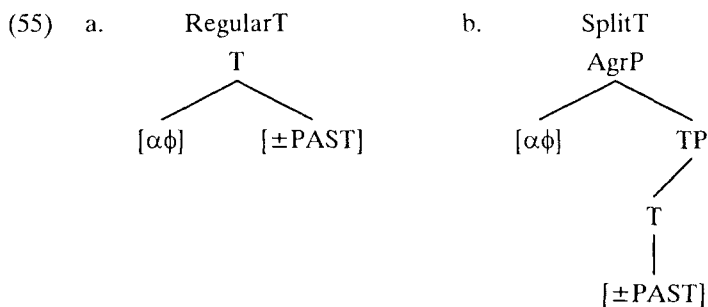
(56) represents the structure of the most complicated example, (53). T and Agr are split and the expletive is merged in Spec.T. For Case reasons, the expletive will raise to Spec.Agr. T selects v(EXP) which itself takes 'seem' as a complement and the dative EA as spec. This EA enters a dependency with the expletive which allows it to satisfy its abstract Case (more on this below). 'seem' takes a nonfinite T as a complement and consequently we have raising. The lower DP *Jon* raises to Spec.T$^{non-fin}$ and ends up nominative.

If there is no AgrP, there is no expletive and the EA raises to Spec.T, where it can be probed by C.

3. As mentioned, the matrix Spec.T is taken by DAT (if there is no expletive). DAT certainly passes a number of "subjecthood" tests (Thráinsson 1979, Sigurðsson 1989, 1996, 2003 among many others). For instance, DAT binds a reflexive in NOM.

(57)   Henni   leiðist bókin   sín.
        she.DAT bores book.the self's
        'She finds her own book boring.'

<div align="right">Sigurðsson (1989: 204ff)</div>

Moreover, DAT becomes PRO in a control context. Crucially, NOM remains:

(58)   Hún   vonast til að PRO   leiðast ekki   bókin.
        She.NOM   hopes for to   bore   not   book.the.NOM
        'She hopes not to find the book boring.'

<div align="right">Sigurðsson (1989: 204ff)</div>

4. It seems clear that DAT raises to Spec.T for Case reasons, not simply to satisfy an EPP feature of T. The DAT argument depends on finiteness or v to be licensed in a sentence. DAT is disallowed in nonfinite clauses, unless the clause is of the raising type (examples a and b were provided by Hrafnbjargson p.c.):

(59)   a. *Að fólki   líka hestar   er ekkert að skammast
           to   people.DAT like horses.NOM   is nothing to shame
           sín   fyrir.
           REFL for
           'For people to like horses is nothing to be ashamed of.'

b. Að líka hestar   er ekkert að skammast sín   fyrir.
   to like horses.NOM is nothing to shame   REFL for
   'To like horses is nothing to be ashamed of.'

c. Við töldum   henni   leiðast Haraldur.
   we believed her.DAT be bore Harold.NOM
   'We believed her to be bored by Harold.'

                                                    Taraldsen (1995: 323)

d. Mundi þer   virðast bátunum   hafa verið
   Would you.DAT seem   the.boats.DAT have been
   bjargað?
   rescued
   'Would it seem to you that the boats were rescued?'

                                                    Sigurðsson (1991: 359)

(59a) and (59b) together show that DAT is ungrammatical in nonfinite clauses. (59c) shows that when we do find DAT in a nonfinite clause it is in a raising context. The conclusion is that DAT needs abstract Case of the type that transitive v or finite C can satisfy, not the null Case assigned in nonfinite clauses (Jónsson 1996, among others).[15]

This leads us to (59d). The subordinate clause is nonfinite but the dative argument 'the boats' is licensed. This means that either v(EXP) or the matrix T license the dative argument (eventually, I will conclude that v(EXP) does, when it has an EA).

It becomes necessary to distinguish abstract Case – the requirement of every D to be licensed by an appropriate head, lexical case – a morphological affix assigned under government by certain verbs or prepositions, and structural case – a morphological affix assigned to Ds that have no lexical case and whose phonetic shape depends on the assigner of abstract Case.

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[15] In Korean, a language that also has quirky subjects, a nominative structural Case can be "stacked" on top of the lexical dative Case. The following example is taken from Yoon (2003):

(i) Cheli-eykey-ka ton-I manh-ta.
    Cheli.DAT.NOM money.NOM a-lot.DECL
    'Cheli has a lot of money.'

I take this to be evidence that quirky subjects need some form of abstract Case. The issue of Case stacking, however, is somewhat complex. As Yoon (2003) explains, the addition of the nominative morphology alters the information structure of the sentence, turning the constituent into what he calls a "major subject". Thus, I will not discuss it further here.

5. Indeed, the only nonsubject properties of DAT are its dative case and the fact that it does not trigger agreement on T.

6. The agreement properties of these constructions are fairly intricate:

(i) In the DATEA–NOMIA construction, the IA cannot appear in first or second person:

(60)   a. Henni   *leiddumst / *?leiddust / ?* leiddist   við.
            she.DAT bored.1.pl / .3rd.pl   / .3rd.sg   we.NOM

Sigurðsson (1996: 28)

Number agreement between IA and T is quasi-obligatory for at least some speakers for at least some of the verbs in this category:

(60)   b. Henni   skruppu   / *skrapp faetur.
            she.DAT failed.3rd.pl / .3rd.sg   feet.NOM
            'She fell.'

Sigurðsson (1996: 27)

Sigurðsson (1996) suggests that there might be a language change in progress since most younger speakers do not accept agreement while most older speakers do. This, however, should be taken only as a general tendency (Hrafnbjargarson p.c.).

(ii) In the DAT experiencer – nominative nonfinite subject construction, the NOM argument can appear in first or second person. If that is the case, the finite T appears in default third person form:

(61)   Henni   virtist   / *virtumst   við   vera   duglegar.
        she.DAT seemed.3rd.sg / 1.pl   we.NOM be   industrious
        'She thought we were industrious.'

Sigurðsson (1996: 36)

If the EA is third person, number agreement with finite T is optional (with speaker variation):[16]

(62)   Mér   virtust   / virtist   þaer   vinna vel.
        me.DAT   seemed.3rd.pl / .3rd.sg they.NOM   work   well
        'It seemed that they were working well.'

Sigurðsson (1996: 30)

---

[16] Sigurðsson (1996: 30 fn 20) indicates that for some speakers agreement is ungrammatical; Hrafnbjargarson (p.c.) has the opposite judgment.

(iii) When agreement is optional, its presence or absence has consequences elsewhere in the grammar. For instance, the pronoun in (63) cannot be coreferent with the matrix EA, while the one in (64) can. Notice that the only difference between these two examples is agreement (discussed by Taraldsen 1995, attributing the observation to Höskuldur Thráinsson):[17]

(63) Konunum$_i$ fundust   þaer $_{*i}$ vera gáfaðar.
      women.the.DAT seemed.3rd.pl they.NOM be   gifted.f.pl.NOM

(64) Konunum$_i$ fannst   þaer $_i$ vera gáfaðar.
      women.the.DAT seemed.3rd.sg they.NOM be   gifted.f.pl.NOM
      'The women thought they were smart.'

<div align="right">Taraldsen (1995: 317)</div>

As a first approximation, agreement creates a unique Binding Domain for the entire sentence, while lack of agreement yields two distinct Binding Domains.

(iv) Agreement between NOM and finite T is not prevented by a displaced DAT. This is shown in (65):

(65) Manninum   virðist   / virðast hestarnir   vera   seinir.
      man.the.DAT seem.3rd.sg / 3rd.pl horses.NOM be   slow
      'The man finds the horses slow.'

<div align="right">Holmberg and Hróarsdottir (2004: 654)</div>

However, if the DAT stands between T and the nonfinite subject overtly, agreement is not possible:

(66) Það   virðist/*virðast   einhveryum manni hestarnir
      there seem.3rd.sg / .3rd.pl some man.DAT   horses.the.NOM
      vera seinir.
      be slow
      'A man finds the horses slow.'

<div align="right">Holmberg and Hróarsdottir (2004: 654)</div>

Examples (67) and (68) show the same phenomenon with a passive

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[17] Platzack (p.c.) remarks that not all Icelandic speakers perceive this difference.

sentence. In passive sentences in Icelandic, an indirect object argument with dative Case can raise to Spec,T while T agrees with nominative IA:

(67)   Stráknum   voru   gefnar   gjafir.
        boy.the.DAT were   given.pl presents.NOM
        'The boy was given presents.'

                                        Holmberg and Hróarsdottir (2004: 656)

But if the indirect object stays in situ because of the presence of an expletive, agreement is again impossible:

(68)   *Það voru   gefnar   stráknum   gjafir.
        there were   given.pl   boy.the.DAT presents.NOM
                                        Holmberg and Hróarsdottir (2004: 656)

3.5.2   T and the nominative IA

There is clear evidence that NOM's Case truly is licensed in the finiteness area, at least some of the time. First, the general rule for many speakers appears to be that there is agreement between T/Agr and NOMIA (see Sigurðsson's 1996 survey), which entails a dependency linking T/Agr and IA:

(69)   Henni   leiddust   strákanir.
        she.DAT   bored.3rd.pl   boys.the.NOM
        'She found the boys boring.'

                                                Sigurðsson (1996: 25)

If the IA were assigned Case within the vP (Sigurðsson 2003), it would not move any further. Assuming the strict version of local Agree that I argued for in Chapter 2, the IA would remain too far from T/Agr to be probed by it.

The nominative subject in the nonfinite complement of 'seem' also optionally agrees with the matrix T/Agr. Again, agreement with T/Agr suggests that the nonfinite subject somehow must be in a dependency with the matrix finiteness area. Additionally, it is worth noting that nominative Case does not survive in nonfinite subject clauses if raising is not available:

(70) Manninum   virðist /   virðast hestarnir   vera seinir.
man.the.DAT   seem.3rd.sg / 3rd.pl   horses.NOM be   slow
'The man finds the horses slow.'

Holmberg and Hróarsdottir (2004: 654)

(71) *Maria   vera   gáfuð fer   í   taugarnar á   mér.
Mary.NOM be   gifted goes in nerves.the on me

Hrafnbjargarson (p.c.)

(71) shows that the subordinate clause has no nominative Case assigner. Consequently, the source of nominative Case in (70) has to come from the matrix clause, either v(EXP) or C. Further, agreement suggests that the finiteness area is involved and the IA cannot stay within the vP. Therefore, I claim that C assigns nominative Case to the nonfinite subject when agreement suggests that this must be the case (and I leave open, until section 3.5.5, whether v(EXP) can also be a Case assigner when agreement is absent).

3.5.3 DAT and NOM forming a Complex Dependency

When the nominative object or downstairs subject gets Case from C, I propose that the dative argument and the nominative one enter a dependency based on Case that is later probed by a higher head forming a Complex Dependency. Consider the Complex Dependencies in (72) and (73) (where the term Fin represents the finiteness area and encapsulates the operations of agreement with T/Agr and Case assignment by C in one convenient label). (72) represents the structure of nominative objects. Following my assumptions concerning spec-to-spec Move, the nominative IA moves to Spec,V, where it is probed by DAT so both end up sharing their abstract Case features. The Fin area then probes the (EA,IA) dependency:

(72) Henni   leiddust   strákanir.
she.DAT bored.3rd.pl boys.the.NOM
Fin [$_{vP}$ henni$_{[αC]}$ v(EXP) [$_{vP}$ strákanir$_{[αC]}$ like/bore t(IA)]]

Agree1

Agree2

(73) represents the structure of nominative nonfinite subjects. The downstairs subject has raised to Spec,V (recall my analysis of Raising to Object in section 2.4.4) where it can be probed by the matrix, lexically dative, EA:

(73)   Manninum   virðist / virðast   hestarnir   vera   seinir.
       man.the.DAT   seem.3rd.sg / 3rd.pl   horses.NOM   be   slow
       Fin [$_{vP}$ manninum$_{[\alpha C]}$ v(EXP) [$_{VP}$ hestarnir$_{[\alpha C]}$ seem [$_{TP}$ t(hestarnir)T$^{[-fin]}$…]]]

Agree1

Agree2

Let me now discuss the nature of the dependency that links the dative and the nominative arguments.

For a start, a word on the quirky subject is in order. It seems that this argument has mixed properties (as described by Chomsky 2000, Jónsson 1996, Sigurðsson 1996 among others). On the one hand, the oblique case behaves as a preposition because it protects the DP from outside probes. This can be analyzed by assuming that the oblique case projects an extra veneer of syntactic structure. This extra structure turns the DP into an opaque domain and makes agreement with T impossible.

On the other hand, the quirky argument behaves like a DP, requiring abstract Case, hence its frontal position in the clause – presumably Spec,T.

Thus, I suggest that quirky Case is a category intermediate between a determiner and a preposition and this leads to the mix of properties. I represent this in (74): a DP is selected by K, a functional head that is spelled out as a morphological case (see Bayer et al. 2001). In its feature matrix, K includes an unvalued Case (Jónsson 1996):[18]

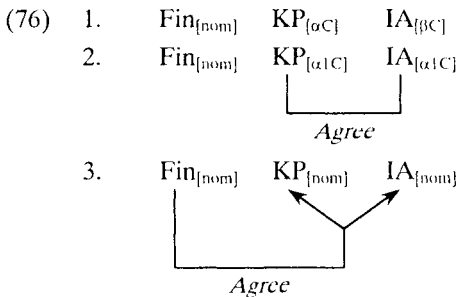(74)   KP
                    ╱   ╲
              K$_{[\alpha C]}$ DP

---

[18] K bears [αC] in Icelandic, but probably not so in other languages. Bayer et al. (2001) argue that K does not need abstract Case in German.

KP appears in one context: it has to be selected by a particular type of verbal head: what Marantz (1993) calls Applicative or what I am calling v(EXP). K never triggers agreement on T, so it seems reasonable to assume that it has no person or number features.

The question now is how K can establish an agreement dependency with the IA or nonfinite subject. Recall that dependencies are established by means of probing. There are two issues to address here: (i) what is the feature that triggers probing, (ii) how can K probe outside its maximal projection. As for the first, I claim that the unvalued Case feature of K is the probing feature, as was the case with SE. As for the second issue, I argue above (Chapter 2, section 2.3.5) that nothing in the system should prevent heads from probing outside their maximal categories, either within Chomsky's (2000, 2001a) system or within Collins' (2002) label-less phrase structure.

Let's look at the psych verb examples more carefully. The structure of the clause is presented in (75) and the sequence of Case dependencies in (76):

(75)   Henni   leiddust   strákanir.
       she.DAT   bored.3rd.pl   boys.the.NOM
       Fin [$_{vP}$ KP v-like/bore [$_{VP}$ IA t(V)]]

(76)   1.   Fin$_{[nom]}$ KP$_{[\alpha C]}$ IA$_{[\beta C]}$
       2.   Fin$_{[nom]}$ KP$_{[\alpha 1 C]}$ IA$_{[\alpha 1 C]}$
                                └──────────┘
                                   Agree

       3.   Fin$_{[nom]}$ KP$_{[nom]}$ IA$_{[nom]}$
              └──────────┐   ↖   ↗
              └──────────────────┘
                    Agree

In step (76.1) we see that both KP and IA have unvalued structural Case features. KP can probe and co-value its [αC] with IA (76.2). The dependency formed by KP and IA can then be probed by C/T. Case is assigned as usual.

Let's now focus on the person constraint:

(77)   Henni   leiddust   strákanir.
        she.DAT bored.3rd.pl   boys.the.NOM
        Fin$_{[\alpha\phi]}$ KP$_{[\alpha|C]}$ IA$_{[plural]\,[\alpha|C]}$
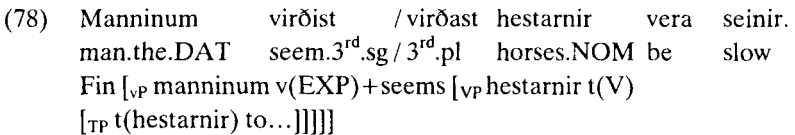

Agree
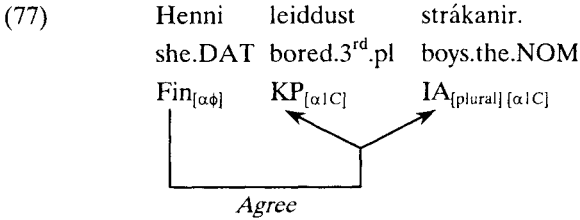
(77) represents the situation in which IA is third person plural. KP, as claimed above, has no [person] or [number] features.

Recall that the [αperson] probe goes first. Full Sharing requires that T copies the [person] features of both KP and IA. K has no [person] features. IA also may not have a [person] feature or it may be first or second. If IA is third person the [αperson] of T is valued as [default] and deletes. If IA is first or second, then T copies the person values from K and IA. The resulting feature structure [$_{person}$ [1/2][default]] cannot find an appropriate vocabulary item in Morphology.[19]

Now [αnumber] probes. Minimal Compliance tempers the ire of Full Sharing, allowing for T to agree with only one of the members of the dependency. So T could go with K and spell out as [default] or it could go with IA and spell out as [plural]. However, the default strategy is a last resort, so T agrees with IA, exhibiting [plural] morphology.

Example (78) can be treated in a similar manner:

(78)   Manninum   virðist   / virðast hestarnir   vera   seinir.
        man.the.DAT   seem.3rd.sg / 3rd.pl   horses.NOM   be   slow
        Fin [$_{vP}$ manninum v(EXP)+seems [$_{VP}$ hestarnir t(V)
        [$_{TP}$ t(hestarnir) to…]]]]]

KP probes DP, as before, from its initial merge position in Spec,v(EXP), so their Case features are co-valued. Then the (KP, DP) dependency is probed by Fin, so both KP and DP receive [nominative] Case. Agreement between T/Agr and the nonfinite subject is also strictly parallel to the psych verb example, as represented in (77): all three constituents must

---

[19] Interestingly, Sigurðsson (1996) shows that the less "obvious" the agreement morphology is, the less harsh the ungrammaticality of the structure. I take this to be evidence for my approach involving morphology clash: the less visible agreement morphology can "pass" as being both [default] and [+person] ([+participant]).

share the same [person] feature but KP can be ignored concerning [number].

Recall, however, two properties that make a nonfinite subject different from nominative object counterparts. First, number agreement in the third person is optional; second, the appearance of a [person] nonfinite subject does not give rise to an ungrammatical sentence but only to default forms on T/Agr (Sigurðsson 1996). This could be accounted for if 'seem' (or rather v(EXP)) could also be a nominative Case assigner, as discussed below (section 3.5.5).

Let's now look at the example type (66), in which the overt presence of the dative argument prevents agreement:

(79) Það   virist / *   virðast einhveryum manni hestarnir
     there seem.3rd.sg / .3rd.pl some man.DAT   horses.the.NOM
     vera seinir.
     be slow
     C Agr EXPL T [$_{vP}$ KP$_{[\alpha C]}$ v(EXP)+seems [$_{vP}$ EA$_{[\beta C]}$ t(V) [$_{TP}$ t(EA)
     to…]]]

K has an [αC], which turns it into a probe. It finds the [βC] of the DP and their unvalued Cases are co-valued. In the next cycle, the expletive is merged. Assume that það, being a D, also has an [αC]. Það is also a probe, finding the KP dependency and co-valuing their Case features:

(80)   EXPL$_{[\alpha 1 C]}$ KP   EA
                                                    [$\alpha 1 C$]

                                         [$\alpha 1 C$]
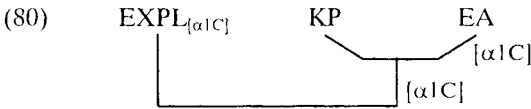
The dependency (EXPL(KP,EA) is made up of the feature [$\alpha 1 C$]. This dependency is now probed by the Case assigner, C. The Case features of the entire dependency (expl(KP,EA) are all valued:

(81)   C$_{[nom]}$ EXPL$_{[nom]}$ KP   EA
                                                      [nom]
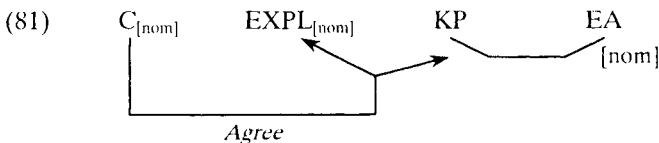
                        Agree

The question now is why agreement between the matrix Agr and EA is

ungrammatical when the dative is standing in the way, as in (66) or (68). One approach to this datum is that the overt presence of KP prevents a dependency between T and IA, while the presence of a copy of KP has no such effect (Chomsky 2001a). I find this unlikely if we stick to the assumption that traces are truly copies of the displaced constituent or if they are occurrences of the same item. Instead, there must be a reason why C can assign Case to NOM in (66) but simultaneously Agr is unable to value its [αnumber] with it. I devote the next section to this issue. Interestingly, it will lead us to a deeper understanding of Complex Dependencies.

3.5.4   The intervention of K

It has often been noted that the physical intervention of a K argument prevents agreement between a nominative IA or downstairs subject (NOM) and T (Chomsky 2000, Holmberg and Hróarsdottir 2001, Taraldsen 1995 and references therein). However, the copy of a K that has undergone raising does not give rise to this intervention. Within my structural assumptions, the relevant cases can be represented as follows:

(82)   a.   Það   virðist / *virðast   einhveryum   manni
            there   seem.3rd.sg / .3rd.pl   some   man.DAT
            hestarnir   vera   seinir.
            horses.the.NOM   be   slow
            Agr [$_{TP}$ það T [$_{vP}$ manni v(EXP) [$_{VP}$ hestarnir seem
            t(NOM)T^{-fin}]]]
            → Agr cannot value features with NOM
     b.   Manninum   virðist / virðast   hestarnir   vera seinir.
            man.the.DAT   seem.3rd.sg / 3rd.pl   horses.NOM   be   slow
            T [$_{vP}$ manninum v(EXP) [$_{VP}$ hestarnir seem t(hestarnir) T^{-fin}]]
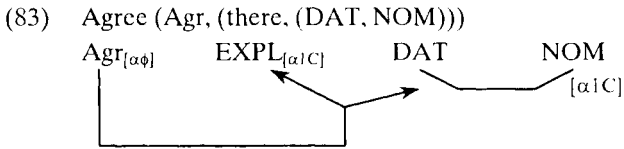   → T can value features with NOM

In order to analyze this pattern, it will be a good idea to remind ourselves what is involved in Agree (p,g) when g is a dependency. There are two possible hypotheses one could try out. The first hypothesis would be to allow the probe p to have an indefinite number of goals. So, if x,y form a dependency probed by p, p probes each of them. Then, if x and y are also dependencies (i.e. x=(z,w), y=(v,t)) then p probes each of them: {z,w,v,t}

and so on *ad infinitum*. This approach would allow us to create dependencies of infinite length. I assume that C_{HL} cannot handle this sort of computation – in other words, that apparently long dependencies actually hide a string of shorter ones (i.e. as in successive cyclic movement).

The alternative I propose here is to make all dependencies embedded (as I have assumed implicitly so far). Moreover, I suggest that the reach of the probe is only to the outer edge of the dependency – thus, probing is local in this sense too. So, when p probes a dependency (x,y), it probes only the features of x,y. It does not probe any features that may be embedded within x or y. The features of z,w,v,t are not accessible to p.

Keeping this in mind, consider (83), which represents the situation in (82a). Let's look at the dependencies involved in this structure from the bottom up. In this example, there is a dependency formed by DAT and IA. This dependency involves only their unvalued Case features. Crucially, it does not involve any number features because there are no unvalued number features.

Then the expletive probes the dependency formed by DAT and NOM and co-values its Case feature with them. Since the expletive has no [number] feature, it does not access the [number] of NOM. Thus the dependency formed by það and (DAT,NOM) does not include the feature [number] either. Finally Agr probes the dependency formed by *það* and the dependency formed by DAT and NOM:

(83)   Agree (Agr, (there, (DAT, NOM)))
   $Agr_{[\alpha\phi]}$ $EXPL_{[\alpha1C]}$ DAT   NOM
                                                    $[\alpha1C]$

When Agr probes the dependency formed by það and (DAT,NOM), it finds no [number]. [number] is not a feature of það nor a feature of the DAT,NOM dependency (since the DAT,NOM dependency includes only the unvalued Case feature). Thus, [αnumber] has to spell out as default. [plural] of NOM is simply too deeply embedded for Agr to access it.

Take now (84), which represents (82b). Here T probes the dependency formed by DAT and NOM. The number feature of NOM is a feature of a member of this dependency, so T can access it, cf. (84).

The dependency represented in (84) is subject to Full Sharing and

(84)   Agree (T, (DAT, NOM))

$T_{[\alpha\phi]}$ $DAT_{[\alpha 1 C]}$ $NOM_{[\alpha 1 C][plural]}$
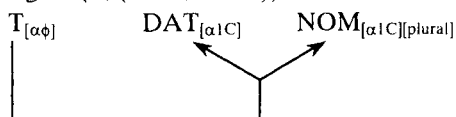
Minimal Compliance, as explained above. T can copy the [plural] feature of NOM.

It has also been noted that IA can agree in number with the matrix Agr (somewhat marginally) if the intervening KP is also plural (Holmberg and Hróarsdottir 2004):

(85)   Það   finnast   mörgum   stúdentum   tölvurnar
        there   find.PL   many   students.DAT   the.computers.NOM
        ljótar.
        ugly.NOM
        'Many students find the computers ugly.'

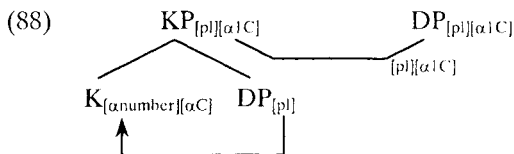(86)   *Það   finnast   einhverjum   stúdent   tölvurnar
        there   find.PL   some   student.DAT   the.computers.NOM
        ljótar.
        ugly.NOM

(87)   *Það   finnast   mörgum   stúdentum   tölvan
        there   find.PL   many   students.DAT   the.computer.NOM
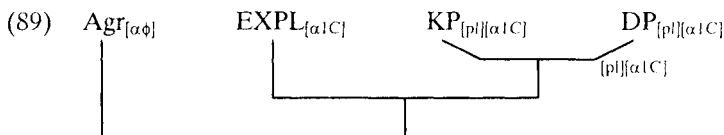   ljót.
        ugly.NOM

In (85) the verb, the dative argument and the nominative argument all appear in the plural form and the result is essentially acceptable. In (86), the verb and the nominative argument are plural, the dative argument is singular and the result is sharply ungrammatical. In (87) verb and dative argument are plural, while the nominative argument is singular, and the result is ungrammatical. Thus, both the dative and the nominative have to be plural for the verb to show up in the plural form (of course, the singular default form of the verb is always acceptable).

Let's assume that K can marginally have [αnumber]. If K has [αnumber], it will value it against its complement DP. So, if DP is plural, K becomes plural. Then, its [αC] leads it to establish a dependency with

the nonfinite subject. Now, since the [number] features of K and non-finite subject match, [number] can be a part of this dependency:

(88) $KP_{[pl][\alpha1C]}$ $DP_{[pl][\alpha1C]}$

                                                                $[pl][\alpha1C]$

         $K_{[\alpha number][\alpha C]}$ $DP_{[pl]}$

When Agr probes, it can access the DAT-NOM dependency, which now includes a [plural] feature. Consequently, Agr values its [αnumber] as plural:

(89) $Agr_{[\alpha\phi]}$ $EXPL_{[\alpha1C]}$ $KP_{[pl][\alpha1C]}$ $DP_{[pl][\alpha1C]}$

                                                                                                        $[pl][\alpha1C]$

To conclude, the key to understanding the intervention of the dative and the apparent exception lies in the structure of Complex Dependencies.

Let me recapitulate what we have so far. We can take the examples in which agreement obtains between IA or the nonfinite subject and the finiteness area as instances of nominative Case assignment by C. It is in these instances that the person–number constraint shows up. I have shown how the Complex Dependency approach throws some light on this constraint particularly because it provides an analysis of dative intervention. There is, however, another set of examples with different properties, which I discuss in the following sections.

3.5.5   v(EXP) and the nominative IA

There is empirical evidence that sometimes IA is actually getting abstract Case from v(EXP) (Taraldsen 1995, Sigurðsson 2003). Let's review this evidence:

1. For some speakers, the following sentence, with default agreement morphology on Agr, sounds grammatical and preferred to the agreeing version (Sigurðsson 2000, Hrafnbjargarson p.c.):

(90)   Henni   leiddist   strákarnir.
       she.DAT   bored.3rd.sg   boys.the.NOM
       'She found the boys boring.'

Sigurðsson (1996: 25)

If a DP does not agree with T, one could plausibly conclude that the two do not form a dependency. So, the nominative morphology of IA does not always come from T.

The nominative morphology on the IA could be a by-product of some rule of Morphology. A standard assumption within Minimalism is that the assignment of a phonetic matrix to a morphosyntactic feature is direct: if you get Case from C/T, you get morpheme x, if you get Case from v, you get morpheme y. However, this rule could be subordinated to another rule R of Morphology that says: if only one structural Case exists in the sentence, assign it morpheme x (see for instance the Case in Tiers model of Yip et al. 1987). In nominative-type languages, x would be the nominative suffix.

Suppose that we have a DAT EA in the structure and IA gets abstract Case from v(EXP). Since EA has lexical case, only IA bears structural Case. With this scenario, R would force the Case assigned to IA to surface as morphological nominative.[20]

2. Sometimes, the nominative Case on IA has no finite C/T anywhere in sight. Consider the following sentence:

(91)   Hún   taldi   okkur   leiðast   hún.
       She.NOM   believed.3rd.sg   we.DAT   be-bored   she.NOM
       'She thought we were bored with her.'

Taraldsen (1995: 319)

The only possible assigner of nominative Case (within standard assumptions on Case assignment) for the object of *leiðast* is the matrix C and it is already busy with another DP. Notice that if the lower *hún* received Case from upstairs by means of a Complex Dependency with *okkur* we would expect accusative. Putting (90) and (91) together, we may conclude that in both cases it is the experiencer predicate v(EXP) that assigns Case.

---

[20] A few verbs in Icelandic have two accusative arguments. If rule R exists in the grammar of Icelandic, both accusatives are quirky.

3. The nominative morphology on IA is reluctant to disappear when the psych verb is in a nonfinite context. Interestingly, the dative is the one that becomes PRO, as shown in (92a). (92b) shows that in a subject infinitival the nominative IA stays while the dative EA goes:

(92)   a.   Hún   vonast til   að leiðast ekki bókin.   (58)
            she.NOM hopes for to   bore   not book.NOM
            'She hopes not to find the book boring.'

                                                                Sigurðsson (1989: 204ff)
        b.   Að líka hestar   er ekkert að skammast   sín fyrir. (59b)
            to like horses.NOM is nothing to be-ashamed REFL for
            'To like horses is nothing to be ashamed of.'

                                                                Hrafnbjargarson (p.c.)

Again, this is very revealing of the source of the nominative morphology: it cannot be the Case assigned by finite T/C. Let's assume that the nominative suffix that we see in examples (90), (91) and (92) is the spell out of a Case assigned by v(EXP) and the intervention of rule R. If v(EXP) assigns Case, there will never be a dependency between IA and the finiteness area. Therefore, the nominative Case on IA can survive in nonfinite contexts.

If v(EXP) can assign Case in Icelandic, and v(EXP) selects the equivalents of 'seem', then we would expect the equivalents of 'seem' to assign Case just like the psych verbs.[21] The nonfinite subject of the complement of 'seem' indeed exhibits nominative Case morphology, even when it does not agree with the matrix Agr/T:

(93)   Henni   virtist   / *virtumst við   vera duglegar.   (61)
       she.DAT seemed.3rd.sg / 1.pl   we.NOM be   industrious
                                                                Sigurðsson (1996: 36)

I claim that the form without agreement in (93) involves a v(EXP) that assigns Case to the nonfinite subject.

    Looking at the 'seem' examples in more detail can help us clarify the role of v(EXP) as a Case assigner. Consider example (94). Can v(EXP)

---

[21] Taraldsen (1995) and Jonas (2001) argue that Icelandic 'seem' assigns Case and that this is visible in Faroese, as shown in Barnes (1986). Holmberg and Hróarsdóttir (2001) adopt this claim.

assign Case to *mergir*?:[22]

(94)   Það   þóttu   margir   vera   gáfuð.
        there   seemed   many.NOM   be   gifted
        'Many seemed to be smart.'

<div align="right">Hrafnbjargarson (p.c.)</div>

As I show in Chapter 1, in this sort of example *margir* can only get Case from the matrix C. Evidence for this is (i) that agreement is obligatory (Jónsson 1996: 153) and (ii) that *margir* must appear in a high position within the matrix clause (Jónsson 1996: 174):

(95)   a. Það   mundu   margir hafa virst   þekkja Maríu.
           there   would.3rd.pl many   have seemed know   Mary
           'Many would have seemed to know Mary.'
        b. *Það   mundu hafa margir virst   þekkja Maríu.
        c. *Það   mundu hafa virst   margir þekkja Maríu.

<div align="right">Sigurðsson (p.c.)</div>

How come v(EXP) can assign Case in (93) but not in (94) or (95)? The generalization is the following: v(EXP) can assign Case if it has an argument in its spec (see also Holmberg and Hróarsdottir 2004, Jonas 2001, Taraldsen 1995):

(96)   [$_{vP}$ KP v(EXP) [$_{vP}$ DP]]
               |Nom_____|

(97)   [$_{vP}$ ∅ v(EXP) [$_{vP}$ DP]]
              |*Nom_____|

Let me emphasize that assignment of abstract Case by v(EXP) is not obligatory, since as I argued in sections 3.5.2 and 3.5.3, it is often the case that v(EXP) does not assign Case and, instead, C does. There seem to be two grammars for v(EXP coexisting in the same speech community (more on this in section 3.5.8).

---

[22] Although Taraldsen (1995: 321) takes examples like (94) to be ungrammatical, a mistake that arises as a consequence of using examples that violate the definiteness condition on expletive associates.

This correlation seen in (96) between assigning Case and having an argument in its spec is not unexpected at all. It is strongly reminiscent of the v(EA)/v(Ø) contrast, discussed in Chapter 2. Thus, I propose to extend the same reasoning to v(EXP). [23]

One way to test whether v(EXP) can assign Case is to place it in a non-finite context, to prevent the interfering effects of finiteness. However, this well-known test is not going to work. Consider the following:

(98) √/*Jón   virðast gáfuð   fer   ekki milli   mála.
      Jon.NOM seem   be-gifted goes not   between cases
      (Intended meaning: no doubt John seems intelligent)

(99) √/*Maríu   virðast Jón   gáfaður fer   ekki milli
      mary.DAT seem   John.NOM be-gifted goes not   between
      mála.
      cases
      (Intended meaning: no doubt John seems to Mary to be
      intelligent)

<div align="right">Hrafnbjargson (p.c.)</div>

In (98), v(EXP) has no external argument, so it has no Case to assign to *Jon*. In (99) v(EXP) does have an external argument (*Mariu*), but this external argument has no abstract Case because there is no finiteness head that could assign it. (Interestingly, however, one of my consultants sees them both as grammatical, which confuses the picture somewhat.)

3.5.6   Some complex patterns in raising to object

The combined assumptions that v(EXP) can assign Case and K can probe and co-value its [αC] with another nominal can provide us the beginning of an analysis for another difficult pair of examples. Consider the following (provided by Sigurðsson, p.c.):

---

[23] As for English, notice that structural (accusative) Case is available with psych verbs but not with 'seem', even if it comes with an experiencer. This would entail that in English v(EXP) with an EA can assign Case only sometimes (viz. when the complement of v(EXP) is a psych verb, not when it is 'seem'), an unhappy conclusion. Another possible tack to follow could argue that 'seem''s apparent EA is actually an adjunct PP.

(100) Eg   taldi   strákana   virðast vera
       I.NOM believed boys.the.ACC   seem   be
       gáfaða.
       gifted.masc.pl.ACC
       'I believed that it seems that the boys seem to be gifted.'

(101) Eg   taldi   Jóni   virðast strákanir   vera
       I.NOM believed John.DAT   seem   boys.the.NOM be
       gáfaðir.
       gifted.masc.pl.NOM
       'I believed that it seems to John that the boys are gifted.'

Consider (100) first. 'the boys' is probed by the matrix v (believe) and consequently shows up in accusative Case. The participle, which has co-valued its [αC] with 'the boys', also appears in accusative Case. In (101) v(EXP) has an external argument, 'John'. Consequently, it can assign Case to 'the boys', which is "transmitted" to the participle by co-valuation. Rule R spells out this Case with a nominative affix.

Consider the following example:

(102) Hún   taldi   okkur   leiðast   hún.
       She.NOM believed.3rd.sg we.DAT   be-bored she.NOM
       'She thought we were bored with her.'

<div align="right">Taraldsen (1995: 319)</div>

Here, it could be argued that the downstairs nominative is licensed by the downstairs v(EXP) that has *okkur* as an external argument. The quirky *okkur* is licensed by the matrix v but, as usual, the lexical case affix trumps the structural one.

Hrafnbjargarson (p.c.) tells me that the construction shown in (102) only seems to work with *leiðast* and *líka*, which are also the two nominative IA verbs that can more easily appear without agreement in finite clauses. This would suggest that the ability of v(EXP) to assign Case is spreading through the lexicon (lexical spreading is a well-known phenomenon of linguistic change).

3.5.7 Agreement and binding

Recognizing that the DAT-NOM pattern may reflect two different strategies of Case assignment might give us a step toward an account of the coreference facts discussed by Taraldsen (1995). As he points out (citing an observation by Hoskuldur Thráinsson), in (103) coreference between the pronoun and the DAT/EA is not possible, whereas in (104) it is. The only difference between one and the other is agreement: where there is agreement, there is no coreference:

(103) Konunum$_i$ fundust   þaer $\cdot_i$ vera gáfaðar.   (63)
       women.the.DAT seemed.3rd.pl they.NOM be   gifted.f.pl.NOM

(104) Konunum$_i$ fannst   þaer$_i$ vera gáfaðar.   (64)
       women.the.DAT seemed.3rd.sg they.NOM be   gifted.f.pl.NOM
       'The women thought they were smart.'

                                                    Taraldsen (1995: 317)

In (103) agreement between the matrix Agr and *þaer* reflects a Complex Dependency between the two. In (104) lack of agreement reflects that there is no such dependency.

Take binding to be connected with ϕ-features (Richards 1994, Reuland 2001), binding domains being defined in terms of feature sharing. A reasonable assumption is that two constituents involved in an A-dependency are in the same binding domain (notice that this is not a biconditional). Additionally, take pronouns to be subject to principle B.

Take the complement of 'seem' to be a binding domain in Icelandic in the unmarked case (Taraldsen 1995). It follows that pronoun and antecedent can be coreferent without violating Binding Theory, as in (104).

The structural relations in (103) are different. In (103), the pronoun and T are engaged in a dependency that values the ϕ-features of T, which entails that they are in the same binding domain. Coreference is forbidden by principle B.

3.5.8 A note on diachronic syntax

In the history of English and Faroese there has been a syntactic change so that both languages lost their nominative IAs in favor of a regular NOM-

ACC pattern (Allen 1995 for English, Barnes 1986 for Faroese). A consequence that can be derived from my analysis is that the syntactic change may have gone through a two-step process. Consider (105). In line 1 we have the quirky pattern with DAT EA and nominative IA forming a Complex Dependency with T and exhibiting number agreement between IA and T. The object shows up in nominative Case. In line 2, v(EXP) has the ability to assign Case, so there is no Complex Dependency. However, since EA still has lexical dative morphology, rule R forces IA to be nominative. In step 3, we have the fully regular pattern. Lexical case on the experiencer argument is lost, so it gets nominative and the IA gets accusative:

(105) 1. Case assigner: C/T
           Morphology: nom
       2. Case assigner: v(EXP)
           Morphology: nom
       3. Case assigner: v(EXP)
           Morphology: acc

That is, I hypothesize that in order to go from 1 to 3, first one has to stop at 2 if EA is quirky, because of the effects of rule R. Given the data presented in this section, lines 1 and 2 seem to coexist within the Icelandic linguistic community.

3.5.9   Conclusions

I have presented a discussion of the very intricate patterns of Case assignment and agreement in Icelandic quirky constructions. After carefully controlling for the apparent fact that v(EXP) can assign nominative Case at least sometimes, we were able to uncover an agreement dependency that involved T, K and a nominative argument. I showed that the person–number constraint is a direct consequence of this Complex Dependency, given Full Sharing and Minimal Compliance. Since the analysis presented is exactly parallel to what was argued for indefinite SE, we have strengthened the assumption that the person–number constraint is not part of the "peripheral grammar" of specific languages but is rooted in the architecture of C_{HL}. To the extent that the analyses presented here hold, they imply a step forward toward a unified theory of A-dependencies in C_{HL}.

3.6   Spanish quirky constructions

3.6.1   Introduction

Although less popular than the Icelandic quirky constructions, Spanish also has a version of them (Masullo 1992, Fernández-Soriano 1999). They involve the dative experiencers of psych predicates or locative arguments:

(106) a. A   María le   gustan   las aceitunas.
           DAT   maria DAT.3rd.sg   like.3rd.pl   the olives
           'Mary likes olives.'
       b. Aquí falta   pan.
           Here lack.3rd.sg bread
           'Bread is needed here.'

Quirky subjects in Icelandic and Spanish have the common property of "looking like subjects" in some respects – as for instance, sitting in Spec.T – while being definitely nonsubject in not agreeing with T and not exhibiting nominative Case. Unlike Icelandic quirky constructions, in Spanish the IA agrees with T in all numbers and persons. Notice the presence of the dative clitic agreeing in person and number with the dative argument in the psych examples:

(107) a. A   María le   gustas   tú.
           DAT   Maria DAT.3rd.sg   like.2nd.sg   you.NOM
           'Mary likes you.'
       b. A   María le   gusto   yo.
           DAT   Maria DAT.3rd.sg   like.1st.sg   I.NOM
           'Maria likes me.'
       c. A   María le   gustamos   nosotros.
           DAT   Maria DAT.3rd.sg   like.1st.pl   we.NOM
           'Maria likes us.'
       d. A   María le   gustáis   vosotros.
           DAT   Maria DAT.3rd.sg   like.2nd.pl   you.pl.NOM
           'Maria likes you guys.'
       e. A   María le   gustan   ellas.
           DAT   Maria DAT.3rd.sg   like.3rd.pl   they.NOM
           'Maria likes them.'

    f. Aquí   falto   yo.
         here   lack.1st.sg I.NOM
         'I am missing here.'

    g. Aquí   faltas   tú.
         here   lack.2nd.sg you.NOM
         'You are missing here.'

    h. Aquí   faltamos nosotros.
         here   lack.1st.pl we.NOM
         'We are missing here.'

    i. Aquí   faltáis   vosotros.
         here   lack.2nd.pl you.pl.NOM
         'You guys are missing here.'

    j. Aquí   faltan   ellas.
         here   lack.3rd.pl they
         'They are missing here.'

The fact that the DAT argument poses no restrictions on agreement between T and IA makes us think that there is no Complex Dependency linking T, the oblique EA and IA; instead, IA agrees with T directly. I argue that the oblique EA does not agree with IA or T because its structural Case is satisfied by the clitic.

    There is a class of counterexamples to the preceding generalization. As discovered by Rivero (2004), psych predicates with an inherent SE do exhibit person–number restrictions:

(108) a. A   María se   le   antoja   un helado.
         DAT Maria SE DAT.3rd.sg crave.3rd.sg an ice-cream
         'Maria is craving an ice-cream.'

      b. A   María se   le   antojan   unos helados.
         DAT Maria SE DAT.3rd.sg crave.3rd.pl some ice-creams
         'María is craving some ice-creams.'

      c. *A   María se   le   antojo   yo.
         DAT Maria SE DAT.3rd.sg crave.1st.sg I.NOM

      d. *A   María se   le   antojas   tú.
         DAT Maria SE DAT.3rd.sg crave.2nd.sg you.NOM

      e. *A   María se   le   antojamos nosotros.
         DAT Maria SE DAT.3rd.sg crave.1st.pl we.NOM

      f. *A   María se   le   antojáis   vosotros.
         DAT Maria SE DAT.3rd.sg crave.2nd.pl you.pl.NOM

I will propose that in this set of examples the nominative IA establishes a Complex Dependency with SE and T. These examples are, in effect, structurally similar to the indefinite SE that I discussed in section 3.4.

This section is organized as follows. In section 3.6.2, I present some preliminaries of Spanish grammar, in section 3.6.3 I discuss whether the quirky subj or the nominative IA is the "subject" of the clause. The surprising conclusion is that they seem to stand in a fairly symmetrical relationship. In section 3.6.4 I argue that the clitic assigns structural Case to the dative argument and, as a consequence, no dependency links the quirky subject and the nominative IA. The absence of the person–number constraint as well as other properties of the construction follow from this analysis. Finally, in section 3.6.5 I analyze the "craving" examples.

3.6.2   Spanish as a DCL

In Chapter 2, I suggested that the locus of nominative Case is subject to parametric variation: T in some languages, C in others. If T assigns Case to an argument in Spec,v, the first immediate consequence is that Spec,T (or Spec,T and Spec,Agr, for the languages that have the latter) becomes available to be exploited for information-structure purposes. Some languages do use it for that purpose, typically as a continuing topic position, as I showed using Finnish as an example:

(109)
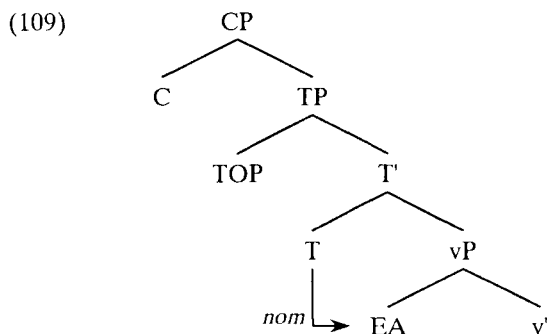
Spanish should be classified as a DCL. The general availability of pre-verbal and postverbal subjects strongly suggests it (notice the presence of the clitic in the (110c) example):

(110) a. Ayer   compró   Juan una lata de aceitunas
          Yesterday bought.3rd.sg Juan a   can of olives
          para martini.
          for martini
          'Yesterday Juan bought a can of olives for martinis.'
      b. Una lata de aceitunas compró   Juan.
          a   can of olives   bought.3rd.sg Juan
      c. La lata de aceitunas la   compró   Juan.
          the can of olives   ACC.3rd.sg bought.3rd.sg Juan

Indeed, it has often been argued that the Spec,T position in Spanish is
unlike its equivalent in English since it can host a variety of constituents
(see Contreras 1991, Goodall 1992, Ordóñez 1998, Zubizarreta 1998
among many others). The earlier analyses proposed that the parameter
involved the way nominative Case is assigned: under government in
Spanish, in a spec,head agreement configuration in English. The reason
for this parameter would be that the English predicate phrase (VP or vP)
would be opaque to government from T. In my model, Case is always
assigned in a "government" configuration, what is subject to cross-
linguistic variation is the locus of the Case feature. The influential
approach to the parametric theory of Borer (1984) would suggest that my
model, based on properties of functional categories, should be preferred
to accounts in terms of vP transparency to government, which at first sight
seem to rely on arbitrary properties of maximal projections.

  In Spanish, as in other DCLs, EAs regularly appear in Spec,T:

(111) Juan compró   ayer   una lata de aceitunas para martini.
       Juan bought.3rd.sg yesterday a   can of olives   for   martini
       'Juan bought a can of olives for martini yesterday.'

Work on this topic assumes that subject raising is actually akin to clitic left
dislocation (as in Contreras 1991, Alexiadou and Anagnostopoulou 1998
among others). If that were the case, then raising to Spec,T would be of
the A'-type. However, it has the properties of A-movement. For instance,
it can be interrupted by a D in an A-position, unlike dislocation. Consider
the following examples:

(112) a. Juan parece haber   ganado la   lotería.
         Juan seems   have.inf won.ptc the   lottery
         'Juan seems to have won the lottery.'

   b. *Juan me   parece haber   ganado la   lotería.
         Juan me.DAT   seems   have.inf   won.ptc the   lottery

   c. Juan me   parece que ha   ganado la   lotería.
         Juan me.DAT   seems   that has.3rd.sg won.ptc the   lottery
         'Juan seems to me to have won the lottery.'

In (112a), 'Juan' has raised from the subordinate clause. In (112b) we can see that an experiencer clitic prevents raising.[24] In (112c), 'Juan' must be dislocated, since the subordinate clause is finite. Notice that in (112c) the clitic does not intervene. The conclusion is that raising to subject in Spanish is a genuine instance of A-movement and the subject of (112a) is not dislocated.

   Moreover, subject raising can strand floating quantifiers:

(113) Los chicos trabajaron   todos   hasta muy tarde.
       the boys   worked.3rd.pl all.3rd.pl until very late
       'The boys all worked until very late.'

This is not a behavior of A'-movement in Spanish. Neither wh-movement nor focus movement strand quantifiers:[25]

(114) a. *¿Qué películas vio   Juan todas?
          what movies   saw.3rd.sg Juan all

   b. *LAS PELICULAS vio   Juan todas.
       the movies   saw.3rd.sg Juan all

---

[24] It is a well-known fact of Romance syntax that the experiencer clitic of *parecer* prevents A-movement in Spanish but not in French or Italian. Moreover, raising over other types of experiencers is possible, as documented later in this chapter. Here I do not try to resolve the puzzle, limiting myself to using the experiencer of *parecer* as a diagnostic of A-movement. For dicussion see Torrego (2002).

[25] Clitic Left Dislocation does strand quantifiers. In López (2003b) it is argued that dislocation in Catalan involves a two-step operation of A-movement followed by A'-movement; floating quantifiers only appear in the first step. As for Spanish, I suggest that the same analysis applies for some instances of CLLD. Other instances (see 110c) seem to involve movement to Spec,T triggered by [f]. For an analysis of (110c) in which the object occupies Spec,T, see Zubizarreta (1998). Discussing these issues in depth goes beyond the limits of this project.

As in Chapter 2, let's assume that in DCLs DPs (and possibly other constituents) can bear a feature, call it [f], which triggers raising to Spec,T. [f] is of the same family as [Case] since it is assigned by C, triggers A-movement and is affected by intervening constituents in A-positions. The main difference between [f] and [Case], as far as I can tell, is that the former, from a cross-linguistic perspective, is optional while the latter is not. This optionality is exploited by the interpretive system in charge of surface semantics.

3.6.3   Who is the subject in quirky constructions?

Keeping this in mind, let's return to quirky constructions. Quirky subjects in Icelandic and Spanish have the common property of "looking like subjects" in some respects – as for instance, sitting in Spec,T – while being definitely nonsubject in not agreeing with T and not exhibiting nominative Case. The dative and locative arguments discussed above do indeed pass some "subjecthood" tests. For instance, a quirky subject can raise subject-to-subject:

(115)   A   María parecen   gustarle   los bombones.
          DAT   Maria seem.3rd.pl like.inf-DAT.3rd.sg the chocolates
          'Maria seems to like chocolates.'

(116)   Aquí parecen   faltar empleados.
          here seem.3rd.pl lack   employees
          'Employees are needed here.'

A skeptical reader could wonder what kind of movement this is. For instance, (115) and (116) could instantiate topicalization/dislocation. This sort of movement is apparent in (117), where the dative argument is linked to a position in a finite clause:

(117)   A   María parece   que le   gustan   los bombones.
          DAT Maria seem.3rd.sg that DAT.3rd.sg like.3rd.pl the chocolates
          'Maria seems to like chocolates.'

However, we can use the intervention test again to show that (115) and

(117) are fundamentally different. (115) is sensitive to the presence of a dative experiencer in the matrix clause, but (117) is not:

(118) a.   A   María   me   parecen   gustarle
             DAT Maria DAT.1st.sg seem.3rd.pl like.DAT.3rd.sg
             los bombones.
             the chocolates
        b.   A   María   me   parece   que le
             DAT Maria DAT.1st.sg seem.3rd.sg that DAT.3rd.sg
             gustan   los bombones.
             like.3rd.pl   the chocolates
             'Maria seems to me to like chocolates.'

(119) a. *Aquí   me   parecen   faltar empleados.
             here   DAT.1st.sg seem.3rd.pl lack   employees
        b.   Aquí   me   parece   que   faltan   empleados.
             here   DAT.1st.sg seem.3rd.sg that lack.3rd.pl employees
             'It seems to me that employees are needed here.'

One characteristic of these constructions that is never mentioned is that the nominative IA can also act as a subject and undergo raising:

(120) a.   Los bombones le   gustan   a   María.
             the chocolates DAT.3rd.sg like.3rd.pl DAT Maria
             'Maria likes chocolates.'
        b.   Los bombones parecen   gustarle   a   María.
             the chocolates seem.3rd.pl like.inf-DAT.3rd.sg DAT Maria
             'Maria seems to like the chocolates.'
        c. *Los bombones me   parecen   gustarle
             the chocolates DAT.1st.sg seem.3rd.pl like.inf-DAT.3rd.sg
             a   María.
             DAT Maria
        d.   Los bombones me   parece   que le
             the chocolates DAT.1st.sg seem.3rd.pl that DAT.3rd.sg
             gustan   a   María.
             like.3rd.pl DAT Maria
             'It seems to me that Maria likes the chocolates.'

(121) a. Los empleados faltan   en esta oficina.
          the employees   lack.3rd.pl in this office
          'The employees are missing in this office.'

      b. Los empleados parecen   faltar en esta oficina.
          the employees seem.3rd.pl lack   in this office
          'The employees seem to be missing in this office.'

      c. *Los empleados me   parecen   faltar
          the employees DAT.1st.sg seem.3rd.pl lack
          en esta oficina.
          in this office

      d. Los empleados me   parece   que faltan
          the employees DAT.1st.sg seem.3rd.sg that lack.3rd.pl
          en esta oficina.
          in this office
          'It seems to me that the employees are missing in this office.'

In (120c, 121c) I apply again the intervention test to show that we have A-movement. So, both DAT and NOM can raise to Spec,T in a raising construction. This is markedly different from Icelandic, where only DAT is subject to raising (Sigurðsson p.c.). The conclusion is that whereas the Icelandic DAT is privileged over NOM in a way clearly redolent of subjecthood, in Spanish both DAT and NOM are equally "subjectly".

The following reinforces this conclusion. Regular subjects in Spanish cannot be bare NPs. Some sort of determiner or modification is required (see Contreras 1974 for the classic analysis and Casielles 1996 for a recent approach and references therein):

(122) a. *Hombres no   saben   bailar.
          men   not   know.3rd.pl dance.inf

      b. Los hombres no   saben   bailar.
          the men   not   know.3rd.pl dance.inf
          'Men do not know how to dance.'

This is another property shared by quirky subjects (examples 123d, e, f from Fernández-Soriano 1999: 109). The contrast between (123a) and (123b) shows that the quirky subject needs some determiner. (123c) shows that when a dative is being used as a plain indirect object this determiner is not necessary. Examples (123d), (123e) and (123f) make the same point with locative subjects. The contrast between (123d) and (123e) shows that

a locative argument cannot include a bare NP. (123f) shows that if the locative is an adjunct, there is no restriction on bare NPs.

(123) a. * A   niños   necesitados les   gustan   los regalos.
         DAT children needy   DAT.3rd.pl like.3rd.pl the gifts

      b. A   los niños   necesitados les   gustan
         DAT the children needy   DAT.3rd.pl like.3rd.pl
         los ragalos.
         the gifts
         'Needy children like gifts.'

      c. Los domingos envío   regalos a   niños
         the sundays   send.1st.sg gifts   DAT children
         necesitados.
         needy
         'On Sundays I send gifts to needy children.'

      d. *En lugares públicos sobran   empleados.
         in   places   public   are-extra employees

      e. En los lugares públicos sobran   empleados.
         in   the places   public   are-extra employees
         'In public places there are too many employees.'

      f. En lugares públicos prefiero   no   hablar.
         in   places   public   prefer.1st.sg not talk.inf
         'In public places, I prefer not to talk.'

Again, this feature does not tease apart the DAT from the NOM. The nominative IA cannot be a bare NP either:

(124) a. *Regalos les   gustan   a   los niños   necesitados.
         gifts   DAT.3rd.pl like.3rd.pl DAT the children needy

      c. Los regalos les   gustan   a   los niños
         the gifts   DAT.3rd.pl like.3rd.pl DAT the children
         necesitados.
         needy
         'Needy children like gifts.'

(125) a. *Empleados sobran   en   lugares públicos.
         employees   are-extra in   places   public

      b. Los empleados sobran   en   lugares públicos.
         the   employees are-extra in   places   public
         'The employees are not needed in public places.'

All-focus sentences (thetic judgments) can work as a good test to find out what the "true subject" of the sentence is. In Spanish, transitive all-focus sentences impose the order SVO or AdjunctVSO. When an IA is preposed, it is always dislocated with a topic or contrastive focus reading and as a result it remains outside focus projection – you have a categorical proposition.[26] In (126) we can see how a clitic-doubled fronted object cannot be part of a thetic proposition:

(126) [Context: what happened last night?]
      a. Pues que los mecánicos estuvieron arreglando el ascensor.
         well that the repair-men were   fixing   the elevator
         'The repairmen fixed the elevator.'
      b.#Pues que el ascensor, lo   estuvieron arreglando
         well that the elevator ACC.3rd.sg were   fixing
         los mecánicos.
         the repair-men

In (127), we see how (126b) can function as a continuing topic:

(127) [Context: what happened to the elevator?]
      Pues mira, el ascensor lo   estuvieron arreglando los
      well look   the elevator Cl.ACC were   fixing   the
      mecánicos.
      repair men

Since the subject is the only argument that can show up to the left of the verb in all-focus sentences, I try out the DAT V NOM and the NOM V DAT orders to see whether focus can project all the way up in out of the blue sentences that trigger the all-focus interpretations. The hypothesis is that whichever argument can appear in preverbal position is the "subject", sitting in Spec,T. The result is surprising: focus can project in either case, with no detectable difference in information structure:

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[26] Thus, Spanish is not exactly like Finnish, a language in which, according to the descriptions I have had access to (Vainikka 1989, Vilkuna 1995), the role of both the EA or the IA in Spec,T is always that of a topic. The discourse configurationality of Spanish is "one notch down", since it retains a residue of privileging Spec,T as a position for the EA.

(128) [Context: what's going on?]
    a. Que a   Juan le   interesa   María.
        that DAT Juan DAT.3rd.sg interest.3rd.sg Maria
    b. Que María le   interesa   a   Juan.
        that Maria DAT.3rd.sg interest.3rd.sg DAT Juan
        'Juan is interested in Maria.'

So, according to three different tests, the two arguments of the psych predicate behave alike, both of them being equally "subjectly".

3.6.4 Quirky and the clitic

As the reader may recall, the evidence indicates that Icelandic quirky subjects are licensed by finiteness. The examples in (59) show that dative subjects are unavailable in nonfinite clauses (unless the matrix verb is a raising predicate). In the following example, the dative goes PRO in a control clause:

(129) Strákanir   vonast til að PRO leiðast ekki öllum   í skóla.
        boys.the.NOM hope for to   bore not all.DAT in school
        'The boys hope to not be bored in school.'

                                          Sigurðsson (1991: 331)

There are two pieces of evidence that Spanish dative EAs are not licensed by finiteness. The first is that the dative EA is perfectly comfortable in nonfinite clauses. The examples (130)–(133) show evidence of this. The (a) examples show that a Spanish quirky subject can be found in nonfinite subject clauses. The (b) examples show that it does not become PRO in a control context. The (c) examples show that the nominative object does:

(130) a. Gustarle   a   María es   imposible.
           please.inf-DAT.3rd.sg DAT Maria is   impossible
           'It is impossible to please Maria.'
    b. Juan quiere   gustarle   a   María.
           Juan want.3rd.sg please.inf-DAT.3rd.sg DAT Maria
           'Juan wants for Mary to like him.'
    c. *Juan quiere   gustar los libros.
           Juan want.3rd.sg like.inf the books
           (Intended meaning: Juan wants to like books)

(131) a. Aburrirle   a   María es   imposible.
           bore.inf-DAT.3rd.sg DAT Maria is   impossible
           'It is impossible to bore Maria.'
       b. Juan quiere   aburrirle   a   María.
           Juan want.3rd.sg bore.inf-DAT.3rd.sg DAT Maria
       c. *Juan quiere   aburrir María.
           Juan want.3rd.sg bore.inf Maria
           (Intended meaning: Juan wants for María to bore him)

(132) a. Interesarle   a   María es   imposible.
           interest.inf-DAT.3rd.sg DAT Maria is   impossible
           'It is impossible to interest Maria.'
       b. Juan quiere   interesarle   a   María.
           Juan want.3rd.sg interest.inf-DAT.3rd.sg DAT Maria
       c. *Juan quiere   interesar María.
           Juan want.3rd.sg interest.inf Maria
           (Intended meaning: Juan wants to find Maria interesting)

(133) a. Faltar   a esta reunión sería   una catástrofe.
           lack.inf to this meeting be.cond a   catastrophe
           'It would be catastrophic to miss this meeting.'
       b. Juan quiere   faltar   a esta reunión.
           Juan want.3rd.sg lack.inf to this meeting
           'Juan wants to be missing in this meeting.'
       c. *Juan quiere   faltar   los empleados.
           Juan want.3rd.sg lack.inf the employees
           (Intended meaning: Juan wants the employees to be missing)

Fernández-Soriano (1999: 119) argues for the opposite conclusion, using only the following example as evidence:

(134) *Me   pregunto por qué faltarle   a   uno los
       I.DAT ask.1st.sg for what lack-DAT.3rd.sg DAT one the
       amigos.
       friends
       (Intended meaning: I wonder why friends fail you)

According to Fernández-Soriano, the ungrammaticality of (134) comes about because the quirky subject occupies (overtly or covertly, I surmise)

the subject position of the subordinate clause, a null Case position incompatible with quirkies. However, it is unclear what exactly makes this construction ungrammatical. Whether you elide the DAT argument or the NOM one or both, the sentence remains ungrammatical:

(135) a. *Me   pregunto por qué faltarle   a   uno.
          I.DAT ask.1st.sg for what lack -DAT.3rd.sg DAT one
          (Intended meaning: I wonder why they should fail one)
       b. *Me   pregunto por qué faltar los amigos.
          I.DAT ask.1st.sg for what lack   the friends
          (Intended meaning: I wonder why friends fail)
       c. *Me   pregunto por qué faltar.
          I.DAT ask.1st.sg for what miss
          (Intended meaning: I wonder why to fail)

It is not clear to me why (134) and (135) are ungrammatical. However, since the construction does not improve if DAT goes PRO, it seems clear that this datum does not indicate that the quirky subject is licensed by finiteness.

The second piece of evidence again involves control into adjuncts. Recall (section 3.2) that we assume, following Chomsky (1995), that nominals that establish a dependency with T can control into adjuncts. As is well-known, the Icelandic quirky subject is able to control into an adjunct clause:

(136) Mer   likuðu baekurnar an þess að buast við þvi.
       I.DAT liked   books.the without to expect it
       'I liked the books without expecting to.'
                                         Toribio (1993: 155), Ura (2000: 128)

It is not possible to construct a similar example in Spanish. In (137), we see that the subject of the verb usually translated as 'love', a regular nominative-accusative verb, can control into an adjunct clause while the dative subject of 'like' cannot. (137c) even shows that it is possible to construct a sentence with a meaning parallel to that of (137b) as long as the adjunct clause is finite without a controlled PRO:[27]

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[27] Montrul (1998) argues that the quirky subject does control into adjuncts. She provides the following example:

(137) a. María ama   a   un hombre casado sin
           Maria love.3rd.sg ACC a man married   without
           avergonzarse de nada.
           shame.inf   of nothing
           'Maria loves a married man without feeling any shame.'
       b. *A   María le   gusta   un hombre casado
           DAT Maria DAT.3rd.sg like.3rd.sg a man married
           sin   avergonzarse de nada.
           without shame.inf   of nothing
           (Intended meaning: 'Maria likes a married man without feeling
           any shame.')
       c. A   Maria le   gusta   un hombre casado
           DAT Maria DAT.3rd.sg like.3rd.sg a man married
           sin   que le   dé   ninguna vergüenza.
           without that DAT.3rd.sg give.3rd.sg no   shame
           'Maria likes a married man without feeling any shame.'

I take the contrast between (137a) and (137b) to show that the Icelandic
DATEA forms a dependency with the finiteness area while the Spanish
one does not.

(i) Sin PRO$_i$ saber   por qué, a   Juan$_i$ le   gusta   María.
    Without know.inf for what DAT Juan CL.DAT like.3rd.sg Maria
    'Without knowing why, Juan likes Mary.'

                                                          Montrul (1998: 32)

PRO and the dative EA can indeed be coreferent. The issue is whether there is
true control. First, in (i) PRO can also have an arbitrary reference. This is clearer
in the following example:
(ii) Sin PRO saber   por qué, la   tormenta estalló.
     without know.inf for what the storm   exploded
     'Without knowing why, the storm began.'
Second, PRO can also be coreferent with a higher subject:
(ii) Carlos$_i$ dice que, sin PRO$_i$ saber   por qué, a   Juan le   gusta María.
     Carlos says that without know.inf for what DAT Juan CL.DAT like.3rd.sg
     Maria
     'Carlos says that without knowing why, Juan likes Mary.'
This behavior contrasts with true control, as in purpose clauses:
(iii)Carlos$_i$ dice que, para PRO$_{*i}$ impresionar a   los periodistas, Juan se
     Carlos says that in.order.to impress   ACC the journalists Juan SE
     puso una corbata nueva.
     put.on a   tie   new
In (iii) control is obligatory and cannot come from the matrix clause. I conclude
that (i) does not instantiate true control.

Thus, the dative EA is not structurally licensed by T in Spanish. It does show up in Spec,T, but recall that raising to Spec,T is attributed to the feature [f], assigned by C. What kind of structural Case does DAT get then? The key datum – well-known to Spanish linguists but so far not fully integrated into the analyses – is the fact that the presence of the dative clitic *le* is obligatory to license a dative experiencer:

(138) a. A   María le   gustan   los libros.
           DAT Maria DAT.3rd.sg like.3rd.pl the books
           'Maria likes books.'
       b. *A   María gustan   los libros.
           DAT Maria like.3rd.pl the books

This has been well-known for a long time, but the consequences have not been fully explored, to my knowledge. I propose that *le* is the Case assigner for the dative subject.[28]

Largely following Demonte (1995) (who builds on Marantz 1993), and Bleam (1999), I assume that the clitic is a verbal morpheme. I further suggest that it is attached to v before v merges with VP. We would get a structure like the following:[29]

(139)
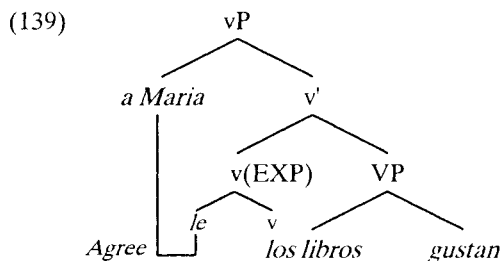
With this configuration, the derivation would proceed like this. The experiencer v (unlike Icelandic) never has any Case, so it does not probe (Belletti and Rizzi 1988). The clitic is embedded within v, so it cannot probe the VP domain either. But EA can probe. So it does, and finds the

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[28] Locative predicates have no clitics. However, in earlier historical stages there were locative clitics in Spanish. Moreover, locative clitics are present in other Romance languages. I assume that there is a covert locative clitic in Spanish.
[29] EA could actually be KP. Since I do not have any evidence one way or another, I avoid making an additional claim.

clitic. An Agree dependency is established that values the unvalued Case feature of the EA as dative.

IA raises to Spec,v, propelled by its unvalued Case feature. The possibility of IA raising – and the creation of VOS orders – is well documented (see Ordóñez 1998, Zubizarreta 1998 and Torrego 2002 for the case of experiencer verbs):

(140)
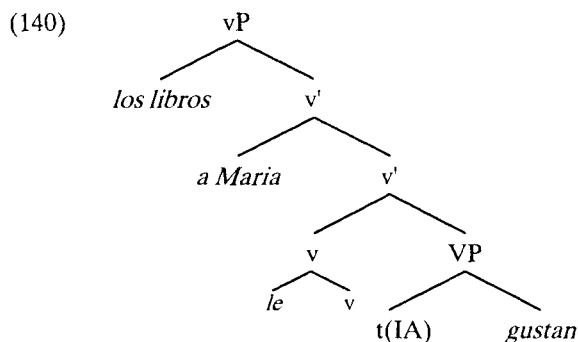
One way to test whether this movement has actually taken place is to place the vP in an all-focus context, i.e. with some sort of topic in Spec,T. This way we can see what order the two arguments appear in so that focus is projected upwards. The result is interesting: only the NOM+DAT order sounds natural in an out of the blue context:

(141) [Context: what happened yesterday?]
   a. Ayer   le   interesó   María   a   Juan.
       yesterday DAT.3rd.sg interested.3rd.sg Maria DAT Juan
       'Yesterday, Juan was interested in Maria.'
   b. Ayer   pareció   interesarle   María   a
       yesterday seemed.3rd.sg interest-DAT.3rd.sg Maria DAT
       Juan.
       Juan
       'Yesterday, Juan seemed to be interested in Maria.'
   c. #Ayer le interesó a Juan María.
   d. #Ayer pareció interesarle a Juan María.

This suggests that movement of IA over DAT is of the obligatory, Case-seeking type, different from the optional, [f] triggered movement to Spec,T. One could wonder if IA could at this point value its Case feature

with DAT. This issue does not arise, since the Case feature of EA has already deleted.

IA in Spec,v can be probed by T:

(142)
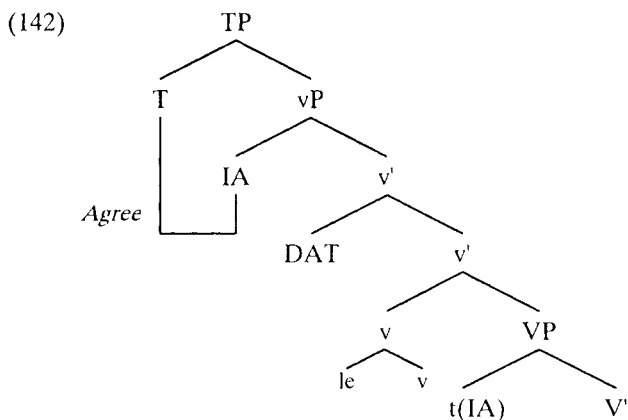
As a result of the Agree dependency established between T and IA, the former copies the φ-features of the latter, without person or number restrictions. From this point on, either DAT or IA could keep moving if one of them had the [f] feature without fear of intervention effects. The configuration (142) provides an explanation of the symmetrical relationship that holds between the two arguments of the psych predicate: it is the outcome of being specs of the same head at the point when their Case features are valued.

The quirky subjects in Icelandic must, and those in Spanish may, occupy Spec,T. This accounts for the properties in both Icelandic and Spanish that suggest "subjecthood" (i.e. both are subject to raising). The differences between the two languages depend exclusively on whether DAT is licensed by a finiteness head or not. In Icelandic, quirky subjects do get a nominative Case in Spec,T as argued in section 3.5. This explains why the quirky subject becomes PRO in a nonfinite clause and can control into adjuncts in Icelandic. The opposite properties of Spanish quirky subjects are explained because they never enter a dependency with T. The person–number constraints in Icelandic were analyzed as a consequence of a Complex Dependency between Fin, K and the IA. Since the IA and DAT do not form a Case dependency in Spanish, but the IA establishes a dependency directly with T, there are no person–number constraints.

3.6.5   The "craving" examples

I return now to Rivero's (2004) examples:

(143) a. A   María se le   antoja   un   helado.
          DAT Maria SE DAT.3rd.sg crave.3rd.sg an   ice-cream
          'Maria is craving an ice-cream.'

      b. A   María se le   antojan   unos helados.
          DAT Maria SE DAT.3rd.sg crave.3rd.pl some ice-creams
          'María is craving some ice-creams.'

      c. *A   María se le   antojo   yo.
          DAT Maria SE DAT.3rd.sg crave.1st.sg I.NOM

      d. *A   María se le   antojas   tú.
          DAT Maria SE DAT.3rd.sg crave.2nd.sg you.NOM

      e. *A   María se le   antojamos   nosotros.
          DAT Maria SE DAT.3rd.sg crave.1st.pl we.NOM

      f. *A   María se le   antojáis   vosotros.
          DAT Maria SE DAT.3rd.sg crave.2nd.pl you.pl.NOM

As mentioned, the person–number restriction returns in these examples. I propose the following structure:

(144)
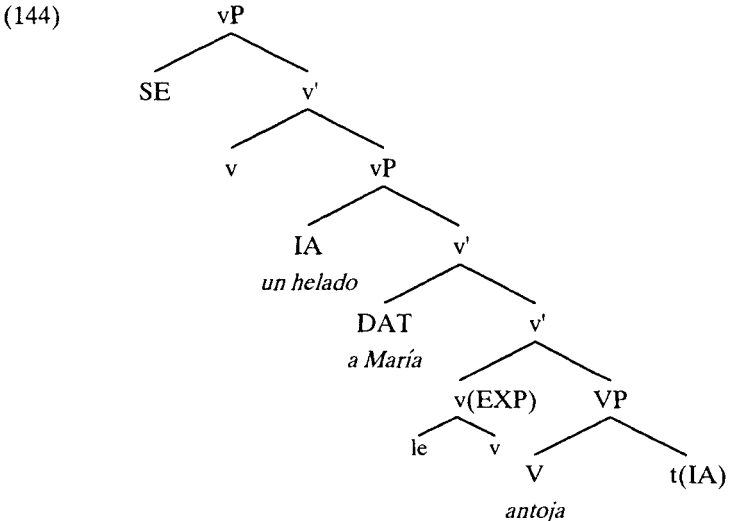
What we find is that we have an extra verbal layer on top of the ex-

periencer that introduces SE. Thus, SE and IA establish a dependency
which is then probed by T, forming a Complex Dependency, just as was
discussed in section 3.4. This accounts for the appearance of person–
number restriction.

3.7 *Me lui*

A phenomenon concerning agreement that has received considerable
attention is what Bonet (1994) calls the Person Case Constraint (PCC).
What the PCC tells us is that if we have dative and accusative agreement
markers, clitics or even weak pronouns within the same syntactic bundle,
the accusative marker has to be third person (Perlmutter 1971, Bonet
1994, Albizu 1997, Ormazábal 2000, Ormazábal and Romero 2001):

(145)   If DAT then ACC-3rd. (Bonet 1994: 40)

(146)   a. Juan me   lo   envió.
            Juan DAT.1st.sg ACC.3rd.sg send.PAST.3rd.sg
            'Juan sent him to me.'
        b. *Juan me   te   envió.
            Juan DAT.1st.sg ACC.2nd.sg send.PAST.3rd.sg
            (Intended meaning: Juan sent you to me)

This restriction is very similar to the one that we saw in the case of
Icelandic quirks: if we have a dative argument, the other argument must
be third person – the only difference being that in this case the other
argument is accusative rather than nominative. As a matter of fact,
Boeckx (2000) has noticed the similarity and has claimed that both
respond to the morphological constraints discussed in Bonet (1994).
Boeckx also attempts to provide a rationale for the existence of this
restriction: in essence he claims that if the IA had an overt [person]
feature (1st or 2nd), this [person] would clash with the inherent [animate]
of the dative argument, which shows up morphologically as [3rd]. I have
discussed Boeckx's approach and shown that datives are not inherently
[animate] in Icelandic (section 3.2). The following examples show that in
Spanish a dative clitic does not have to be animate either:

(147) a. Juan   le   puso   el mantel   a
           Juan   DAT.3rd.sg put.PAST.3rd.sg the tablecloth DAT
           la mesa.
           the table
           'Juan put the tablecloth on the table.'
      b. Juan   le   cambió   las ruedas al
           Juan   DAT.3rd.sg change.PAST.3rd.sg the wheels DAT.the
           coche.
           car
           'Juan changed the car's wheels.'

The examples in (147) indicate that the dative clitics are unspecified for animacy. As a matter of fact, this is going to be the point of departure of my analysis.

Ormazábal and Romero (2001) also argue that the PCC is an [animacy], and not a [person], issue – although they do not make the claim that datives are inherently [animate]. Their argument is as follows. In some Spanish dialects, the clitic *le* is used as a dative clitic and also as a masculine [animate] accusative. The distribution of third person clitics looks like this:

(148) Accusative feminine: la
       Accusative masculine [–animate]: lo
       Accusative masculine [+ animate]: le
       Dative: le

Further they show that accusative, masculine [+ animate] is incompatible with a dative clitic, while [–animate] is fine:

(149) a. Te   lo   di.
           DAT.2nd.sg ACC.3rd.sg gave.1st.sg
           'I gave it to you.'
      b. *Te   le   di.
           DAT.2nd.sg ACC.3rd.sg gave.1st.sg
           'I gave him to you.'

If Ormazábal and Romero (2001) are right, then the PCC should be formulated as:

(150) If DAT then ACC$_{[-animate]}$

Within my framework, whether the relevant feature is [person] or [animacy] makes no difference for the mechanics of the analysis: the fact that there is a restriction reveals the presence of a Complex Dependency. Respecting Ormazábal and Romero's evidence, I will assume that (150) is correct.

Assume there is a Complex Dependency that involves the dative clitic, the accusative clitic and the functional category to which the clitics are attached (maybe v, as Anagnostopoulou suggests). Take the dative and accusative clitics to have the following structures (abstracting away from gender):

(151)   a. $le_{[dative][\alpha F]}$

      b. $le_{[accusative][animate][\alpha F]}$

      c. $lo/la_{[accusative][\alpha F]}$

      d. $me_{[1st]}$

      e. $te_{[2nd]}$

The $[\alpha F]$ is whatever feature establishes an open dependency between the two clitics (or the agreement morphemes or the weak pronouns).[30] After the two clitics form an open dependency based on $[\alpha F]$, they are probed by v, which presumably has a valued [F]. Take v to have a $[\alpha animate]$ probe instead of $[\alpha person]$ (or, possibly, a feature more abstract than either [animate] or [person]). The rest of the analysis proceeds as articulated in sections 3.3, 3.4 and 3.5. $[\alpha animacy]$ of v probes first. Since the dative clitic has no [animacy] feature, the accusative clitic must also be without [animacy]: only *lo/la* are so constituted, since $le_{[accusative]}$, *me* and *te* are all necessarily animate.

However, there is a twist. Recall that the ultimate reason why person–number violations were ungrammatical was because Morphology could not find a suitable vocabulary item for the resulting feature combination. However, Spanish v has no [animate] morphology. This means that the impossibility of finding an appropriate lexical item for the features $[_{animacy}$ [default][animate]] cannot be taken literally: no lexical item explicitly encodes the feature [animate] in Spanish. I surmise that it is the

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[30] Anagnostopoulou (2003) argues that the PCC is dependent on movement. If so, [F] could be identified with the feature that triggers cliticization. This suggestion can be extended to agreement morphemes or to weak pronouns if we assume that they also involve some form of movement. I leave a development of this possibility for future research.

presence in Morphology of contradictory features that leads the system to a screeching halt. For my system to embrace the *me lui* data, the problem created by contradictory features in Morphology has to be looked at from a more abstract perspective.

3.8   Japanese nominative objects

3.8.1   The basic data

Japanese is a nominative-accusative/dative language:

(152)   John-ga   hon-o   yonda.
        John.NOM   book.ACC   read
        'John read a/the book.'

But if the verb can be classified as [stative], the IA exhibits nominative case morphology:[31]

(153)   John-ga   *eigo-o   /   eigo-ga wakaru.
        John.NOM English.ACC / .NOM   understands
        'John understands English.'

                                                            Takano (2003: 780)

Notice that, unlike Icelandic or Spanish, EA also shows up in nominative morphology rather than an oblique case (although oblique subjects also exist in Japanese, see Ura 2000, Yatsushiro 1999 and references therein for discussion).

Some [stative] verbs are affixes that become subject to incorporation by a lexical verb. In this case, IA can be accusative or nominative. Example (154) shows one of these verbs, *-e*, meaning 'be able'. Its complement, the verb *yom* 'read', is incorporated into it:

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[31] Yatsushiro (1999) considers the accusative morphology optional while Takano (2003) rules it out. I follow Takano's judgments under the somewhat optimistic assumption that data that appear in a refereed journal is trustworthy, or at least more so than an unpublished dissertation that has not undergone blind reviewing.

(154) Kai-ga   hon-o   / hon-ga   yom-e-ta.
      Kai.NOM book.ACC / .NOM   read.can.past
      'Kai was able to read a book.'

Yatsushiro (1999: 82)

(155) [$_{VP}$ –e [$_{VP}$ yom]] → [$_{VP}$ yom-e [$_{VP}$ t(yom)]]

The verb *yom* 'read' would normally always assign accusative Case. Only as the complement of the [stative] suffix is this accusative assigning feature withheld.

This section is organized in the following manner. First I present the general structure of my analysis – in essence, feature co-valuation between EA and IA. Then I present the competing approaches on the market: Koizumi (1995), Takano (2003), Tada (1992) and Yatsushiro (1999), as well as the brief remarks in Chomsky (1995). Koizumi argues (and Chomsky asserts) that the nominative IA is very high in the sentence while Takano, Tara and Yatsushiro argue that it stays within the vP. Both sides have empirical arguments – based on scope – to support their respective proposals. In the last section I show how Complex Dependencies can provide a simple account of all the phenomena.

3.8.2 Proposal

The structure of the [stative] predicates does not differ from what I have presented above for other languages: the experiencer θ-role (if there is one) is the external argument while the theme θ-role is the internal argument:

(156)

In standard minimalist theory, it is usually assumed that a v with an external argument always has a Case to assign. However, Belletti and Rizzi (1988) showed that at least a subclass of transitive psych verbs in some languages is unaccusative (i.e. Spanish, Icelandic, as discussed above). It seems that this class of transitive unaccusatives is somewhat broader in Japanese, to embrace all those that can be classified as having the feature [stative], as described in the references above. Since the IA of [stative] verbs is not assigned Case by v, it ends up establishing an Open Dependency with EA:

(157) Kai$_{[\alpha 1 C]}$ hon$_{[\alpha 1 C]}$

                Agree
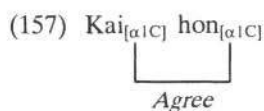
As for (154), the optionality of nominative or accusative Cases seems to suggest that the modal affix has the ability to select either a vP or a VP (see López 2001 for a discussion of causative affixes having a similar optionality). If the modal verb selects a vP, the lower light verb may assign accusative Case to IA:

(158)

```
                    vP
              _____|_____
             EA           v'
           Kai-ga      ___|___
                      vP      -e
                  ____|____   can
                 PRO      v'
                       ___|___
                      VP      v
                   ___|___
                  IA     yom
                hon-o    read
                  ↑_____|
                     [acc]
```
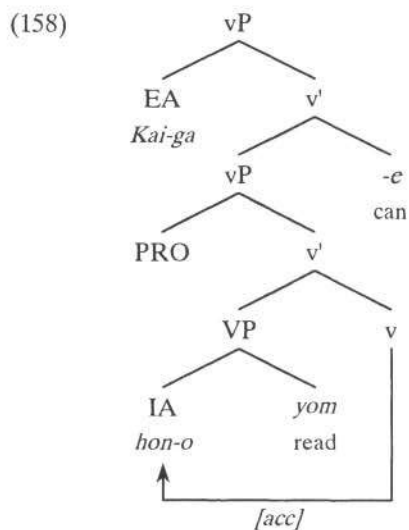
If *-e* selects a VP, then IA is not assigned Case and ends up having its Case co-valued with that of EA:

(159)
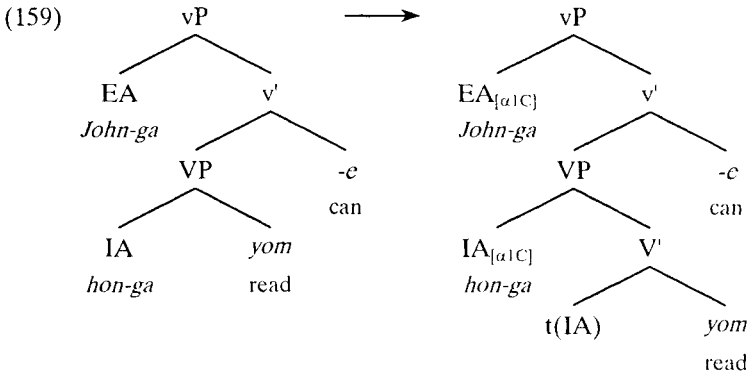
Eventually, EA receives Case from T/C, which is transmitted to IA by co-valuation. As far as I can tell, there is no evidence that Japanese is a DCL, in the sense that I use the term here, i.e. the position in Spec,T seems to be a privileged position for EA; IA can only reach it by means of scrambling. Therefore, in the following I assume that C assigns nominative in Japanese.

3.8.3 Competing analyses

There are, as far as I know, two types of analysis of nominative IA on the market: according to one class of analysis, IA stays somewhere in the middle field and is licensed by v/AgrO; according to the other, it is licensed in the finiteness area.

The different analyses are in (160). According to Tada (1992) and Yatsushiro (1999), IA gets nominative Case in a relatively low position. According to Tada, this low position is Spec,AgrOP, the latter being the Case assigner (160a). According to Yatsushiro, it is the [stative] verb itself that assigns nominative in a spec–head relationship (160b). Takano's (2003) analysis for our purposes is equivalent (different from the others mostly because he argues that IA is proleptic). Koizumi (1995) proposes instead that IA raises to Spec,T, where it gets nominative Case from T. In his theory, EA would be in Spec,AgrS while accusative IAs move to Spec,AgrO, located between the two VP shells (160c). Finally, Chomsky (1995) briefly suggests analyzing this phenomenon as T having multiple specs (160d):

(160) a. [$_{AgrSP}$ EA AgrS [$_{TP}$ T [$_{AgrOP}$ **IA** AgrO [$_{VP}$ t(EA) V t(IA)]]]]
       b. [$_{TP}$ EA [$_{vP}$ t(EA) v [$_{vP}$ **IA** v [$_{VP}$ V t(IA)]]]]
       c. [$_{AgrSP}$ EA AgrS [$_{TP}$ **IA** T [$_{VP}$ t(EA)V [$_{AgrOP}$ AgrO [$_{VP}$ V t(IA)]]]]]
       d. [$_{TP}$ **IA** [$_{T'}$ EA T [$_{vP}$ t(EA) v ...t(IA)]]]

The arguments that have been used to support one or the other analysis hinge on the scope properties of Japanese. Thus, a few words on the topic are in order. The crucial fact that all the analyses build on is that scope is rigid in Japanese (as first argued by Kuroda 1972 and confirmed many times afterwards):

(161) a. Dareka-ga   daremo-o   aisiteru.
           someone.NOM   everyone.ACC   loves
           someone >> everyone
          *everyone >> someone
       b. Daremo-ga   dareka-o   aisiteru.
           everyone.NOM someone.ACC   loves
           everyone >> someone
           someone >> everyone

<div align="right">Yatsushiro (1999: 18)</div>

(161a) shows that there is no covert QR in Japanese. As for (161b), some recent work has shown that the wide scope effect of indefinites does not necessarily depend on c-command relations (see Reinhart 1997, Kratzer 1998, among others).

In order to get scope ambiguity in a sentence like (161a), it is necessary to scramble the object:

(162) Daremo-o   dareka-ga   aisiteru.
       everyone.ACC   someone.NOM loves
       someone >> everyone
       everyone >> someone

<div align="right">Yatsushiro (1999: 22)</div>

Yatsushiro suggests a Horstein (1995) sort of approach: a constituent A can take scope over another constituent B if it c-commands B or its trace:

(163) daremoo >> darekaga >> t(daremoo)

When IA scrambles over EA, IA c-commands EA while EA c-commands

the trace of IA. Hence the scope ambiguity. However, it is unclear whether incorporating Hornstein's theory is productive in the present context. One could wonder why IA cannot do short scrambling to Spec,v, maintaining the EA–IA order but giving rise to an ambiguous sentence:

(164) $[_{TP}$ EA T $[_{vP}$ IA t(EA) v $[_{vP}$ IA V $]]]$

Since IA c-commands a trace of EA, the order EA–IA should be ambiguous, within Hornstein's assumptions. As a matter of fact, the principle of Economy would say that since adjunction to vP is all that is necessary to create an effect on output (scope ambiguity), adjunction to TP would be prohibited. It seems that scope in Japanese and the apparent absence of short scrambling favors the classic May (1985) approach rather than Hornstein's. In May's approach scope ambiguity is created by c-commanding the head of a chain, not just the tail. Only this assumption forces scrambling to Spec,T to obtain scope ambiguity. Keeping this in mind, I proceed to examine the analyses of nominative IA in Japanese.

Let's first examine the data that indicate that nominative IA is structurally higher than the accusative IA, indicating that it must have moved at least to Spec, *e*.

The first piece of data involves the operator *dake* 'only', a particle that attaches to nouns. Tada (1992) points out that when *dake* is suffixed to a nominative object it takes wide scope over the [stative] verb. However, when it is suffixed to an accusative IA, it can only take narrow scope:

(165) a. John-ga   migime-dake-ga   tumur-e-ru.
           John.NOM   right-eye.only.NOM   close.can.pres
           'John can close only the right eye.'
           (Meaning: he can close the right eye but can't close the left one)
           only >> can
           *can >> only
       b. John-ga   migime-dake-o   tumur-e-ru.
           John.NOM   right-eye.only.ACC   close.can.pres
           'John can close only the right eye.'
           (Meaning: he can wink with the right eye leaving the left one open)
           *only >> can
           can >> only

Assuming that scope depends on c-command and that scope in Japanese

is rigid the datum in (165) indicates that the nominative IA must have raised to a position where it can c-command the potential predicate *-e*. Tada thus argues that the nominative IA must have raised to Spec,AgrO. Or, in more neutral terms, NOMIA undergoes short scrambling while regular IA does not.

Further, Yatsushiro argues that the nominative IA can't have raised very high. Scope rigidity again becomes crucial: if IA raised to Spec,AgrO one would expect scope ambiguity between EA and IA, since IA would c-command a trace of EA. This ambiguity, however, does not happen: EA uniformly takes scope over IA:

(166) Dareka-ga   daremo-ga   nagur-e-ru.
       someone.NOM   everyone.NOM   hit.can.pres
       'Someone can hit everyone.'
       someone > > everyone
       *everyone > > someone

According to Yatsushiro, this suggests that the nominative IA never moved to or past Spec,v. However, this datum could be taken in the opposite direction to argue for May's theory of scope rather than Hornstein's: IA takes scope over the potential predicate but not over EA because it c-commands the former but not the head of the latter's chain.

(167)
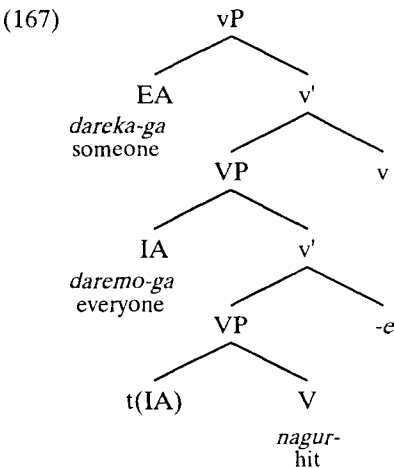
Be that as it may, Yatsushiro suggests the structure shown in (167), where

IA raises to Spec,*e* where it is assigned Case by *-e* in a Spec,Head configuration.

Notice that this structure is a little more complicated than what I suggested above, since it includes three verbal heads instead of just one. The interesting feature of this structure is that IA c-commands *-e* without c-commanding EA, as desired. However, it is unclear what role the higher light verb plays.

Yatsushiro uses VP fronting as further evidence that the nominative IA stays within the vP. When the Japanese verb has a focus particle affixed to it, the VP (or vP) can be fronted to a middle-field position or to the beginning of the clause. When that happens, the nominative IA is dragged along, while the EA is not:

(168) Eigo-ga   hanas-e-sae   Kai-ga sita.
       English.NOM   speak.can.even   Kai.NOM did
       'Kai managed even to be able to speak English.'

Yatsushiro (1999: 96)

(168) is represented in (169):

(169)
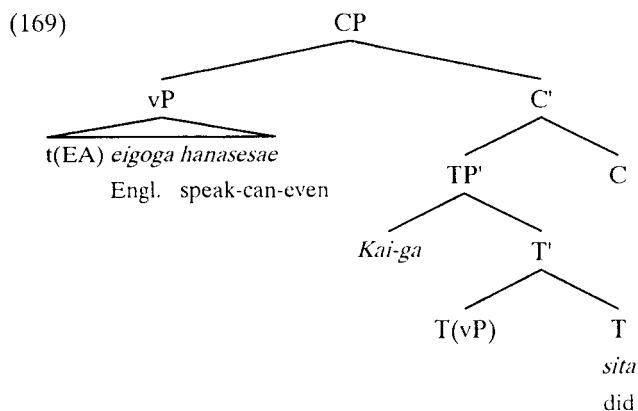
However, notice that (168) and (169) are only evidence that the complement of *sita* has moved – whether this complement is a vP or AgrOP or something else depends exclusively on one's assumptions. If *sita* is in AgrS and EA in Spec,AgrS, then the moved constituent could even be a TP.

Koizumi (1995) argues that the nominative IA must have raised higher, to Spec,T. Let's consider Koizumi's arguments, both of which also involve scope.

The first one involves the relative scope of *dake* 'only' and *tuzuke* 'continue', another verbal affix:

(170) Mary-wa   sugaku-dake-ga   wakari-tuzuke-ta.
       Mary.TOP   math.only.NOM   understand.continue.PAST
       'Mary continued to understand only math.'
       only > > continue

The reading in which *dake* takes scope over *tuzuke* is apparent in a situation in which Mary took and understood several subjects during her academic career, but only one of them, math, she understood throughout. (The opposite reading, continue>>only, would say that all the time she was in school there was only one subject that she understood, and that was math.)

Koizumi further shows that wide scope of *dake* is unavailable if the IA is in the accusative Case:

(171) Mary-wa   sugaku-dake-o   wakari-tuzuke-ta.
       Mary.TOP math.only.ACC understand.continue.past
       'Mary continued to understand only math.'
       *only > > continue

Within his theoretical assumptions these facts follow directly. He assumes the following structure (notice that for him AgrOP are located between the two VP shells), cf. (172).

The nominative IA, having raised to Spec,T, c-commands *tuzuke* 'continue', while the accusative IA does not.

According to Yatsushiro, Koizumi's approach, like Tada's, would predict that nominative IA should have scope over EA, since it can c-command a copy of it. This, as explained above, is the case only if one adopts Hornstein's approach to scope.

On the other hand, Koizumi's data are not easily accounted for within Yatsushiro's approach. The structure of (172) would be as in (173) for Yatsushiro:

(172)

```
                    AgrSP
                 ╱        ╲
              EA            TP
                         ╱      ╲
                    IA_nom        T'
                sugaku-dake-ga  ╱    ╲
                 math only    VP       T
                            ╱    ╲
                        t(IA)      V'
                                 ╱    ╲
                            AgrOP      -tuzuke
                           ╱     ╲     continue
                      IA_acc      AgrO'
                                 ╱    ╲
                              VP       AgrO
                            ╱    ╲
                        t(IA)     wakari
                                  understand
```

(173)

```
                 vP
              ╱      ╲
           EA          v'
                     ╱    ╲
                   v        VP
                          ╱    ╲
                        VP      -tuzuke
                      ╱    ╲     continue
                   IA        V'
              sugaku-dake-ga ╱   ╲
               math only  t(IA)   wakari
                                  understand
```
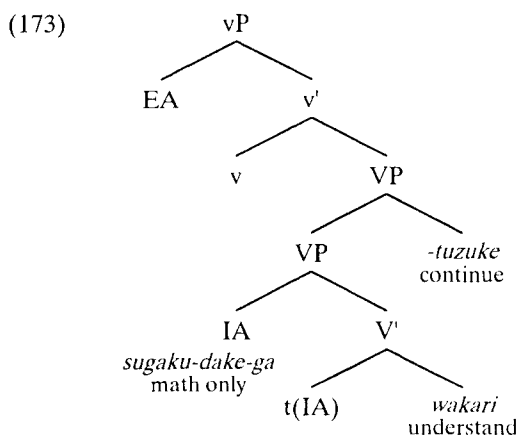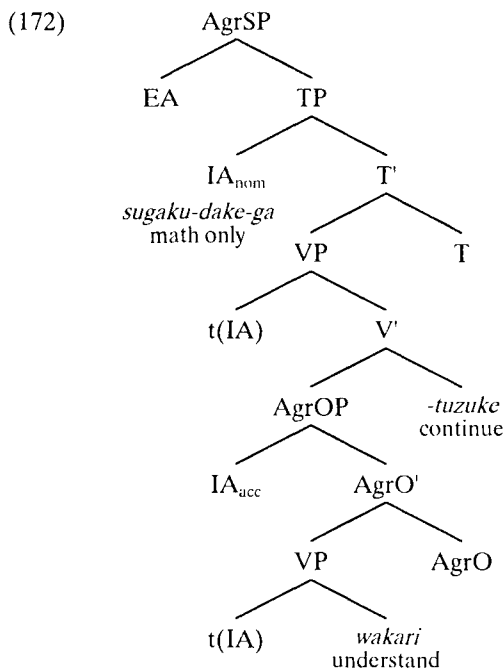
The IA would move to the Spec of the stative verb, *wakar*, where it gets Case in a spec,head relationship, as she assumes. In this position, IA does not c-command *tuzuke*. Yatsushiro's (1999: 104–105) solution is to posit a

sequence of operations: (i) raising of *wakari* into *tuzuke*, (ii) movement of IA to the spec position of the newly created head – where it does c-command *tuzuke*, as desired. Notice that operations (i) and (ii) act countercyclically: raising of IA to Spec, *wakari* must, for some reason, wait for head movement to take place.

A similar problem is raised by the interaction of *dake* with negation, exemplified in the following sentence:[32]

(174) Kai-ga   banana-dake-ga   tabe-hazime-rare-na-katta.
       Kai.NOM banana.only.NOM eat.start.can.neg.past
       'Kai couldn't start eating only bananas.'
       only >> neg
       *neg >> only

As Koizumi explains, we can assume a situation in which Kai has been subject to a liquid-only diet and now he can start eating solid food. However, bananas is the only thing he can't start eating yet. As before, this reading is not possible if IA is accusative. If IA is accusative, the sentence means that it is not the case that Kai could eat only bananas:

(175) Kai-ga   banana-dake-o   tabe-hazime-rare-na-katta.
       Kai.NOM banana.only.ACC eat.start.can.neg.past
       'Kai couldn't start eating only bananas.'
       *only >> neg
       neg >> only

Again, since negation *-na* is hierarchically higher than Spec, *rare*, where supposedly nominative Case is assigned, the scope fact seems mysterious.

The conclusion is that, from a purely empirical standpoint, Koizumi's approach is the winner. However, this empirical success is expensive: it implicates the usage of subject and object Agr phrases in a language that has no explicit agreement markers. It would be interesting to find out if it is possible to achieve a comparable empirical coverage with a modicum of phrase structure and using the concept of Complex Dependency, which has given us so many good results in earlier sections.

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[32] Note that *-rare* and *-e* are allomorphs.

3.8.4 An alternative solution

I propose that if we understand nominative IAs as forming a Complex Dependency with the EA and T, all the data brought out by Tada, Koizumi and Yatsushiro can find an explanation.

(176) $C_{[nom]}$ ... $EA_{[\alpha 1 C]}$ ... $IA_{[\alpha 1 C]}$

A gree

A gree
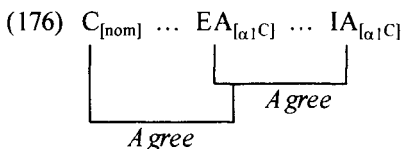
Recall that Chomsky (1995) shows that an IA that establishes a dependency with T can have, as it were, its c-command domain extended. I repeat the relevant examples here for the reader's convenience:

(177) There walked into the room three men without introducing themselves.
(178) *Il est entré trois hommes sans s'annoncer.
         it is come three men without SE introduce

In English, IA is able to control the PRO in the adjunct clause because it forms a dependency with T. In French, IA is not connected with T in any way.

I suggest the same line of argumentation applies here. Japanese nominative IAs form a dependency with (EA and) C, which extends the c-command domain of IA and allows it to c-command verbal operators that would normally be outside its domain. At the same time, IA never c-commands EA or a trace of EA. This explains why nominative IA never takes scope over EA.[33]

---

[33] Nishiyama (p.c.) points out that when the EA appears in dative Case rather than nominative the scope facts are like those of the NOM-NOM construction:
(i) John-ni   banana-dake-ga   tabe-rare-nai.
     John-DAT banana-only-NOM eat-can-neg
     only >> neg
     *neg >> only
If we regard the dative Case on the EA as a form of lexical case, then we can assume that this EA requires abstract Case from C which it transmits to the IA, just like the regular nominative EAs discussed in the main body and – crucially – just like the Icelandic quirky subject constructions. Nishiyama also points out that,

3.8.5   Multiple subject and raising to object

Japanese has the possibility of raising to object, even out of finite embedded clauses (Hiraiwa 2001, Bruening 2001). The finite embedded clause may be [stative]:

(179)   John-ga   Mary-ga/-wo   kodomo-da   to   omot-ta.
         John.NOM Mary.NOM/ACC child.CPL.PRES C$_{fin}$ think.PAST
         'John thought that Mary was a child.'

<div align="right">Hiraiwa (2001: 71)</div>

The accusative Case Morphology on *Marywo* must have come from raising to object. However, I can't from the data provided discern if *Maryga* is a case of double nominatives or a nominative case assigned by the subordinate C – which would therefore include this possibility optionally. I consider both possibilities in my analyses.

When the subordinate [stative] verb is transitive, we have three grammatical possibilities:[34]

(180)   John-ga   Mary-ga   eigo-ga   yoku dekiru
         John.NOM   Mary.NOM   English.NOM   well   do.can.PRES
         to   omoikondei-ta.
         C   believe.PAST
         'John believed Mary could speak English well.'

(181)#John-ga   Mary-wo   eigo-wo   yoku dekiru
         John.NOM   Mary.ACC   English.ACC   well   do.can.PRES
         to   omoikondei-ta.
         C   believe.PAST

(182)   John-ga   Mary-wo   eigo-ga   yoku dekiru
         John.NOM   Mary.ACC   English.NOM   well   do.can.PRES
         to   omoikondei-ta.
         C   believe.PAST

according to the reflexive and honorification tests, the dative EA exhibits subject properties.

[34] Nishiyama (p.c.) points out that for many Japanese speakers raising to object is possible only if the subordinate predicate is intransitive. Thus, those speakers find (180)–(183) all unacceptable.

(183) *John-ga   Mary-ga   eigo-wo   yoku dekiru
      John.NOM   Mary.NOM   English.ACC   well do.can.PRES
      to omoikondei-ta.
      C   believe.PAST

Hiraiwa (2001: 73–74)

In example (180) both subject and object are in nominative Case, in (181) both are accusative, while in (182) only the higher one is accusative. Only (183), in which the lower one is accusative, is ungrammatical.

In example (180), I assume that either the subordinate C is assigning Case here, so there is no raising to object, or we have multiple nominatives. I continue to assume that multiple nominatives are a consequence of a Complex Dependency linking two arguments and C. Hiraiwa accounts for multiple nominatives by allowing *Multiple Agree*: a probe endowed with the feature [+multiple] can agree with several goals simultaneously.

In (181), Hiraiwa claims that both subject and object undergo raising to object (the # sign indicates the mild ungrammaticality created by having two DPs with the accusative suffix in the same sentence, but this does not affect the discussion). Having both arguments raise is unusual; in English and Icelandic only the subject can raise. The important issue here is that the analysis of (181) must reflect that having double accusatives in a raising to object context correlates with the availability of multiple nominatives in an ordinary sentence. Hiraiwa could account for this easily by saying that the feature [nominative] of C is "switched off", so both arguments need to raise to the matrix clause, where v would be [+multiple]. In my terms, the two accusative arguments could be in a Complex Dependency with the matrix v.

As for (182), Hiraiwa claims that [+multiple] has switched off while C has assigned nominative.

Hiraiwa accounts for the contrast between (182) and (183) as an effect of the MLC: the matrix v probe, armed with [accusative] but without [+multiple], can reach only the first argument, but not the second. This makes (183) ungrammatical and (182) grammatical. However, Hiraiwa does not clarify how *eigoga* gets nominative Case in (182). Presumably, it is assigned by the subordinate T/C which, consequently, must bypass *Marywo*, in violation of the MLC. It does not seem possible that the MLC and Multiple Agree can account for the (182) and (183) contrast satisfactorily.

Given Bruening's (2001) analysis of raising to object out of finite clauses, an alternative analysis of (182) is immediately possible: the accusative argument is merged at the edge of CP and linked (i.e. coindexed) with a *pro* in the subordinate clause:

(184)   John-ga [$_{CP}$ Mary-wo$_i$ C [$_{TP}$ eigo-ga *pro$_i$* yoku dekiru] to] omoikondei-ta

Only (183) is left. Since the accusative argument is not at the edge of the clause, it must have been merged as a complement of *dekiru*. Accusative Case cannot be assigned downstairs because it is not available (as in (153) above). Additionally, it cannot get it from the matrix clause because it can't bypass the EA: instead, a Complex Dependency is forced with the subject, so both have to have the same case morphology.

To conclude, Hiraiwa's raising to object examples do not present a problem for my analysis. If anything, (180) and (181) would seem to reinforce it.

3.9   Conclusions

Given the stringent locality conditions on Agree and Move that I imposed on myself in previous chapters, the apparent long distance agreement effects created by indefinite SE constructions and Icelandic quirky subjects needed to be accounted for. The tool of Complex Dependencies, which I introduced in Chapter 2 to account for multiple agreement dependencies, turned out to be perfectly suitable for the matter at hand, since we only required the principles of Full Sharing and Minimal Compliance to explain the famous person–number restrictions. Moreover, I was able to argue that in Spanish psych verb constructions these restrictions are absent because there is no Complex Dependency linking T, the experiencer EA and the theme IA. Instead, the IA is probed locally by T. Chomsky's system falls short on this empirical database. In order to ensure agreement between T and IA across the quirky subject, he had to allow for a weakening of the PIC and never provided an account of person–number restrictions in Icelandic or their absence in Spanish.

Finally, Complex Dependencies were also able to explain why Japanese nominative objects have the apparent paradoxical properties

they have – able to c-command negation and the potential light verb but still unable to c-command the EA. The success obtained in throwing light on such an apparently complex area of the theory of grammar provides confidence that the approach taken in Chapter 2 is on the right track.

4

Complex Dependencies: the Quirkiest Subject

4.1   Introduction

This chapter is devoted to expletive and locative constructions. I provide detailed analyses of these constructions in English and explore the parameters that account for the cross-linguistic differences, taking into account data taken from French, German, Icelandic, Italian and Spanish. It is worth emphasizing that the latter goal has never been attempted, as far as I know. Extensive use will be made of concepts articulated in Chapters 2 and 3, especially Complex Dependencies, Local Agree and spec-to-spec Move, thus providing further empirical support for my framework.

I start with a regular introductory section. Section 4.3 discusses the initial merge position of the expletive. Sections 4.4 and 4.5 discuss the associate and argue that in some languages T, expletive and associate form a Complex Dependency. Section 4.6 begins the discussion of the English data. I argue that the person–number restriction that we find in expletive and locative constructions in English (*there am only me/there is only me) is the result of a Complex Dependency. In section 4.7 I take on the data that Chomsky (2000) has used to argue for a numeration and the Merge-over-Move principle and propose an alternative within my assumptions. In section 4.8 I discuss word order issues. Finally, in section

4.9 I switch gears and discuss Transitive Expletive Constructions in Icelandic.

4.2 Analyses of expletives: from Safir (1982) to Chomsky (2000, 2001a)

Consider a sentence like (1), and the structure in (2):

(1)   There is a man in the closet.

(2)

```
                    TP
              ┌──────────┐
           there         T'
                    ┌─────────┐
                    is        VP
                         ┌─────────┐
                       t(is)       SC
                              ┌──────────┐
                           a man    in the closet
```
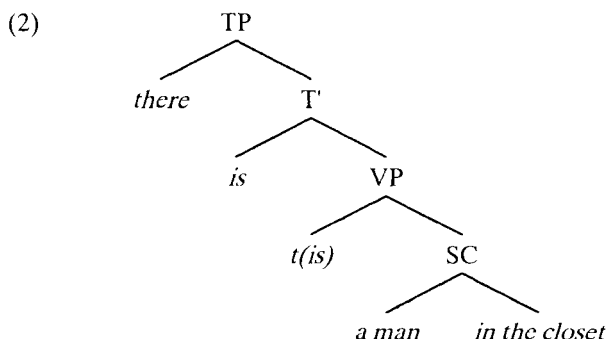
Safir (1982) raised the following question: Chomsky (1981) argues that agreement and Case assignment take place in a government configuration. However, in (1), agreement of T and the IA 'a man' must take place "long distance". Safir's idea is that this agreement must use the expletive as an intermediary. A mechanism of coindexation linked the expletive with the IA – called the associate – and by virtue of this co-indexation T and 'a man' could find themselves in a dependency. Coindexation reflected the idea that the expletive does not refer independently and so, it can be said to form a chain (or CHAIN) with the associate.

The analysis is intuitively appealing, except for the coindexation mechanism – as Chomsky would argue years later, coindexation can be used to express relationships, it cannot be taken to be an operation that *creates* relationships. Thus, Chomsky (1986) proposed "expletive replacement", at LF, on the grounds that the expletive had to be deleted from the structure before LF, or it would violate Full Interpretation.

Later, adjunction of associate and expletive was proposed and, already within minimalism, raising and adjunction of formal features (Chomsky 1995). Each of these solutions had its own set of advantages and problems that would now take us too far afield to consider (see the influential proposals in Chomsky 1995 and Lasnik 1992, 1995, among many others). I only note that something they all have in common is that expletive and associate are in some sort of relationship. Let me now fast-forward to Chomsky (2000).
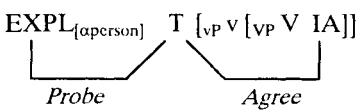
In Chomsky (2000), the analysis of expletive constructions takes a new turn. Take the sentence in (1) to be constructed from the following numeration, which includes both the expletive and the NP 'a man':

(3)   Num={there, T, be, a, man. in, the, closet}

Consider now the step in the numeration in which T has just been merged and 'there' is still part of the numeration:

(4)   T be a man in the closet
       Num={there}

T has an EPP feature and needs a nominal in its spec. Both 'there' and 'a man' can satisfy the EPP. Since Merge is simpler than Move and the numeration needs to be exhausted, 'there' is merged in Spec,T rather than have the DP raise. 'There' only has the feature [αperson], and this feature probes T, also with a [αperson], and deletes (in spite of lack of valuation). The [αperson] of the expletive is enough to satisfy the EPP feature of T, but leaves the φ-features of T intact because the expletive is φ-incomplete (Chomsky does not consider the possibility that T could agree in [person] with the expletive and [number] with the associate, see Chomsky 2001a: 16). Thus, T can probe and agree with the IA. The φ-features of T are valued and deleted and the case of the IA is valued as nominative and deleted:

(5) $\text{EXPL}_{[\alpha\text{person}]}$ T $[_{vP}\ v\ [_{VP}\ V\ \text{IA}]]$

       Probe   *Agree*   (Chomsky 2000, 2001a)

Notice that, as a result of this change in perspective, the expletive and the DP do not enter any sort of relation – there is no expletive–associate

relation, contrary to what had been commonly assumed up to this point. This entails that the ungrammaticality of (6a) can only be due to lack of satisfaction of T's features:

(6)   a.   *There seems that a monk is in the cloister.
       b.   There seems to be a monk in the cloister.

However, I showed in Chapter 2 how the unvalued features of a probe do not necessarily bring about a crash, since they can always resort to the default strategy. An example is shown in (7a). (7b) instantiates the [default] setting for v in English. (7c) shows that there is an [accusative] in the structure headed by [$_v$ v+eat]. (7b) shows that nothing happens if this [accusative] is not assigned, which suggests that the same solution at work in (7a) is also at work in (7b):

(7)   a.   Þeim   er   kalt.   *Icelandic*
             They.DAT   is   cold
             'They are cold.'

                                                             Sigurðsson (1989: 204ff)

       b.   John ate here yesterday.
       c.   John ate salmon here yesterday.

Thus, the ungrammaticality of (6) is left unexplained within Chomsky's system.

The change in the feature structure of the expletive with respect to previous analyses is noteworthy. Until Chomsky (1995), the expletive is of category D and this feature is the one that satisfies the EPP. Chomsky (2000, 2001a), intent on eliminating categorial features, claims the expletive is not a D – but instead, he creates a somewhat disembodied [αperson] feature which is deleted by probing T although it is never valued. In my analyses, I stick to the idea that expletives (in English and other, but not necessarily all, languages) are determiners (of category D or K).[1]

All these analyses predict that the associate agrees with T and shows up in nominative Case. This is true in many languages (or rather, constructions within languages):

---

[1] Chomsky (2001b) assumes that D is always referential, so expletives can never be D.

(8) Ci   sono soltanto io.   *Italian*
     there am   only   I
     'There is only me.'

(9) Se dan   muchas cerezas por aquí.   *Spanish*
     SE give.3rdpl many   cherries by   here
     'There are many cherries round here.'

The Italian *ci* and the Spanish *se da* existentials both have an IA in
nominative Case agreeing with T. But there is an interesting difference
between them. As can be seen from the example, the Italian existential *ci*
construction can show up in any person. However, the Spanish existential
with *se* can only appear in the third person, another instance of the person
restriction that we saw in Chapter 3.

   In another class of languages (or constructions within languages) IA
appears in a nonnominative Case (which I refer to as [partitive], following
Belletti's 1988's suggestions) and does not agree with T. The latter
appears in an invariable third person singular. Apparently, this set of
languages is quite numerous (Lambrecht and Polinsky 1997). The
following is an example. Notice how altering the [number] feature of IA
does not lead to altering the singular morphology of T:

(10) a. Es gibt   einen   Mann hier.   *German*
        It give.3rd.sg one.ACC man   here
        'There is a man here.'

     b. Es gibt   drei Männer hier.   *German*
        It give.3rd.sg three men   here
        'There are three men here.'

I assume that in these languages v(Ø) can assign Case (Belletti 1988,
Lasnik 1992) and therefore there is a parametric choice: v(Ø) with an
expletive in its spec assigns Case in some languages but not others.

   English, of course, is peculiar, because the associate shows up in non-
nominative – [partitive] – Case but agreement with T is possible, with
some interesting gaps in the paradigm (briefly mentioned in Chomsky
2000 fn90: 149):

(11) [Context: I am in a big party surrounded by people. I get distracted looking at a painting on the wall and then I look around and, to my surprise, I find that...]

    a. There is only me/you/her/him/us/you guys/them.

    b. *There am only me.

    c. *There are only you, Chris.

    d. There are only us.

    e. There are only you guys.

    f. There are only them.

(11) shows that there is a person restriction in the singular paradigm, but not in the plural. Moreover, resort to a [default] form is always acceptable, unlike what we saw in the person–number restrictions of Chapter 2.

The question is whether a probe in T should reach IA or not, as Chomsky (2000) proposes:

(12)
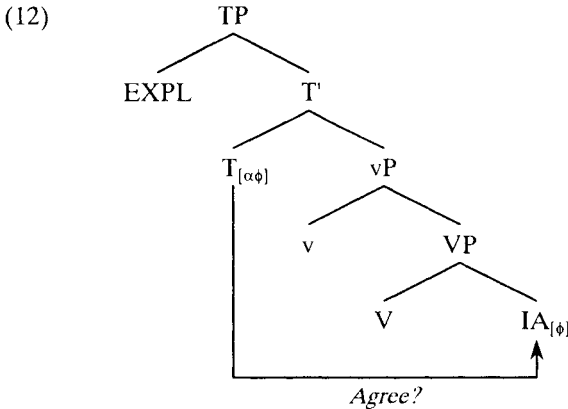
Agree?

If IA does not enter a dependency with v, IA can agree with and have its Case valued by T/C, as in Spanish and Italian. If IA enters an Agree dependency with v, the Case of IA is valued and it deletes at once becoming unavailable for T, as in the German example. With this reasoning, we rule out English, since in this language T agrees with IA although Case comes from v. Alternatively, we could assume that the ϕ-features of IA remain accessible a little longer after agreeing with v, maybe until the phase is completed. This approach rules English in, but

rules out German. There does not seem to be a way out of this puzzle without a substantial change in our assumptions.

In the next sections I argue for the following:

(i)   the German example is the result of IA establishing a dependency with v. There is no dependency linking the expletive and the associate or T.

(ii)   the Italian example is the result of T and IA establishing a simple dependency, while the Spanish *se da* forms a Complex Dependency involving T, SE and IA.

(iii)   in English, v assigns Case to IA, but expletive and associate form a dependency based on Select and this allows for a Complex Dependency to be established between T, expletive and IA.

Before I continue, I should clarify that in these sections I treat existential sentences and presentational sentences with an expletive as being in the same class. Although there are some differences between them, I believe that with regards to their agreement, Case and A-movement properties, they are essentially the same.

4.3   Expletive and associate

In this section I discuss where expletive is merged, where the IA surfaces and its Case assignment in English, and what the expletive–associate relation, when it does exist, amounts to.

I start with IA. Recall that in Chapter 2 I argued that Agree is a strictly local relation that reaches only as far as the spec of the complement of the probe. This strict locality was confirmed empirically by the well-known obligatory adjacency between verb and IA.

In expletive constructions we find the same word order evidence that IA is not in situ. Lasnik (1995) shows that IA must be adjacent to the verb 'be' or the unaccusative in English:

(13)   a. *There will be usually a man in this store / There will be a man usually in this store.
        b. *There will arrive usually a man in this store / There will arrive a man usually in this store.

I take the fact that an adverb can't stand between the IA and the verb is a sign that IA must have raised to Spec,V in (13b). Following Lasnik (1995) and Maling and Sprouse (1995), I further assume that the copula in English assigns Case to its complement.

Moreover, the word order datum can help us discard a tempting alternative concerning the Case of IA. As was discussed in Chapter 2, nominals can always receive a form of default Case, provided that they are not selected. So, one could think of extending this approach to this context and simply say that the nonnominative form of the IA here is another instance of default. But, if the NP gets default case, why should it move to be adjacent to the verb? Or, in other words, why does the IA in expletive constructions exactly mimic the structural constraint that an ordinary IA in a transitive frame has to fulfill? Moreover, there is no doubt that IA is selected. For instance, it is an argument of the locative phrase:

(14)   There is a man in the closet.
         in (a man, the closet)

So, I conclude that IA requires structural Case.[2]

I turn now to discussing where the expletive is merged. If the expletive merges with Spec,T, as almost universally assumed (but see Groat 1999 and references therein for exceptions), one would expect to find expletive constructions with transitive and unergative predicates; however, in many languages including English and French, expletive constructions are limited to the copula, unaccusative and passive verbs or, in other words, to predicates without an external argument:

---

[2] Schütze (1997: 56–57) doubts this conclusion on two grounds. The first is that the complement of the copula gets nominative in many other languages. The second is that one can optionally (prescriptively) have a nominative in that position, while the complements of ordinary verbs are never nominative:

    (i) It is me/I.   (but notice: there is only me/*I)

    (ii) I love her/*she.

The fact that the IA exhibits nominative morphology in some languages and nonnominative in others is discussed at length in this chapter. As for the prescriptive usage of 'I', it may have more of a sociological explanation than an I-linguistic one: prescriptive grammarians sought to force the grammar of English into a Latin mold. The 'it is I' syndrome is explained because in Latin the complement of the copula is nominative, unlike the complement of an ordinary verb. See Sobin (1997). Notice: *there is only I.

(15) a. There arrived three men.
      b. *There worked three men.

(16) a. Il est arrivé trois hommes.
          it is arrived three men
      b. *Il est/a travaillé trois hommes.
          it is/has worked three men

In some languages expletives are grammatical with transitive verbs (Icelandic, German, and Dutch are well-known examples). I discuss Icelandic Transitive Expletive Constructions (TECs) in section 4.9, where I present an analysis of the parameter that differentiates languages with TECs from languages without.

Thus, I claim that English 'there', and French *il* merge in Spec,v as an external argument, which explains why only unaccusatives and passives accept expletives in these languages. The basic derivation for a vP with an expletive in these languages and its resulting structure are represented in (17) and (18) (compare with the derivations presented in Chapter 2, section 2.4.7) (notice there is a question mark in the Case feature of v because of parametric variation here):

(17) 1. Merge $(V, IA_{\{[\alpha C][\phi]\}}) = \{V, IA_{\{[\alpha C][\phi]\}}\}$
      2. Copy $IA_{\{[\alpha C][\phi]\}}$
      3. Merge $(IA_{\{[\alpha C][\phi]\}}, \{V, t(IA)\}) = \{IA_{\{[\alpha C][\phi]\}}, \{V, t(IA)\}\}$
      4. Merge $(v_{\{[part?][\alpha\phi]\}}, \{IA_{\{[\alpha C][\phi]\}}, \{V, t(IA)\}\}) =$
          $= \{v_{\{[part?][\alpha\phi]\}}, \{IA_{\{[\alpha C][\phi]\}}, \{V, t(IA)\}\}\}$
      5. Merge $(EXPL_{[\alpha C]}, \{v_{\{[part?][\phi]\}}, \{IA_{\{[\alpha C][\phi]\}}, \{V, t(IA)\}\}\}) =$
          $= \{EXPL_{[\alpha C]}, \{v_{\{[part?][\phi]\}}, \{IA_{\{[\alpha C][\phi]\}}, \{V, t(IA)\}\}\}\}$

(18) C/T $[_{vP}$ EXPL v $[_{VP}$ IA V t(IA)$]]$

Notice that in the configuration shown in (18), expletive and associate can enter an Agree relation without violating my locality condition on Agree.

Merging the expletive with vP seems preferable conceptually to doing so with TP. We know that v(EA) selects for an external argument. We can simply assume that v always selects for a D (Chapter 2, section 2.2.1); the only difference between v(EA) and v(Ø) is that the latter has had its θ-assigning property "bleached", but otherwise they have identical syntactic properties. In other words, the D selecting feature of v does not need to

be fully stipulated because it can be approached as a residue of semantic selection. Notice that we do not need an EPP feature on T to force movement of a DP to Spec,T because the need of DPs to value their Case is sufficient to trigger raising.

(19)

```
            beP
           /    \
         be      SC
                /   \
              NP      Expl
```

An alternative analysis propounded by Hoekstra and Mulder (1990) and Moro (1997) takes the expletive to be a predicate complement of the copula, as shown in (19).

This analysis forces some contortions to explain why the expletive cannot show up in postverbal position while the NP raises to Spec,T. Moreover, the parallelisms with locative arguments and quirky subjects – in particular, in terms of the person restriction – are captured if we provide a unified analysis for all three, a solution that, as far as I can tell, (19) does not make viable. For this reason, I do not adopt it. Moreover, it seems to me that most of its main insights are captured with the Spec,v hypothesis.[3]

The assumption that the expletive is merged in Spec,v provides us with an additional insight. One peculiar property of $v(\emptyset)$ that our discussion has brought forward is the fact that in some languages $v(\emptyset)$ in expletive constructions assigns Case, while in others it does not. If the expletive is merged in Spec,T, defining a parameter that accounts for this split becomes extremely difficult: why should the presence of a feature in T make a difference in the feature composition of v? But if the expletive is

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[3] See in particular Moro (1997: 103–130). He argues that the expletive is a predicate that takes the associate as a complement. I agree that the expletive selects the associate (see Chapter 2, section 2.2 and below Chapter 4, section 4.6). He also argues that the associate does not raise to Spec,T, since extraction out of the associate does not give rise to subject island effects:

(i) Di quale libro crei   que ci fossero [molte copie t] nello studio?
     of which book believe.3rd.sg that there were many copies in.the studio
     'Which book do you think there were many copies of in the studio?'

Moro (1997: 103)

Again, I agree that there is no "expletive replacement", as I show below.

merged in Spec,v, the parameter can be formulated straightforwardly:

(20) a. v assigns Case if it is merged with an argument in its spec.
      b. v assigns Case if it is merged with a D in its spec.

(Recall the distinction from Chapter 2, section 2.2 between $v^{EPP}(\emptyset)$ and $v(\emptyset)$, the first one selecting an expletive in its spec, the second one not.)

In languages of the (20a) type, the only source of Case for the IA in expletive constructions is T/C. In languages of the (20b) type, v is a Case assigner, even if there is no external argument, as long as an expletive is merged in Spec,v.

Assume that $v(\emptyset)$ has [partitive] Case to assign, as in (20b). Since the valued Case of the IA deletes at once, there will be no Agree dependency between expletive and IA (thus, no "associate"). Consequently, T will be able to probe the features of the expletive only. T will never value its ϕ-features against IA. This is discussed in section 4.4.

If $v(\emptyset)$ cannot assign Case, as in (20a), expletive and associate will form an [αC] dependency based on Agree. C/T probes this dependency and nominative Case can be assigned to expletive and associate. Moreover, the ϕ-features of T will be able to probe the (expl,associate) dependency and value its features. This is discussed in section 4.5.

This still leaves English out: in section 4.6 I argue that in English there is a dependency between expletive and associate based on Select rather than Agree, which allows for [partitive] Case on IA and agreement with T.

4.4   Nonnominative associates

In German *es gibt* existentials the associate is an IA in accusative Case and T adopts default third person morphology. The resulting structure is that of a transitive verb with an expletive instead of an external argument.:

(21) a. Es   gibt   einen   Mann hier.
          It   give.3ʳᵈ.sg one.ACC man   here
          'There is a man here.'

      b. Es   gibt   drei   Männer hier.
          It   give.3ʳᵈ.sg three   men   here
          'There are three men here.'

The first question is why T cannot reach IA. Within my assumptions, the answer is easy: after Case assignment, IA has no unvalued features, hence no reason to move. Thus, IA is too far for T to reach it, given local Agree. If we assumed long distance Agree, "freezing" effects must be stipulated, so once the IA has been assigned Case it cannot be accessible to higher probes, even if the φ-features have not deleted.

The second question is: can T reach IA indirectly through *es* forming a Complex Dependency?

The latter question is relevant only if we assume that *es* is merged in Spec,v. This is clearly not always the case: *es* can act as an expletive in transitive constructions, so at least sometimes it is merged in a high position. However, in the *es gibt* construction, no external argument is present. So it is reasonable to assume that *es* in *es gibt* constructions is merged in Spec,v (Czinglar 2002).

So, we return to the question: can *es* establish a dependency with IA? *es* has no [person] or [number], so only [αC] could turn *es* into a probe. But, since IA has no Case available (recall that in Chapter 2, section 2.6 I argued that deletion of [−Interpretable] features should take place right after valuation has taken place), no dependency is established between expletive and OB. When T probes, it finds the expletive only and must value its features as default.

Let's now consider the details of execution. Consider the following structure:

(22)   C[2 T[*es* v(∅)+*gibt* [1 t(V) IA]]]

IA raises to 1, where it gets accusative Case from v(∅). All uninterpretable features are deleted, as shown in (23.1). The expletive is merged with vP with no φ-features and [αC]. [αC] should force the expletive to probe. However, there is nothing to probe, because the Case features of v and IA have already deleted. Consequently, there is no feature co-valuation between expletive and associate.

After T is merged, it can probe the expletive. Since the expletive has no φ-features, T values its own φ-features as [default], as in (23.2). T cannot agree with IA. IA is too far for a direct Agree (T,IA) dependency to be built. Moreover, expletive and IA have not established a dependency that T could use as a platform to access the features of IA.

Does T assign nominative in German or does C? All the literature on German clause structure that I am aware of assumes that Spec,T is a

position privileged for subjects. When an object raises, it is because of scrambling or movement to Spec,C. Spec,T in German does not exhibit the same sort of freedom that Spec,T in Finnish has (recall Chapter 2, section 2.3). I conclude that C assigns [nominative] in German.

Let's proceed with the derivation. The expletive is still in Spec,v and has an unvalued Case feature. Consequently, it raises to Spec,T. Then C is merged. Finally, the expletive is assigned nominative Case by C and values the ϕ-features of C (23.3). The valued uninterpretable features of C, T and *es* can now be deleted:

(23)   1. Agree($v_{[part][\alpha\phi]}$, $NP_{[\phi][\alpha C]}$)   → $v_{[\text{part}][\phi]} \ldots NP_{[\text{part}][\phi]}$

2. Agree($T_{[\alpha\phi]}$, $es_{[\alpha C]}$)   → $T_{[\text{def}]} \ldots es_{[\alpha C]}$

3. Agree($C_{[nom][\alpha\phi]}$, $es_{[\alpha C]}$)   → $C_{[\text{nom}][\text{def}]} \ldots es_{[\text{nom}]} \ldots T_{[\text{def}]}$

In French, Tense does not agree with the associate of the expletive either. (24a) shows an existential with *avoir*, (24b) is an unaccusative:

(24)   a.   Il   y   a   trois   hommes   sur la   table.
               it   expl   have.3$^{\text{rd}}$.sg   three   men   on the table
               'There are three men on the table.'

       b.   Il   est arrivé   trois   femmes.
               it   is   arrived   three   women
               'There arrived three women.'

It is hard to tell whether the associate is nominative or accusative, since it has no case morphology. When the context is created that makes a presentational pronoun sound plausible, we obtain the sequence of strong pronouns:

(25)   [Context: I am at the party surrounded – I believe – by lots of people. I get distracted watching a picture on the wall. Then I turn around and, to my surprise:]
          Il   y   a   que   moi/toi/lui.
          it   there   has   that   me/you/him.
          'There is only me/you/him.'

Strong pronouns appear in all nonnominative positions, the nominative series being *je/tu/il/elle*. However, it is hard to tell if the reason why they show up in this position is because they are accusative or because the

nominative series are clitics and need to be attached to the verb.[4] Nevertheless, I believe it plausible to assume that French expletive constructions work like the German *gibt* case, with a v(Ø) that assigns Case and an expletive that has no φ-features and consequently triggers [default] in T. The analysis is exactly the same as in (23).

4.5   Nominative associates

Assume v(Ø) does not assign Case while selecting an expletive in its spec. My approach makes a very precise prediction. The expletive will probe IA and as a result there is going to be a Complex Dependency linking T, expletive and associate (i.e. in a manner strictly identical to what we saw in Chapter 3). Within this dependency, Full Sharing will force all three to share their person features. Since the expletive has no [person], the associate must also have no [person] and T has to adopt the [default] form. As for [number], Minimal Compliance allows T and associate to establish a number dependency disregarding the expletive (again as in Chapter 3).

The Spanish existential construction *se da* (it gives) exemplifies precisely this scenario. It looks like the exact counterpart of German *es gibt* except that the associate is nominative and agrees with T in number. Crucially, this construction only appears in the third person:[5]

---

[4] Kayne (1975) suggests that in a sentence like (i) *moi* is the real subject while *je* is a clitic:

(i) Moi je ne peux pas.
     me I.NOM not can.1st.sg not
     'I can't.'

However, Kayne (1982) argues that subject clitics in French are phonological clitics and *je/tu/il* are therefore true syntactic subjects. If that is the case, the series moi/toi/lui can be considered nonnominative.

[5] As pointed out by Czinglar (2001) the interpretive possibilities of German *es gibt* and Italian/Spanish *se da* are not identical. The latter is a pure existential while the former can also be presentational. I do not have an account for this difference at this time.

(26) a. Se da   un tipo especial de persona en esta región.
          SE give.3rd.sg a   type special of person   in this area
          'A special type of people can be found in this area.'
      b. Se dan   buenas personas en esta región.
          SE give.3rd.pl good   persons   in this area
          'Good people can be found in this area.'
      c. *Se damos   buenas personas en esta región.
          SE give.1st.pl good   persons   in this area
      d. *Se dais   buenas personas en esta región.
          SE give.2nd.pl good   persons   in this area

As mentioned in Chapter 3, an ordinary plural DP is compatible with first
or second person agreement):

(27) a. Las buenas personas damos   limosna a los pobres.
          the good   persons give.1st.pl alms   to the poor
          'We the good people give alms to the poor.'
      b. Las buenas personas dais   limosna a los pobres.
          the good   persons give.2nd.pl alms   to the poor
          'You the good people give alms to the poor.'

(27) shows that the person–number restriction of *se da* must be triggered
by SE.

   We saw in Chapter 3, section 3.3 how indefinite SE can take up the
Spec,v position and establish a dependency with IA. It is not surprising
that these features of SE are exploited to create an existential
construction. Just as in Chapter 3, SE probes and co-values its unvalued
Case feature with IA:

(28) $[_{vP}$ SE$_{[\alpha 1C]}$ v($\emptyset$) $[_{VP}$ IA$_{[\alpha 1C]}$ V t(IA) $]]$

          └───────────────┘
                   Agree

(29) T$_{[\alpha\phi][nom]}$ SE$_{[\alpha 1C]}$ OB$_{[\alpha 1C][\phi]}$

          └──────────────────────────┘
                         Agree
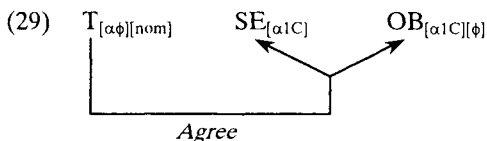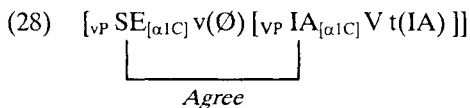
The (SE,OB) dependency can now be probed by T, as shown in (29).

For the Agree dependency to take place, SE and IA must both have the same [person] feature. Since SE necessarily has no [person] IA must also have no [person]. [αperson] of T can probe the (SE,OB) dependency without finding contradictory features. However, [number] can agree with IA only because of Minimal Compliance (see Chapter 3 for detailed implementation).

Let's turn to German briefly. As I argued, the German *es gibt* construction does not involve a Complex Dependency. Consequently, it should not exhibit any person–number constraint. This prediction is confirmed (Katrin Axel, Remus Gergel p.c.):

(30)   Es gibt leider   nur noch mich/dich/uns/euch.
       it   gives unfortunately only still me/you/us/you guys
       'There is unfortunately only me/you/us/you guys.'

An apparent counterexample to my prediction would seem to be posed by Italian *ci*:

(31)   a.   Ci   sono   soltanto   io.
            there   am   only   I
       b.   Ci   sei   soltanto   tu.
            there   are   only   you
       c.   C'   é   soltanto   lui.
            there   is   only   he
       d.   Ci   siamo   soltanto   noi.
            there   are.1st.pl only   we
       e.   Ci   siete   soltanto   voi.
            there   are.2nd.pl only   you
       f.   Ci   sono   soltanto zi/loro.
            there   are.3rd.pl only   they

The pronoun in object position is nominative and there is full agreement between it and T in all persons and numbers. In the following, I argue that IA establishes a dependency with T directly, without the participation of *ci*.

ci is a clitic of locative origin, like English 'there' and French *y* (or

Dutch *er* or German *da*). But despite their parallel sources, French *y* and English 'there' seem to be different syntactic objects. 'there' is a real D functioning like a subject according to all sorts of tests (i.e. inversion in questions, raising, etc.). Moreover, 'there' has distanced itself even further from its former use as a locative by appearing in presentational constructions with unaccusative verbs (there arrived three men).

French *y* on the other hand has not gone all the way down to becoming a determiner:

(32) a. Il y   a   trois livres.
          it there have.3rd.sg three books
          'There are three books.'
      b. Il semble y   avoir   trois livres.
          it seems   there have.inf three books
          'There seem to be three books.'

In (32), we can see that it is the expletive determiner *il* that fulfills subject functions, is probed by T, and raises to subject. Tellingly, *y* cannot occur in constructions with unaccusatives:

(33) a. Il est arrivé trois hommes.
          it is   arrived three men
          'There have arrived three men.'
      b. *Il y   est arrivé trois hommes.
          it there is   arrived three men

The question is whether Italian *ci* is like French *y* or like English *there*. It seems that it is more like the former, since it cannot show up in presentational sentences (Moro 1997: 111):

(34) *Ci   arrivarono   molte copie del   libro.
        there arrived.3rd.pl many copies of.the book

Additionally, *ci* does not raise:

(35) a. Pareva esserci del   pane sul   tavolo.
          seems be.there of.the bread on.the table
          'There seems to be bread on the table.'

b. *Ci   pareva essere   del   pane sul   tavolo.
   there seems be.there of.the bread on.the table

<div style="text-align: right;">Burzio (1986: 130)</div>

I take these facts as suggesting that *ci* should be classified with French *y* rather than English *there*. That is, I take *ci* not to be a determiner (or even a K, see Chapter 3 and below), therefore unable to participate in A-dependencies. Agreement between T and IA will have to take place as in a simple dependency: IA will have to raise, overtly or covertly, to a position close enough to T to be probed. As a matter of fact, IA can raise overtly to Spec,T:

(36)   Gianni dice che una foto   del   muro c'   é.
        Gianni says that a   picture of.the wall   there is
        'Gianni says that there is a picture of the wall.'

<div style="text-align: right;">Moro (1997: 152)</div>

Another interesting datum in this context is the absence of definiteness effects in Italian existentials:

(37)   C'   é Gianni in questo giardino.
        there is Gianni in this   garden

<div style="text-align: right;">Moro (1997: 131)</div>

German *es gibt*, Spanish *se da*, French and English expletives all have some sort of definiteness effects. What makes Italian *ci* constructions different from the others? Notice that in all of them, except Italian, IA stays within VP. In English, French and German, IA values its Case with v. In Spanish, it co-values its $[\alpha C]$ with an expletive, so it also stays in VP. In contradistinction, the Italian IA of existential constructions necessarily leaves the VP. I capitalize on this difference to account for the presence/absence of definiteness effects by invoking Diesing's (1992) Mapping Hypothesis. Recall that Diesing argues that the VP is the domain of existential closure while presupposed constituents have to be in the middle or higher field by LF. In the German, French, Spanish and English examples, the IA stays within the VP and therefore must be existentially bound. In Italian, *ci* does not stand in the way of IA raising (but see Moro 1997 for a more elaborate proposal largely compatible with

my approach).[6]

Let me summarize sections 4.4 and 4.5. We have found existential/presentational constructions that involve a Complex Dependency and a person restriction (Spanish *se da*); we have also found others that involve Case assignment by v (German *es gibt*, French *il*); finally, we have also seen the IA agree with T without forming a Complex Dependency with the expletive (Italian *ci*). Notice that we have found the same range of possibilities that we saw in Chapter 3 with respect to quirky subjects. Hence my suggestion that quirky and expletive subjects be classified together.

4.6   English

4.6.1   A different person restriction

A-dependencies in locative and expletive constructions in English are intriguing for two reasons: (i) although the IA gets [partitive] Case assigned by $v^{EPP}(\emptyset)$, the IA still agrees with T, a fact not predicted by any analysis of expletives that I am aware of; (ii) agreement between T and IA is subject to a person restriction.

Moreover, the person restriction that we see in expletive/locative constructions is different from the ones we saw in Chapter 3 or above with Spanish *se da*. Consider the following example:

(38)   [Context: I am in a big party surrounded by people. I get distracted looking at a painting on the wall and then I look around and, to my surprise, I find that...]
a.   There is only me/you/her/him/us/you guys/them.
b.   *There am only me.
c.   *There are only you, Chris.
d.   There are only us.

---

[6] However, the IA of transitive sentences also gets Case from v and can, nonetheless, be presupposed. I assume that in this case an additional mechanism allows IA to "scramble" and abandon the vP. I surmise that this mechanism is simply not available in existential sentences.

    e.   There are only you guys.
    f.   There are only them.

Expletive constructions force a presentational focus reading on IA and this makes pronouns in this construction somewhat unnatural generally, hence the necessity of creating a context that allows the pronoun to have this type of information function. In spite of the difficulty, the judgments are clear. The sentences with 'is' – i.e. with a default form – are always acceptable, regardless of the person and number of IA. This default form should be taken as a genuine grammatical option, as argued by Den Dikken (2001) and Schütze (1999). For instance, it can be inverted with T in questions:

(39)   a.   There's three books on the table.
       b.   S'there three books on the table?

Person agreement in the first and second person singular forms is sharply ungrammatical. The form 'are' is acceptable with all three plural persons but not with the second singular pronoun (see the contrast between (38c) and (38e)). Thus, if we look at the singular paradigm, English expletive constructions are subject to the same person restriction as Icelandic quirky EA/SE constructions. However, if we look at the plural paradigm, the acceptability of 'there are only us/you guys' contrasts with the rejection of similar forms in quirky EA/SE.

    Locative inversion yields the same judgments. The sentences in (40) were judged as more difficult for my consultants and one rejected them entirely. I assume this is because the presentational focus requirement is felt even more intensely.[7] However, the relative judgments seem to be clear and going in the same direction as those in (38).

(40)   [Context: I am in a big party surrounded by people. I get distracted looking at a painting on the wall and then I look around and, to my surprise, I find that...]
      a.   In the room is standing only me/you/him/her/us/you guys/them.
      b. *In the room am standing only me.

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[7] Rochemont (1986) actually argues that first and second person pronouns are ungrammatical in locative inversion constructions precisely because, according to him, those pronouns can never bear presentation focus.

   c. *In the room are standing only you.
   d. In the room are standing only us.
   e. In the room are standing only you guys.
   f. In the room are standing only them.

We find again the same rejection of person agreement with the first and second person singular – instead, the default form 'is' is much preferred. The plural pronouns are acceptable both with the default form and with the plural form 'are'. Notice the contrast between (40c) and (40e), which parallels (38c) and (38e).[8]

   The goal of this section is to argue that this person restriction will help us uncover a type of Complex Dependency very similar to the ones seen in Chapters 2 and 3 – with the locative or expletive acting as the "quirky subject". To advance matters a bit, the locative/expletive and the IA are in a Select dependency that can be accessed by the unvalued ϕ-features of T. The acceptability of all plural forms is derived from the assumption that plural 'are' is underspecified for [person], hence able to match any person feature, including [default], even apparently contradictory [person] combinations, in the terminal node.

   This section is organized as follows. In section 4.6.2 I argue that the locative argument is merged in Spec,v. In section 4.6.3 I show that locatives and expletives select the IA and I further claim that this selection relationship establishes a form of dependency between them. Finally, in 4.6.4 I present an analysis of the person restriction in which 'there' and the IA form a Select dependency that is probed by T, thus forming a Complex Dependency.

4.6.2   Phrase structure of locatives

As mentioned above, I assume that expletive 'there' is merged in Spec,v and raises to Spec,T to value its [αC]. As for the locative PP, Bresnan (1994) and Hoekstra and Mulder (1990) have presented several arguments that it is also a subject (in our terms, that it surfaces in Spec,T). Bresnan points out that extraction of preposed PP is subject to the that-

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[8] Judgments with a nominative pronoun were less systematic. I attribute this to the idea proposed by Sobin (1997) that nominative Case in the complement of the copula is a grammatical virus.

trace effect:

(41)   a. It's in these villages that we all believe t can be found the best
            examples of this cuisine.
        b. *It's in these villages that we all believe that t can be found the
            best examples of this cuisine.

Bresnan (1994: 97)

Crucially, if the PP is not preposed, it can be extracted in the presence of a
complementizer:

(42)   It's in these villages that we all believe (that) the finest examples of
        this cuisine can be found t.

Bresnan (1994: 97)

This shows that the locative PP is sitting in Spec,T. Further confirmation
that this is the position of the PP is that it shows up to the right of a wh-
phrase:

(43)   We all witnessed how down the hill came rolling a huge baby
        carriage.

Hoekstra and Mulder (1990: 32)

Moreover, if the PP is itself displaced by wh-movement, it does not
require do-support:

(44)   a. Out of which barn ran a horse?
        b. *Out of which barn did run a horse?

Hoekstra and Mulder (1990: 32)

Additionally, the locative PP is subject to raising:

(45)   Over my windowsill seems t to have crawled an entire army of ants.

Bresnan (1994: 96)

This confirms that PP surfaces in Spec,T. Moreover, it must have a $[\alpha C]$,
since it is subject to A-movement. From now on, I assume that the
locative is a species of KP (see Chapter 3).

(46)

```
                    TP
              ┌──────┴──────┐
           EA/Ø            T'
                      ┌─────┴─────┐
                      T          VP
                             ┌────┴────┐
                             V        SC
                                  ┌────┴────┐
                                LOC        DP
```
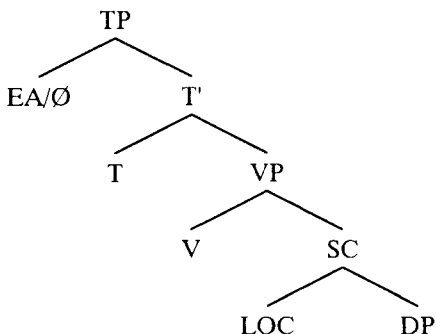
A more difficult issue is where the KP is merged initially. Hoekstra and Mulder (1990) argue that the locative (my KP) and DP form a SC constituent which is the complement of the verb (cf Moro's 1997 analysis of expletives). Either one of them can raise to Spec,T. They further argue that locative inversion sentences have no external argument. Within their pre-Internal Subject Hypothesis framework, external arguments are merged in Spec,T, as shown in (46).

A locative cannot raise to Spec,T if the position is already occupied – it follows that external arguments are incompatible with locative inversion. This analysis receives support from the fact that locative inversion is sharply ungrammatical with transitive verbs unless they are passivized:

(47)   a. *On the table placed Pat a strange object from outer space.
        b. On the table was placed a strange object from outer space.

However, many unergative verbs are grammatical with locative inversion:

(48)   Around the fire danced the women.

                              Levin and Rappaport-Hovav (1995: 232)

Hoekstra and Mulder take on this problem and argue that the unergative verbs that appear in this construction can as a matter of fact be unaccusative when they select for certain types of locative arguments. Assuming that auxiliary selection is a reliable test for unaccusativity in Dutch, they show that unergative verbs in construction with some types of locatives (i.e. locatives that denote the endpoint of an activity) show up with the *zijn* 'be' auxiliary:

(49) a. Jan heeft gesprongen.
          'Jan has jumped.'
      b. dat Jan in de sloot gesprongen is/heeft.
          'that Jan in the ditch jumped   is/has.'
                          Hoekstra and Mulder (1990: 8)

The choice of auxiliary in (49b) gives rise to a change in meaning, since only *zijn* carries the meaning that a change of location has taken place, with the ditch as the endpoint of the change. The sentence with the *hebben* auxiliary, instead, simply denotes an activity, with no change of location.

Moreover, they argue that when the auxiliary chosen is *zijn* the locative is an argument but when the auxiliary is *hebben* it is an adjunct. With *hebben* the locative can be omitted, can appear postverbally and can be separated from the verb by other material – typical adjunct behavior in Dutch:[9]

(50) a. dat Jan gesprongen heeft.
      b. dat Jan gesprongen heeft in de sloot.
      c. dat Jan in de sloot vaak gesprongen heeft.
                          Hoekstra and Mulder (1990: 9)

With *zijn*, the locative cannot be omitted, cannot appear postverbally and must be adjacent to the verb:

(51) a. *dat Jan gesprongen is.
      b. *dat Jan gesprongen is in de sloot.
      c. *dat Jan in de sloot vaak gesprongen is.
                          Hoekstra and Mulder (1990: 9)

From these authors, I adopt the insights that locative inversion is incompatible with an external argument and the locative is an argument of the verb.

Levin and Rappaport-Hovav (1995) argue that Hoekstra and Mulder's solution is mistaken, mostly because it is, in their opinion, uninsightful. Instead they argue that all the ungrammatical examples derive from discourse-based restrictions. The DP must be informationally newer than

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[9] These examples are not glossed in the original source.

the KP while the verb must be informationally light. I agree that this restriction seems to be at work. Take the following pair:

(52)   a. From the flagpole waved a tattered banner.
        b. *From the roof waved a bearded student.

                            Levin and Rappaport-Hovav (1995: 259)

'waving' is a characteristic activity of flags. This makes 'wave' and 'banner' mutually predictable (their turn of phrase). Consequently, sentence (52a) does not convey a lot more information than saying that a banner was on the flagpole (likewise: 'in the tank swim the fish' is informationally equivalent to saying that there are some fish in the tank). On the other hand, 'waving' is not necessarily something that bearded students do. Thus, 'wave' is here informationally heavy, which makes the sentence ungrammatical.

The analysis of the contrast in (52) is plausible, as are several others that they discuss. However, Levin and Rappaport-Hovav's solution ends up being unsatisfactory, mostly because they cannot present an articulated account of the ungrammaticality of transitive verbs. They claim that the verb and the subject can hardly be mutually predictable in transitive predicates, precisely because the verb, together with its complements and modifiers, predicates something of the subject. Thus, they seem to assume that transitive predicates always give rise to categorical judgments, while intransitive predicates can map onto categorical or thetic judgments (see pp. 231–232 of their book; see Lambrecht 1994 for extensive discussion of the thetic/categorical distinction). The assertion that a transitive predicate cannot be informationally light is controversial. One would wonder how they would handle a contrast like the following:

(53)   a. Into the room walked a very strange man.
        b. *Into the room brought a man a strange package.

I think that in these sentences, it is hard to argue that 'walk' is informationally light while 'bring' is not. Given the appropriate context, it is clear that 'walk' (or 'walk into a room') and 'bring' (or 'bring something into a room) are equally unsurprising activities for a 'a strange man'. The following context will make this clearer:

(54)   [We were all expectant, as we waited for Susan to come back and
         show us her surprise. And surprised we were, because:]
    a. Into the room walked a very strange man.
    b. *Into the room brought a man a strange package (while Susan
         was walking behind, a big smile on her lips).
    c. Into the room was brought a strange package.

Arguably, 'bring' is lighter in (54b) than 'walk' is in (54a), since "bringing
a package" is not unexpected in the context of "showing a surprise"
(compare with (54c). I conclude that information structure concepts are
insufficient to rule out locative inversion with transitive predicates.
Instead, a syntactic restriction that makes the co-occurrence of an EA and
an argument locative in Spec,T must be at work.

I propose the structure (55) for locative predicates. The VP is selected
by a vP, which also selects for a locative constituent in its spec. At an
intuitive level, I would like to surmise that v(LOC) and v(EXP) are not
very different, since both have a KP in their specs and a VP as
complement, so a broader v(Applicative) category could be posited. It is
intriguing to see how easily a locative and an indirect object can trade
places, cf. (56) and (57):

(55)
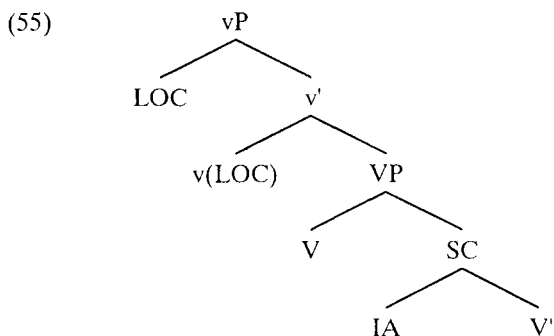
(56)   a. En esta casa falta pan.   *Spanish*
            in this house lacks bread
            'This house needs bread.'
        b. A   mí me   falta pan.
            DAT me Cl.dat lacks bread
            'I need bread.'

(57) a. Se le   da   una cereza a un niño.   *Spanish*
          SE Cl.dat gives a   cherry to a child
          'A child is given a cherry.'
      b. Se dan   buenas cerezas por aquí.
          SE give.3rd.pl good   cherries by here
          'There are good cherries around here.'

The structure with LOC in Spec,v is essentially what is proposed by Fernández-Soriano (1999) for Spanish locatives and Yatsushiro (1999) for Japanese. Yatsushiro (1999) argues that in Japanese locatives are base generated higher than OB. She shows that the locative argument takes scope over IA rigidly when the word order is LOC+OB. With the order OB+LOC, scope is ambiguous:

(58) a. Dokoka-ni   daremo-ga   tuita.
          somewhere.LOC everyone.NOM arrived
          'Everyone arrived somewhere.'
          somewhere > everyone
         *everywhere > somewhere
      b. Daremo-ga   dokoka-ni   tuita.
          everyone.NOM somewhere.LOC arrived
          somewhere > everyone
          everywhere > somewhere

Yatsushiro (1999: 35–36)

Recall (Chapter 3) that Japanese scope is rigid generally, only altered by scrambling. Thus, Yatsushiro uses this scope evidence to argue that in their base positions the locative argument asymmetrically c-commands the theme in a structure like the one proposed above in (55). In particular, Yatsuhiro's data show that (46), a structure in which locative and DP are in a symmetric relationship, cannot be correct.

Locative raising to Spec,T, within my assumptions, can only be triggered by Case in English (as in Hoekstra and Mulder's analysis). This explains why transitive predicates are not permitted: the external argument would create an intervention effect, cf. (59).

This leads us to a direct prediction. Recall that I argued (Chapter 2) that in DCLs raising to Spec,T is not triggered by Case but by another feature, call it [f], a feature that optionally could be borne by any of the arguments in the clause. Let's assume that LOC can have [f]. If so, LOC

(59)
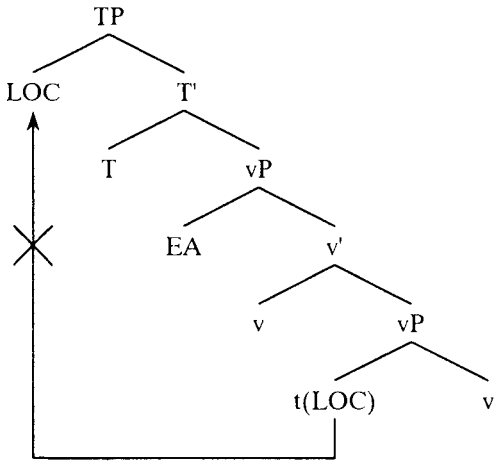
could leapfrog over EA and we could have a locative inversion construction with a transitive predicate. This prediction holds as shown by the following Spanish example:

(60)   A la   habitación llevó   un hombre un extraño paquete.
       to the room   brought.3rd.sg a   man   a   strange package
       'A man brought a strange package into the room.'

4.6.3   Locative and associate

As described in section 4.2, from the 1980s there has been a persistent intuition that the expletive and the associate are in some sort of relationship. In Safir (1982) this relationship involved coindexing, in Chomsky (1986) it involved expletive replacement while in Chomsky (1995) it involved feature adjunction.

One datum that was used to argue for this relationship is agreement between T and IA:

(61)   There are walking into the room several men.

In a model in which agreement had to be in a spec–head configuration, (61) looked odd. The above-mentioned proposals provided some sort of analysis.

A second piece of evidence is control into adjuncts. The famous contrast between English and French follows if the English associate is in some sense related to T. Again, if all relationships must be spec–head, some sort of chain or raising must be established:

(62)   a.   There walked into the room several men without identifying
             themselves.
       b.   *Il est entré trois hommes sans   s'annoncer.
             it is   come three men   without SE identify
             'There arrived three men without identifying themselves.'
                                                       Chomsky (1995: 274)

One interesting datum that is not mentioned in these discussions is that locative inversion behaves in a way parallel to expletive constructions:

(63)   a.   Into the room are walking several men.
       b.   Into the room walked several men without identifying
             themselves.

(63a) exemplifies agreement between T and IA and (63b) shows that the IA can control into an adjunct. It seems desirable to have a common analysis for expletives and locative consructions. However, the coindexation or replacement approaches cannot be extended to the locative inversion data. Coindexation and replacement take as starting point the lack of interpretation of the expletive: if the expletive were interpretable, coindexation would lead to a condition C violation and replacement would entail deleting a meaningful lexical item from LF. Thus, these approaches cannot be extended to locatives, which are certainly interpretable.

Chomsky (2000) does away with all these approaches and simply claims that the IA agrees with T directly. This allows us to extend coverage to locatives, if we set up the structure and/or minimality assumptions so that the locative does not intervene between T and IA. However, there is a lingering issue: the person restriction. As mentioned in section 4.6.1, there are person restrictions involving agreement between T and the IA in locative and expletive constructions (see examples (38) and (40)). If IA agrees directly with T, why are there such restrictions? On the other hand, if my intuitions of Chapter 3 are correct, person restrictions come about if there is a D/K element that has unvalued Case

and no φ-features standing between the agreeing elements. I argue that the same configuration holds here.

The person constraints strongly suggest that IA and LOC/EXPL form a dependency and that this dependency is probed by T. The question is, what is the basis for the (EXPL/LOC,IA) dependency? Given that IA apparently can get partitive Case from v, it does not seem like [αC] is their link. I would like to propose that LOC and EXPL are in a Select dependency with IA (see Chapter 2, section 2.2).

There is no doubt that the locative selects for the IA. I quote Bresnan (1994: 80): "Locative inversion can occur just in case the subject [which she also calls the 'theme', my IA] can be interpreted as the argument of which the location, change of location, or direction expressed by the locative argument is predicated." In other words, IA is an argument of the predicate that LOC heads. Take the following pair of examples:

(64)   a. A few leaves fell onto the ground.
       b. The soldiers spit onto the ground.
       c. Onto the ground had fallen a few leaves
       d. *Onto the ground had spit a few soldiers.

<div align="right">Bresnan (1994: 78)</div>

As Bresnan explains, (65a) entails that the leaves are on the ground, while (65b) involves no such entailment. If we take a preposition to be a two-place predicate, we can see that 'onto' takes 'leaves' and 'ground' as its arguments in (66a), but not 'a few soldiers' in (65b):

(65)   a. onto (leaves, ground)
       b. *onto (soldiers, ground)

In order for locative inversion to be licensed, there has to be this sort of semantic connection between the locative and OB. This is shown in (64c, d). This connection, I argue, is expressed in C_{HL} by means of the Select dependency.

The expletive 'there' also selects for a nominal (see Chapter 2, section 2.2):

(66)   a. There seems to be a man here.
       b. *There seems that a man is here.
       c. *There rains often here.

One possible approach is to attribute the ungrammaticality of (66b) and (66c) to the idea that the expletive 'there' – unlike 'it' – cannot value the φ-features of T, maybe because it is φ-incomplete. However, I already showed in Chapter 2 and above that going default is always an option for unvalued features and this option can be detected in English as well as Icelandic. Further, consider now the following contrast:

(67)   a. *I believe there that a monk is in the cloister.
       b. I believe that there is a monk in the cloister.

The question is, what makes (67a) ungrammatical? The φ-features of matrix v are valued and the [αC] of 'there' is valued by v. There is only one reason that I can think of to explain the ungrammaticality of (67a) as well as (66b, c): 'there' needs to have a nominal nearby.

Expletive 'there' is not a locative semantically and even syntactically it is a D (unlike French *y* or Italian *ci*). Therefore it does not select a nominal semantically. However, it has a locative origin and, as a residue, it still selects a nominal, although all that is left now of this selection is a purely formal requirement – see Chapter 2, section 2.2 and above, in relation to v(∅), where I suggest that syntactic selection is always a residue of a bleached semantic relation.

The following tree expresses the relationship between EXPL/LOC and the IA:

(68)
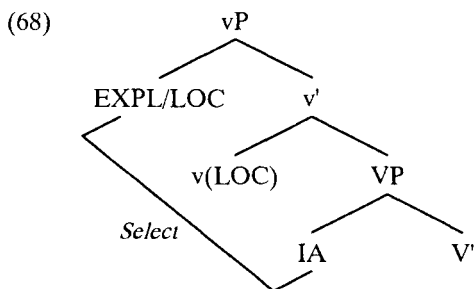
In (68) I incorporate Yatsushiro's and Fernández-Soriano's arguments that the locative argument asymmetrically c-commands the IA and therefore should be considered a species of EA. In the derivation of (68), the IA has raised to Spec,V, a movement triggered, as usual, by its [αC]. This feature is valued by v(LOC). v(LOC) introduces an EA, which is a

locative PP or the expletive 'there'. The locative head – for instance, the preposition 'onto' in (65a) – takes two arguments but only one of them is contained within the PP. This allows the latter to probe and finds IA, which satisfies the Select requirements of 'onto'. As a consequence, a dependency is established between them. If the constituent in Spec,v is an expletive, the derivation is essentially the same. 'there' selects for an NP and this leads it to probe. The probe finds the IA and a dependency is established.

Thus, I claim that selection of IA by the expletive or locative constitutes a dependency. Once the locative or expletive is probed by T, we have a Complex Dependency. Let me discuss this in detail.

4.6.4   Addressing the constraint

Let me summarize what we learned in sections 4.6.2 and 4.6.3. (i) LOC/EXPL are merged in Spec,v, (ii) IA gets Case from v but (iii) IA is also in a dependency with T, (iv) LOC/EXPL selects IA.

The person–number restrictions that we saw above suggest that T and IA must be related by a Complex Dependency. This dependency must have slightly different properties than those formed by quirky EA and SE, judging from the empirical data. The following charts summarize the facts:

(69)   a.   EXPL and LOC

	sing	pl
1	*	√
2	*	√
3	√	√

√ Default T

b.   Quirky EA and SE

	sing	pl
1	*	*
2	*	*
3	√	√

* Default T

EXPL and LOC in English can have plural first and second person OBs agreeing with T, which was not possible in the other cases. Moreover, in EXPL and LOC constructions T always has resort to the default form, while in quirky EA and SE it does not.

Recall what was my account of the quirky EA/SE datum. In Chapter 3 I argued that T, involved in a Complex Dependency with quirky EA/SE and IA, would copy contradictory features on its feature matrix if IA was first or second person. Faced with a feature matrix with features [$_{person}$ [default] [1/2 person]], Morphology is not able to find an adequate lexical item that would match both features. A vocabulary item without a specification for [person] would be beaten by one that does have a [1st/2nd] feature. However, a vocabulary item with a [1st/2nd] feature is too specified to match the [default] of T. Morphology cannot decide on a vocabulary item and this gives rise to ungrammaticality.

Let's see if the same analysis can be extended to the LOC/EXPL datum in the singular. Assume the following structure:

(70) $T_{[\alpha\phi]}$ Expl be only[$_D$1st]
        '*There am only me.'

If a Complex Dependency is established between T, Expl and [$_D$1st], T will end up with the feature structure [$_{person\ One}$] [default] [1st]. The vocabulary item 'am' may match the [1st person] feature of T, but not the [default], so it is too specified. This explains the ungrammaticality of '*there am only me'. However, the possibility of default 'is' ('there is only me') is not predicted and neither is the plural paradigm (i.e. the contrast in the plural paradigms between (69a) and (69b).

I start with the plural paradigm, I capitalize on the fact that the form 'are' is underspecified for [person] and is thus able to match any feature combination of [person] features. Let's articulate this in more detail. As a first approximation, take the feature structure of the present tense of 'be' to be the following (I choose this paradigm because it is the most complex one; I take the two 'are' to be homophonous but distinct forms: the chart shows that they behave differently in LOC/EXPL constructions):[10]

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[10] Frampton (2002) avoids positing two 'are' by defining 'are' simply as [−past]. 'am' is defined as [+1st,−pl,−past] while 'is' is [−2nd,−pl,−past]. Notice that characterizing 'is' as [−pl] predicts that 'there's only us' should be ungrammatical, contrary to fact; thus, it seems it is empirically advantageous to leave 'is' without a

(71) ϕ-feature structure of $be_{[present]}$ (1st approximation)

    a.   am $\rightarrow [1^{st}]$

    b. $are_1 \rightarrow [2^{nd}]$

    c.   is

    d. $are_2 \rightarrow$ [plural]

Is this an adequate representation of the paradigm? As a matter of fact, it is not. Assume syntax serves Morphology the following structure:

(72) $[_D [1^{st}][\text{plural}]\,]\, be + T_{[1st][pl]}$ home
       'We are home.' / '*We am home.'

No vocabulary item can match both features of be + T: 'am' matches $[1^{st}]$ while 'are' matches [plural]. If we adopt the assumption that Morphology chooses the vocabulary item that best matches the features of the MS feature matrix of the terminal, then we are still in a quandary, because both 'am' and 'are' match one of the two features of be + T, but not the other, which makes '*we am home' as likely as 'we are home'. It is clear that we need to enrich the feature structure of 'are' by indicating that it can match a person feature – any person feature – which will give it a winning advantage over 'am'. I notate this by assigning 'are_2' an underspecified [person] feature, able to match first, second or default specifications on be + T:

(71') ϕ-feature structure of $be_{[present]}$

    a.   am $\rightarrow [1^{st}]$

    b. $are_1 \rightarrow [2^{nd}]$

    c.   is

    d. $are_2 \rightarrow$ [plural][uperson]

This ensures that 'are_2' matches both features of be + T and is chosen over 'am' with the desirable result 'we are nice'.

    We are now ready to put everything in place. In example (73) is a derivation of the dependencies involved in an English locative/expletive construction. I choose the most complex example: a plural IA, v is 'be' and T is [present]. The first dependency (line 2) is that established between v

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number feature. Moreover, I do not incorporate negatively defined features in my framework.

and IA, which results in the valuing and deletion of their uninterpretable features in the usual way.

Line 3 shows the second dependency, which holds between expletive/locative and associate. This dependency is based on selection, as argued above. Finally (line 4), T probes and takes the (Loc/Expl, IA) dependency as its goal. As a consequence, the ϕ-features of IA become accessible to T.

(73)   1. $T_{[\alpha\phi]}$ Loc/Expl$_{[\alpha C]}$ $v_{[\alpha\phi][part]}$ IA$_{[\alpha C][pl]}$

2. $T_{[\alpha\phi]}$ Loc/Expl$_{[\alpha C]}$ $v_{[pl][part]}$ IA$_{[part][pl]}$ → $v_{[\sout{pl}][\sout{part}]}$ IA$_{[part][pl]}$

$\underline{\qquad\qquad}$
Agree

3. $T_{[\alpha\phi]}$ Loc/Expl$_{[\alpha C]}$ $v_{[\sout{pl}][\sout{part}]}$ IA$_{[\sout{part}][pl]}$

$\underline{\qquad\qquad\qquad}$
Select

4. $T_{[\alpha\phi]}$ Loc/Expl$_{[\alpha C]}$ $v_{[\sout{pl}][\sout{part}]}$ IA$_{[\sout{part}][pl]}$

$\underline{\qquad\qquad}$
Select

$\underline{\qquad\qquad\qquad\qquad}$
Agree
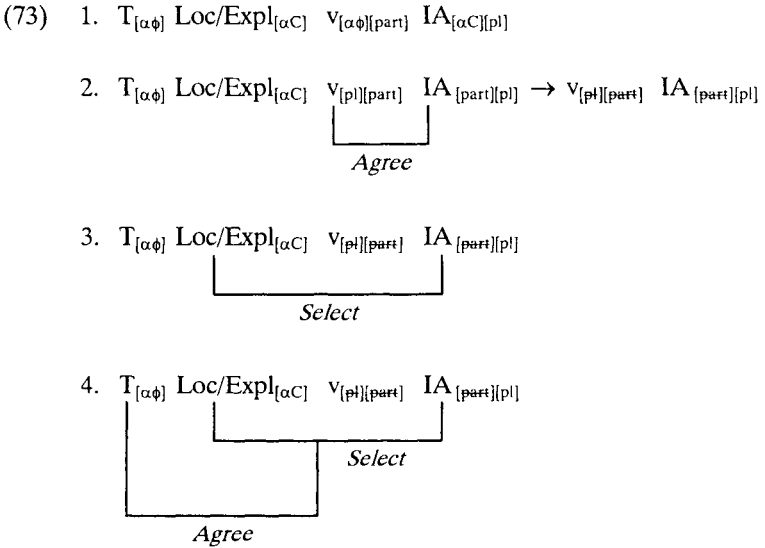
Take IA to be [1st,pl]. [αperson] of T probes first and is valued as [default] (from Loc/Expl) and [1st] (from IA). Then [αnumber] probes and, due to Minimal Compliance, copies only the [plural] of IA. The resulting T has the feature structure [[$_{person}$ [default][1st]][plural]]. 'are$_2$' is the only vocabulary item that matches this feature specification, so it does. The results are very similar if IA is [2nd,pl] or simply [plural]. In the first case, T ends up with the feature structure [[$_{person}$ [default][2nd]][plural]], and again this is matched by 'are$_2$'. If IA is third person plural, T ends up with [[$_{person}$ [default]][plural]], which again can be matched by 'are$_2$'.

Take IA now to be first person singular. [αperson] of T probes first and is valued as [$_{person}$[default][1st]][$_{number}$default]. There is no vocabulary item that matches the contradictory specification of [person] and the [default] number. '*there am only me' is ungrammatical because 'am' is

too specified for the [default] of person. If we take IA to be second person singular, the same result obtains, with [2nd] in place of [1st] in the feature structure of T. Finally, if IA is third person singular, T ends up with default person and number. The form 'is', which matches [present] but has no φ-features, is the only vocabulary item that can be inserted.

All that is left to account for now is the fact that the unspecified form 'is' is always grammatical, even with a plural IA:

(74)   There is only me/you/her/us/you guys/them.

In previous chapters I presented Complex Dependency as obligatory if possible:

(75)   **Complex Dependency**
        If a probe P engages a constituent a involved in an open dependency D, the goal of P is D.

Notice that the obligatoriness of engaging D is redundant with Full Sharing. I repeat Full Sharing here:

(76)   **Full Sharing**
        If a,b are engaged in an Agree(p,g) dependency, feature sharing is mandatory.

Suppose that the principle of Complex Dependencies can be weakened in the following manner:

(75')   **Complex Dependency**
        If a probe P engages a constituent a involved in an open dependency D, then P can take D as a goal.

This makes the establishment of Complex Dependencies available but not forced. In the case of dependencies based on φ-features, Full Sharing suffices to ensure that the probe takes D as its goal and none of the analyses presented so far is altered. But in the case of expletives and locatives, the expletive and the IA are bound by a dependency based on Select, so (76) does not force T to take the (EXPL/LOC,IA) dependency as its goal and (75) is inapplicable because the dependency that links the

EXPL/LOC and the IA is not one based on Agree. Thus, (76') allows T to agree with the LOC/EXPL only:

(77)   T   ...   there   ...   IA
             └_____┘   └_____┘
                Agree   Select
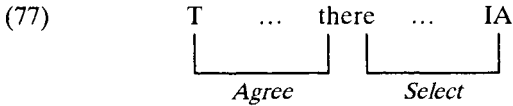
This predicts the grammaticality of 'is' with every type of IA. Moreover, since IA gets Case from v, the fact that it is not engaged with T does not give rise to ungrammaticality.

How does this affect the other examples of Complex Dependencies we saw in Chapters 2 and 3? Not at all. Recall that all those dependencies were based on the sharing of the feature $[\alpha C]$ between EA and IA. Their dependency was forced by Full Sharing, which co-valued their $[\alpha C]$. When EA is probed by T, a Complex Dependency is obligatory because valuing the $[\alpha C]$ of the EA without valuing that of the IA would violate Full Sharing. Since the dependency between locative/expletive and IA is not based on feature sharing but on Select, there is no problem in assuming that the Complex Dependency is really just an option.

4.7   Expletive, numerations and Merge-over-Move

In this section[11] I discuss constructions with expletives in English that have given rise to a lot of discussion and many different analyses. I am going to

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[11] In order to obtain the judgments reported in sections 4.7 and 4.8, I worked closely and separately with four language consultants, speakers of American English, two of them linguists but none of them a syntactician. The grammaticality judgments were solicited by e-mail over a period of four weeks. The sentences were presented in batteries with distractors. With the more difficult sentence types, I presented several examples with the same structure altering only the lexical items. The judgments of the sentences discussed in sections 4.7.6 and 4.7.7 are somewhat delicate and even those given as grammatical sounded a little odd to at least one consultant. Sometimes the presence or absence of an adverb or the heaviness of a constituent could alter judgments significantly. After some intensive work, I concluded the oddness perceived by the consultants was due to the extreme infrequency of the structures and the existence of alternative forms that are perceived as more natural, which put even the best sentences on the

use them as a testing ground for some of the theoretical assumptions that I have argued for throughout this book: the establishment of a dependency between expletive and associate, merging of expletives in Spec,v, local Agree and spec-to-spec movement. Along the way, the empirical necessity of lexical arrays/numerations as well as the Merge-over-Move principle are going to be scrutinized, and I will argue that the theory of grammar can do without them. Thus this section takes up the issues still left open from Chapter 1.

4.7.1 *There is likely a monk to be in the cloister

Numerations (or more simply, lexical arrays, henceforth LAs) were initially proposed by Chomsky (1993) within a theory of syntax in which what Collins later called Global Economy was of paramount importance. The idea would be that once a derivation was finished, it was compared with all other derivations built from the same LA. The simplest derivation would win and would become the only acceptable one – the others would result in ungrammaticality.

Comparison of whole derivations has been abandoned. However, LAs have been maintained. The contrast between (78a) and (78b) is, as far as I know, the only empirical argument currently presented by Chomsky for a numeration. As a matter of fact, it does triple duty as evidence for phases and the Merge-over-Move principle (see also discussion in Chapter 1):

(78) a. *There is likely a monk [$_\beta$ to be t in the cloister]
      b. There is likely [$_\beta$ to be a monk in the cloister]

Consider the pair in (79) (the sentences in (79) appear in Castillo et al. (1999) but apparently Juan Romero and Alec Marantz came up with similar examples independently):

(79) a. There is a man saying that a monk [$_\alpha$ is t in the cloister]
      b. A man is saying that there [$_\alpha$ is a monk in the cloister]

Let us first assume that computation does not proceed by phases. In (79),

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borderlines of usability. Whenever a serious disagreement among the consultants came about, I point it out in the discussion.

the initial numeration includes all the items in the sentence. Consider the point when α has just been built:

(80)   [$_\alpha$ T^{fin} be a monk in the cloister]
         LA = {*there, T^{fin}, be, a, man, saying, that*}

T has an EPP feature that needs to be satisfied (within Chomsky's assumptions). The preference of Merge-over-Move would force merge of 'there' over raise of 'a monk'. This would rule out (79a), mistakenly. The same problem arises if there is no numeration and lexical items are selected directly from the lexicon as long as Merge-over-Move is maintained.

So, let's assume that we get rid of Merge-over-Move, so that in stage (80) either insertion of 'there' or raising of 'a monk' could take place. This solution accounts for the grammaticality of both sentences in (79) but would lead us back into trouble with (78). Consider structure β from (78) together with the available LA:

(81)   [$_\beta$ to be a monk in the cloister]
         LA = {*there, T^{fin}, be, likely*}

Again, we have to insert 'there' or move 'a monk'. If we insert 'there' we have the following derivation (following Chomsky's assumptions on movement rather than mine, for exposition):

(82)   a.   there to be a monk in the cloister
         b.   likely there to be a monk in the cloister
         c.   be likely there to be a monk in the cloister
         d.   T^{fin} be likely there to be a monk in the cloister
         e.   there T^{fin} be likely to be a monk in the cloister =
              = 'There is likely to be a monk in the cloister.'

Let's assume now that we raise 'a monk' instead of merging 'there'. The derivation proceeds as follows:

(83)   a.   a monk to be t in the cloister
         b.   likely a monk to be t in the cloister
         c.   be likely a monk to be t in the cloister

d. T^{fin} be likely a monk to be t in the cloister
Num = {*there*}

At step (83d) we again have a choice between raising 'a monk' or inserting an expletive. However, the LA must be exhausted, so we must insert the expletive. The result is as follows:

(84)　a.　T^{fin} be likely a monk to be t in the cloister
　　　b.　there T^{fin} be likely a monk to be t in the cloister
　　　　 = * 'There is likely a monk to be t in the cloister.'

So, at the stage β represented in (81) we need to make sure that the expletive is inserted in preference to raising of IA. However, this preference will prevent the derivation of (79a).

Chomsky's way to approach the issue is to make sure that the LA that builds the subordinate clause includes the expletive in (78) but not in (79). That is why we apparently need a phase together with an LA.

Let's see how it works. Take the initial LA to be subdivided into smaller sub-LAs, each including one and only one C or transitive v. Each sub-numeration carries out a phase of a derivation. In (79a), the derivation develops in two phases, the first one including the LA A, the second one the LA B:

(85)　There is a man saying that a monk is in the cloister.
　　　LA A = {*that, a, monk, T^{fin}, be, in, the, closet*}
　　　LA B = {*there, is, a, man, saying*}

LA A builds the first phase; since there is no expletive 'a monk' can raise without creating a Merge-over-Move conflict. In order to derive (79b), all we need is to have 'there' in the first subarray:

(86)　A man is saying that there is a monk in the cloister.
　　　LA A = {*a, monk, T^{fin}, be, in, the, cloister, there*}
　　　LA B = {*a, man, T^{fin}, be, saying*}

Since now subarray A includes an expletive, the Merge-over-Move principle ensures that 'there' is merged and 'a monk' stays in situ.

Assume that TP is not a phase and there is no subordinate CP in (78). Then there are no subarrays and the initial LA includes all the lexical

items of the sentence:

(87)   There is likely to be a monk in the cloister.
     LA = { T^{fin}, *seem, there, T^{def}, be, monk, a, cloister, in, the*}

At the point of the numeration in which β is built up, we have the following structure and remaining numeration:

(88)   [β to be a monk in the cloister]
     LA = { T^{fin}, *be, likely, there*}

At this point, the Merge-over-Move preference dictates that it is more economical to merge β with *there* than to move the IA. Thus, (78a) is grammatical and (78b) is ungrammatical. No such competition takes place in (79) because the subordinate sentence does include a CP. So both (79b) and (79a) are grammatical.

This solution predicts the following sentence to be grammatical:

(89)   *There is likely there to be a monk in the cloister.

Chomsky (2000 fn93: 149) suggests that the ungrammaticality of (89) is explained if we assume that the person feature of the lower 'there' stands between the matrix T and 'a monk'. T's features cannot be valued and this gives rise to ungrammaticality. As I have argued throughout this monograph, unvalued features can adopt the default option, so the fact that matrix T cannot reach 'a monk' and value its features should not give rise to ungrammaticality (additionally notice that this assumes that the [person] feature of 'there' does not delete at once, but probably after a phase has been completed, which I have argued against, see Chapter 2, section 2.6).

Moreover, if the empirical problem posed by (78a) is supposed to be revealing of how C_{HL} is structured, then we should predict that (78a) is universally ungrammatical. This is not the case, as the following Icelandic example testifies (briefly mentioned by Chomsky 2000, see again Chapter 1):

(90)   Það   þóttu   mergir   vera gáfaðir í   þessum bekk.
     there seemed.pl many.NOM be   gifted in   this   class
     'Many seemed to be gifted in this class.'

                                                         Hrafnbjargarson (p.c.)

It seems clear that *mergir* must have raised despite the presence of the expletive in the numeration.

4.7.2 There is a man likely to be committed to the madhouse

The following sentence makes the approach presented in section 4.7.1 even more dubious:

(91)   There is a man likely to be committed to the madhouse.

Again, 'a man' has raised although there is an expletive in the numeration.

Chomsky (2001: 25) argues that 'likely to be ...' is a reduced relative modifying 'a man'. If so, (91) asserts the existence of a man with a certain property. Chomsky argues that this is in fact the case and that is why the following sentence sounds odd:

(92)   There are many cakes likely to be baked in this oven.

In (92), we would assert the existence of cakes that will exist in the future. The reasoning is correct but the datum is not, since none of my consultants found this sentence to be specially odd. They also thought the following to be unremarkable:

(93)   There is a car likely to be built in this factory.

This sentence should also sound odd if Chomsky were right, but my consultants do not reject it. It seems to me that (91) can certainly involve a reduced relative, but I would argue that it is structurally ambiguous and can also be taken to be a raising to subject construction.

Reduced relatives are strong islands for extraction, since they are adjuncts:

(94)   a.   There is a box containing shoes.
        b. *What is there a box containing t?

(95)   a.   There is a chip reduced in size with the help of a very
             innovative technique.
        b. *How is there a chip reduced in size t?

This predicts that 'likely' phrases should be strong islands. However, they are not (again, Chomsky's judgments differ from my consultants'):

(96) a. How soon is there a man likely to be committed to the madhouse t?
      b. What institution is there a man likely to be committed to t?

Compare (96) with (97). In (97) the matrix verb is not a raising verb, so the 'likely' phrase has to be an adjunct. Extraction out of it is sharply ungrammatical, in line with (94) and (95):

(97) a. There arrived a man likely to become president.
      b. *What did there arrive a man likely to become t?

Thus, (91) can indeed be a classic raising construction:

(98)   there T [$_{vP2}$ t(there) be [$_{AP}$ a man likely [$_{TP}$ to [$_{vP1}$ be committed t(a man) to the madhouse]]]]

4.7.3 Analysis

In this and the following section I provide an account of (78), (79), (89) and (91), repeated here:

(78) a. *There is likely a monk [$_\beta$ to be t in the cloister]
      b. There is likely [$_\beta$ to be a monk in the cloister]

(79) a. There is a man saying that a monk [$_\alpha$ is t in the cloister]
      b. A man is saying that there [$_\alpha$ is a monk in the cloister]

(89) *There is likely there to be a monk in the cloister.

(91)   There is a man likely to be committed to the madhouse.

My account avoids using numerations/lexical arrays, allowing for lexical items to be merged into a structure without this intermediate step (see Collins 1997 and particularly Frampton and Guttman 1999, 2002 and Chapter 1 on the computational problems added by LAs). The Merge-

over-Move principle is also avoided. As for phases, the system developed in Chapter 2 already replaced them for the notion of derivational cycle.

I start with the raising examples. In the building of a raising sentence we find there are two points where C_{HL} has to choose between moving the NP 'a man' or merging 'there': the two Spec,v, indicated as vP1 and vP2. If there is no Merge-over-Move, there are four possibilities:[12]

(i)   always move $[_{vP2} IA \dots [_{vP1} t(IA) \dots t(IA)]]$

(ii)   choose move in vP1, choose merge in vP2 $[_{vP2} there \dots [_{vP1} IA \dots t(IA)]]$

(iii)   choose merge in vP1, choose move in vP2 $[_{vP2} there \dots [_{vP1} t(there) \dots IA]]$

(iv)   choose merge in vP1, choose merge in vP2 $[_{vP2} there \dots [_{vP1} there \dots IA]]$

Option (i) gives rise to the sentence in (99), uneventfully:

(99)   A man is likely to be committed to the madhouse.

Option (ii) yields the following derivation:

(100)   a.   be a man committed t to the madhouse
        b.   a man be t committed t to the madhouse
        c.   to a man be t committed t to the madhouse
        d.   a man to t be t committed t to the madhouse
        f.   likely a man to t be t committed t to the madhouse
        g.   a man likely t to t be t committed t to the madhouse
        h.   be a man likely t to t be t committed t to the madhouse
        i.   there be a man likely t to t be t committed t to the madhouse
        j.   T there be a man likely t to t be t committed t to the madhouse
        k.   there T t be a man likely t to t be t committed t to the
            madhouse
            = There is a man likely to be committed to the madhouse.

That is, (91).

Option (iii) yields the following derivation:

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[12] The v that selects an expletive is not identical to raising v – one has an EPP or selects a D, the other one does not (Chapter 2, section 2.2). Thus, properly speaking, we do not have a choice in v's behavior but a choice in the type of v that selects VP.

(101) a. be a man committed t to the madhouse
  b. there be a man committed t to the madhouse
  c. to there be a man committed t to the madhouse
  d. there to t be a man committed t to the madhouse
  f. likely there to t be a man committed t to the madhouse
  g. there likely t to t be a man committed t to the madhouse
  h. be there likely t to t be a man committed t to the madhouse
  i. there be t likely t to t be a man committed t to the madhouse
  j. T there be t likely t to t be a man committed t to the madhouse
  k. there T t be t likely t to be a man committed t to the madhouse
      = There is likely to be a man committed to the madhouse.

Finally option (iv) yields the following derivation:

(102) a. be a man committed t to the madhouse
  b. there be a man committed t to the madhouse
  c. to there be a man committed t to the madhouse
  d. there to t be a man committed t to the madhouse
  f. likely there to t be a man committed t to the madhouse
  g. there likely t to t be a man committed t to the madhouse
  h. be there likely t to t be a man committed t to the madhouse
  i. there be there likely t to t be a man committed t to the madhouse
  j. T there be t likely t to t be a man committed t to the madhouse
  k. there T t be there likely t to be a man committed t to the madhouse
      = *There is there likely to be a man committed to the madhouse.

Notice that derivations (i)–(iii) are perfectly expected within my assumptions. Only (iv) remains to be accounted for, which I do in the following section. Consider (78) again:

(78) a. *There is likely a monk [β to be t in the cloister]
  b. There is likely [β to be a monk in the cloister]

My assumptions only generate the sentences in (99) to (102), among which (78a) is not included. The logic underlying my system simply makes (78a) impossible. Take step (100f). At this point, 'a man' has no choice

but to raise into the next spec, and it will go on raising until it gets Case from 'be', yielding 'there is a monk likely …'.

(78b) is generated by my system (101). Take the point when the lower v has been merged with an expletive in its spec:

(103)   there [$_v$ be [$_{VP}$ a monk in the cloister]]

'a monk' receives Case from 'be', while 'there' establishes a Select dependency with it. From this point on, 'there' can raise as far as it wants.

As for (79), we can freely merge 'there' in Spec,v or raise 'a monk'. The result will be either of the sentences in (79).

(79)   a.   There is a man saying that a monk [$_\alpha$ is t in the cloister]
        b.   A man is saying that there [$_\alpha$ is a monk in the cloister]

4.7.4   *There is likely there to be a man in the madhouse

Consider the following pair:

(104)   a.   *There is likely there to be a man in the madhouse.
        b.   *There is there likely to be a man in the madhouse.

(104a) is discussed by Bošković (2002), arguing that if there were an EPP in the subordinate clause, (104a) should be a perfectly grammatical sentence, on a par with:

(105)   John believes there to be a man in the madhouse.

Within my assumptions, both sentences are actually very different. I consider first (105). The derivation is shown in (106):

(106)   [John v [2 believ- [1 to there be a man in the madhouse]]].

The expletive will raise through the spec numbered 1 to spec 2, where it can receive accusative Case from the matrix v.[13]

As for (104a), I can invoke again the notion of locality of Agree: the downstairs expletive is too far from the matrix clause probes, so the matrix

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[13] Or it may adjoin to v, as proposed by Bošković (1997).

'there' ends up without an associate while the lower 'there' ends up without Case.

(107) [$_{vP}$ There be [$_{AP}$ likely [$_{TP}$ there to be a man in the madhouse]]]

(104b) turns out to be a more interesting example, and it is a leftover from the previous section. Let's see how my system derives it. The lower 'there' is first merged in the spec of the lower 'be':

(108) there[be a man in the madhouse]

As the derivation progresses, it finds itself in the following configuration:

(109) [be there likely t to t be a man in the madhouse]

At this point, Merge is chosen instead of Move. The result is the following:

(110) there [be there likely t to t be a man in the madhouse]

The higher 'there' can probe the lower one and, presumably, select it. The lower one has its features co-valued with the associate downstairs and both have their Case valued as [accusative]. All features are valued. What is wrong with it?

Notice that in (110) the two 'there' are indistinguishable: they have exactly the same phonetic and syntactic features (only their Case features, which are instantly deleted, are different in the MS matrix. In the PF matrix, whether 'there' is accusative or nominative makes no difference, since Case does not inflect in English). Moreover, the two 'there' are in a dependency. What we see, in effect, is a configuration akin to that between a trace and its antecedent (Chapter 3, section 3.4.5). I suggest that PF sees the two 'there' as copies. If so, PF will act as it always does: by deleting the lower copy.

4.7.5 *There seems a man to be in the madhouse

'be' and 'seem' function in a parallel way in several sorts of constructions, except precisely with respect to having an NP to their immediate right. This can be seen in the following battery of examples:

(111) a. A man is likely to be committed to the madhouse.
       b. A man seems likely to be committed to the madhouse.

(112) a. There is a man likely to be committed to the madhouse.
       b. *There seems a man likely to be committed to the madhouse.

(113) a. There is likely a man to be committed to the madhouse.
       b. *There seems likely a man to be committed to the madhouse.

(114) a. There is likely to be a man committed to the madhouse.
       b. There seems likely to be a man committed to the madhouse.

(115) a. A man is to be committed to the madhouse.
       b. A man seems to be committed to the madhouse.

(116) a. There is a man to be committed to the madhouse.[14]
       b. *There seems a man to be committed to the madhouse.

Recall that we assumed that the lexical item 'seem' is selected by a v(EXP) (Chapter 3, section 3.5), while 'be' is a light verb that selects the participle (Chapter 2, section 2.7). The question now is why the configurations (a) and (b) are ungrammatical while (c) and (d) are fine:

(117) a. *[$_{vP}$ there v(EXP) [$_{VP}$ a man seem [$_{AP}$ t(DP) likely[$_{TP}$ t(DP) to...]]]]
       b. *[$_{vP}$ there v(EXP) [$_{VP}$ a man seem [$_{TP}$ t(DP) to...]]]
       c. [$_{vP}$ there be [$_{AP}$ a man likely ...[$_{TP}$ t(DP) to...]]]
       d. [$_{vP}$ there be [$_{TP}$ a man to...]]

The analysis of (c) and (d) is a repetition of what we saw above: a v(Ø) selecting a D (v^{EPP}(Ø)) assigns [partitive] in English.

As for (a) and (b), I suggest building on one of the conclusions reached in Chapter 3, section 3.5. When discussing Icelandic quirks I argued that v(EXP) with an EA may assign Case in this language, while v(EXP) with no EA may not. In particular, v(EXP) with an expletive is

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[14] Again, with this sentence it becomes necessary to convince the reader that a reduced relative is not necessarily involved. The island test can be invoked again:
(i) a. When is there a man to be committed to the madhouse t?
   b. What institution is there a man to be committed to t?

not enough. Thus, I surmise that (117a, b) are ungrammatical for exactly the same reason: v(EXP) does not have an external argument and consequently does not have a Case to assign.

Viewing v(EXP) as having morphosyntactic properties parallel (although not identical) to v(EA) is the key to understanding the ungrammaticality of (117a, b). As we saw in Chapter 2, v(EA) has a "diluted" version, which we referred to as v(Ø) (as in Chomsky's v* and plain v). This v(Ø) does not have an external argument but still requires a nominal in its spec, the EPP property. As for its Case properties, we suggested earlier in this chapter (see (20)) that in some languages v(Ø) with an expletive assigns Case while in others v(Ø) never seemed to assign any Case (i.e. recall my discussion of German *es gibt* and Spanish *se da*). In English, consideration of existential sentences led to the conclusion that v(Ø) with an expletive assigned Case.

The idea then is to extend the same reasoning to v(EXP). Thus, I claim there is a version of v(EXP), call it v(ø), that has no EA and no capacity to assign Case. In the two cases that we have with us so far (English and Icelandic), v(ø) with an expletive cannot assign Case. In (118) v(EXP) with an external argument can assign Case to the IA, in contrast with the examples above:

(118) a. Chris loves Pat.
       b. [$_{vP}$ Chris v(EXP) [$_{VP}$ Pat love t]]

'seem' does not have an experiencer argument, as can be seen in the ungrammaticality of (119a). Instead, the experiencer appears as an adjunct PP (119b):

(119) a. *It seems me to be a man in the pantry.
       b. It seems to me to be a man in the pantry.

There has been abundant discussion concerning the peculiar properties of the 'seem' experiencer. It does not intervene in raising, as shown in (120a) but it does trigger condition C effects (see Kitahara 1997 and McGinnis 1998, among others):

(120) a. A man seems to me to be in the pantry.
       b. A man seems to him$_i$ to hate Peter$_{*i}$.

The lack of intervention follows directly from the status of 'to him' as an adjunct PP. I do not have an analysis of the condition C effects, but I note that other prepositional adjuncts give rise to similar effects (Pesetsky 1995: 161–162):

(121) a. The boat was sunk by him$_i$ to ruin Peter$_{*i}$.
      b. John is believed by him$_i$ to scare Peter$_{*i}$.

A glitch of this analysis is the following: why can't 'there' co-value its Case feature with the raised nominal (as Spanish SE does)? I assume that a Select dependency and a Case dependency are mutually incompatible for reasons that I do not know.

4.8 Expletives and word order

Expletive constructions built on passive ditransitives, passive simple transitives and unaccusatives present some vexing problems concerning their word order possibilities. In this section I use my assumptions concerning local Agree and spec-to-spec Move in order to present simpler analyses than those in Chomsky (2000, 2001a). Although some of these analyses are tentative, I believe the discussion does throw some light on the properties of these constructions.

4.8.1 Passive ditransitives

Let's start with passive ditransitives. The word order restrictions found in the following examples is intriguing:

(122) a. There was a book put on the table.
      b. *There was put a book on the table.
      c. *There was slowly a book put on the table.
      d. There was a book slowly put on the table.

(123) a. There was a book given to the library.
      b. *There was given a book to the library.
      c. *There was generously a book given to the library.
      d. There was a book generously given to the library.

(124) a. There was a woman given the best novel.
       b. *There was given a woman the best novel.

In each of these examples, it looks as if IA or IO has obligatorily shifted to the left.[15] Chomsky (2001a) proposes an ad hoc operation of leftward extraposition. This proposal is challenged by the fact that in ordinary passives leftward extraposition is banned:

(125) a. A woman was given a novel.
       b. *A woman was a novel given.
       c. A novel was given to a woman.
       d. *A novel was to a woman given.

The question is why leftward extraposition can't take place in (124b) or even (125b). In the following, I analyze the movement involved in (122a), (123a) and (124a) as instantiating plain Case-driven movement. Case is valued by 'be', and the DP stops where it can be probed, as is routine by now. The suspicion that we have Case-driven movement is supported by the fact that the DP must be adjacent to 'be', as shown in (122c, d) and (123c, d). As for (125b) and (125c), lack of motivation prevents displacement.

But before I present my analysis, let's first make sure (again) that the (a) examples do not necessarily exemplify a participial relative. This analysis is certainly possible: (122a), for instance, can mean that there was a book, which happened to be on the table. The following example shows that the noun+participle can function as a constituent:

(126) a. A book given to the library was lost.
       b. A book put on the table symbolizes wisdom.

However, (122a) can also be a paraphrase of the passive sentence: 'a book was put on the table'. That is, both a stative and an eventive reading are available. Perhaps another example will put the contrast in deeper relief:

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[15] On the other hand, Scandinavian languages allow the ptc+IA order, Danish does not allow the IA+ptc order and the others allow both. See Holmberg (2001) for a fine-grained analysis involving (mostly) the features of participles and a rich structure.

(127) I saw a book put on the table.

The stative reading would be: I saw a book, which happened to be sitting on the table. Or it can mean: I witnessed the event of a book being put on the table.

As mentioned above, reduced relatives are islands for extraction. A couple of examples are shown in (128):

(128) a. I saw a box containing shoes.
       b. *What did you see a box containing?
       c. I found a baby abandoned in the church.
       d. *Where did you find a baby abandoned?

However, the constructions above are not islands:

(129) a. Where has there been a book put?
       b. What institution has there been a book given to?

This suggests that examples (122a), (123a) and (124a) do not necessarily include a reduced relative.

Considering then that (a) examples can exemplify a true passive sentence, the question is how to approach the word order datum. The solution to the problem involves looking at the structure of passives more closely. As pointed out in Chapter 2, Blight (1997) and Göbbel (2003) show that adverb positions reveal that passive participles are to be found in a position lower than ordinary verbs:

(130) a. John (*poorly) built the house (poorly).
       b. The house was (poorly) built (poorly).

(131) a. Mary (*beautifully) played the flute (beautifully).
       b. The flute was (beautifully) played by Mary (beautifully).

Following Blight and Göbbel, I take this datum as evidence that passive participles do not raise to v. With expletive passives you obtain the same results, suggesting that the same phrase structure holds:

(132) a. There was a house poorly built.
       b. There was a flute beautifully played.

Additionally, as argued in Chapter 2, it is reasonable to suppose that the little v in these structures is fleshed out as 'be'. Consider now the following structure for a ditransitive verb with a prepositional complement:

(133)

```
                    beP
              _____|_____
           there          be'
                      _____|_____
                    be            PtcP
                             _____|_____
                          a book          Ptc'
                                      _____|_____
                                    Ptc            VP
                                               _____|_____
                                           t(a book)         V'
                                                         _____|_____
                                                      giv-          to the library
                                                      put           on the table
```

(134)

```
                    beP
              _____|_____
           there          be'
                      _____|_____
                    be            PtcP
                             _____|_____
                        a woman          Ptc'
                                     _____|_____
                                   Ptc            ApplP
                                              _____|_____
                                          t(a woman)         Appl'
                                                         _____|_____
                                                      Appl            VP
                                                                 _____|_____
                                                              giv-          the novel
```
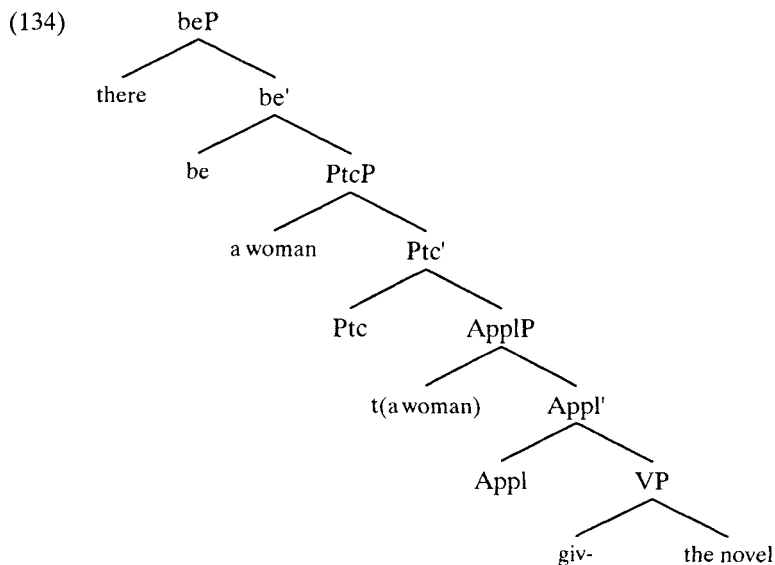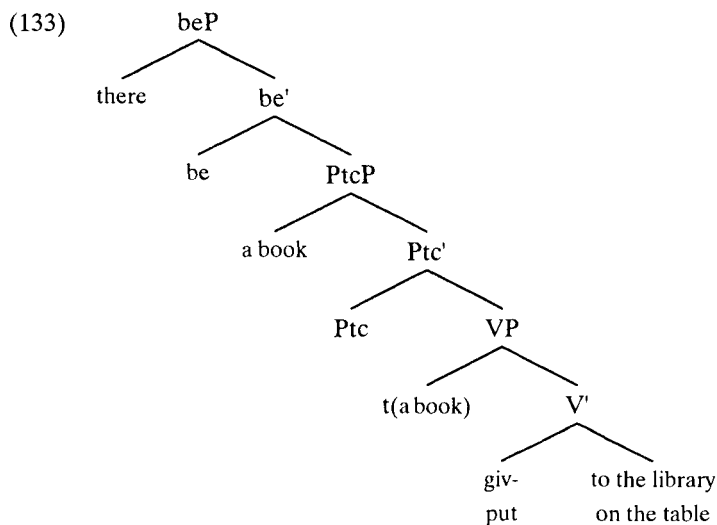
If we have a passive formed on a Double Object Construction, the analysis is essentially the same, taking the IO to be introduced by an applicative head (Appl), as in Marantz (1993) and much subsequent work: in (134), 'a woman' receives Case from 'be' while 'the novel' will receive it from Appl. Again, the order IO followed by the participle follows unproblematically. Now we can go back to (125), repeated here:

(125)   a.   *A woman was a novel given.
        b.   *A novel was to a woman given.

(125a) is ungrammatical because the Appl morpheme assigns Case to 'the novel', so it does not raise any further. As for (125b), it suffices to say that PPs do not raise for Case reasons.

4.8.2   Passive transitives and TH/EX

Let's now consider examples with a 'there' passive and a verb that is a simple transitive. IA can appear to the left or to the right of the participle:

(135)   a.   There was discovered the body of a lady.
        b.   There was a body discovered in the pond.

Example (135b) is what you would expect from my analyses: the IA is in Spec,Ptc where it gets Case from 'be', cf. (138).

As for (135a), two analyses are a priori possible. Under one analysis, some rule has applied that displaces the subject to the right (Chomsky's 2001a TH/EX, see Julien 2002 for detailed discussion) with the effect that it becomes focalized. Alternatively, the other possible analysis simply assumes that the lower trace has spelled out instead of the higher one.

The second analysis seems attractive initially because of its apparent simplicity. However, it is untenable. The first difficulty it encounters is that in English the trace of the IA never spells out – in other words, IA always shows up adjacent to the main verb – why should matters be different in this particular construction? Second, it seems that some syntactic operation has indeed applied to IA in (135a). The IA in (135a) is an island, cf. (137).

(136)

```
                    beP
                  /      \
             there        be'
                        /     \
                      be       PtcP
                             /      \
                       a body        Ptc'
                                   /      \
                                Ptc        VP
                                         /    \
                                 t(a body)     V'
                                             /    \
                                      discover-    t
```
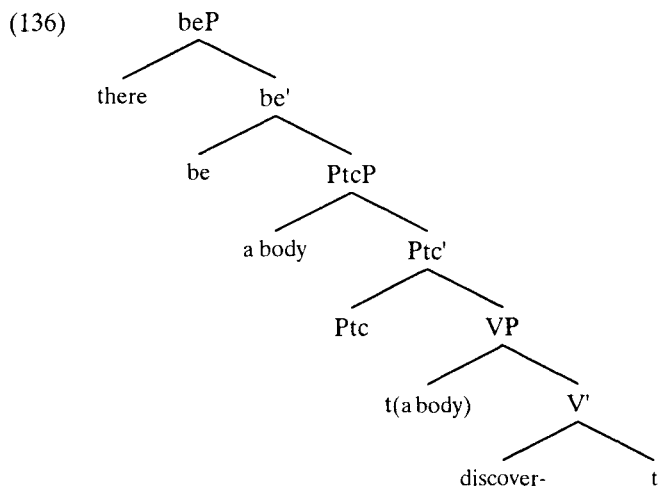
(137) a. ?Who was there [a body of t] discovered?
       b. *Who was there discovered [a body of t]?

This suggests that the far-right IA has undergone some syntactic operation. Additionally, adjuncts are preferred to the left of the IA if the latter is to the right of the participle. This is inconsistent with the "trace Spell-out" hypothesis:

(138) There was discovered in the pond the body of a certain lady.

And, turning back to our ditransitive examples, the higher complement (the one appearing in Spec,Ptc in (133) or (134)) can also be extraposed to the right (Julien 2002):

(139) a. There was a large package placed on the table.
       b. There was placed on the table a large package.
       c. *There was placed a large package on the table.

(140) a. There was a woman given a very interesting book.
       b. There was given a book a certain woman from Pearl St.
       c. *There was given a woman a very interesting book.

The examples (b) and (c) lead us to definitely abandon the "Spell-out in

situ" hypothesis.

To sum up so far, these are the possible word orders for passive expletive constructions. I underline the extraposed constituents:

(141)   Trans: be IA ptc adj
                        *be ptc IA adj
                        be ptc adj <u>IA</u>
         Ditrans: be IA ptc PP
                        be IO ptc IA
                        *be ptc IA PP
                        *be ptc IO IA
                        be ptc PP <u>IA</u>
                        be ptc IA <u>IO</u>

To conclude: Chomsky proposes leftward and rightward extraposition to account for the word order of passive expletives. I have shown that leftward extraposition leads to incorrect predictions and instead we have Case-driven movement, with the additional bonus of obtaining a simpler theory. Rightward extraposition needs to be retained.

4.8.3 Unaccusatives

Although Chomsky (2001a) tells us that (142a) is ungrammatical and (142b) is acceptable, my own consultants prefer (a) to (b). Julien (2002) reports the same results:

(142) a. There came several angry men into the room.
       b. There came into the room several angry men.

The heaviness of the DP seemed to influence the judgments, so I assume that the sentences in (142) are equally grammatical, (142b) involving TH/EX.

The question is how to derive (142a). Following the strategy laid out in sections 4.8.1 and 4.8.2, we would expect IA to be adjacent to v, to get Case in that position. Unlike the passive constructions surveyed above, in unaccusatives we do not find the IA to the left of the participle, as shown by the contrast between (143a) and (143b). Instead, it must show up to the right of the participle – as a matter of fact, the IA has to be right-adjacent

to the participle:

(143) a.   There have come several angry men into the room.
   b. *There have several angry men come into the room.
   c.   There have come several angry men slowly into the room.
   d. *There have come slowly several angry men into the room.

Let us assume that with unaccusative verbs $v(\emptyset)$ remains abstract, requiring incorporation of the lexical verb. The Blight–Göbbel test shows that the participle has raised to v, since the manner adverb has to appear to the right of the verb:

(144) a.   Mary (*beautifully) played the flute (beautifully).
   b.   The flute was (beautifully) played by Mary.

(145) a.   The flower (*beautifully) blossomed (beautifully).
   b.   The flower has (*beautifully) blossomed (beautifully).

The contrast between (144b) and (145b) shows that the adverb cannot appear to the left of the unaccusative participle, which is evidence that the unaccusative participle has raised higher than the passive one. I surmise, it

(146)
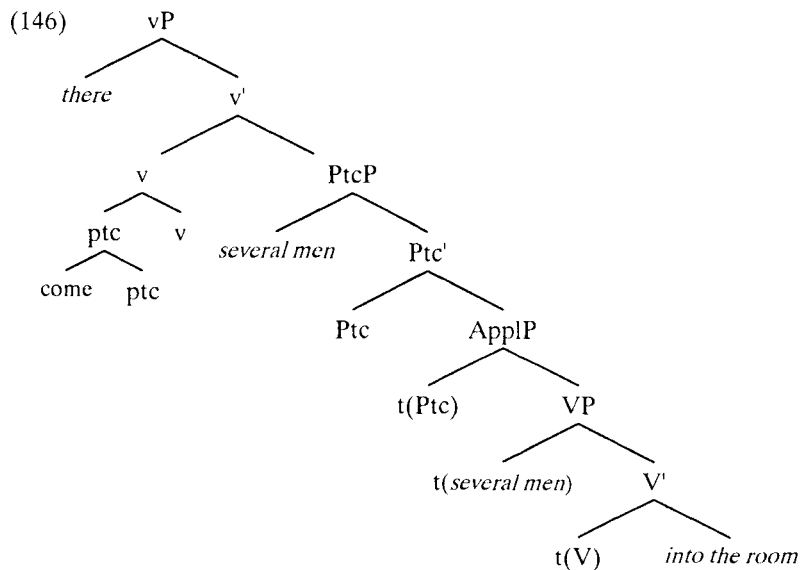
has raised into v. If so, then the word order in (143) is to be expected. I propose the following vP structure, cf. (146).

That is, this is an unaccusative verb with two arguments, and the higher one moves to Spec,Ptc (142a) or is extraposed (142b).

Lexical verb raising to v gives rise to the V/ptc+IA word order. Thus, unaccusative and passive expletives behave alike with respect to DP movement, the only difference being verb movement to v, present in unaccusatives, absent in passives.

Extraction of IA gives results similar to those of passive expletives, without giving rise to full unacceptability:

(147) a. ?What kind of flowers did there blossom during my long absence?
b. ?How many angry men did there come into the room?

In the following sentences, the IA is obligatorily extraposed, as pointed out by Chomsky (2001a):

(148) a. There entered the room a man from Ohio.
b. There hit the stands a new journal.
c. *There entered a man a very large room.
d. *There hit a new journal all the stands in 11th Street.

For some reason, Chomsky calls these TECs, although it seems to me that the predicate is clearly unaccusative – 'enter' has the same argument structure as 'come into', while 'hit' is like 'arrive at' plus a semantic feature of suddenness and impact.[16] With these considerations in mind, I propose the structure shown in (149).

At this point, the reason why the higher DP has to extrapose is unclear to me. Comparing the examples in (148) with those in (142), it seems that TH/EX is obligatory if the locative argument is a DP rather than a PP. This suggests an approach in terms of Case. I postpone an implementation of this intuition to future research.

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[16] Julien (2002) independently reaches the conclusion that these structures do not involve an external argument. However, she claims that we have a sequence of an IO followed by an IA.

(149)

```
                    vP
              ┌──────┴──────┐
           there           v'
                      ┌─────┴─────┐
                      v           VP
                              ┌───┴───┐
                         a journal   V'
                        a strange man  ┌───┴───┐
                                     hit     the stands
                                    enter     the room
```
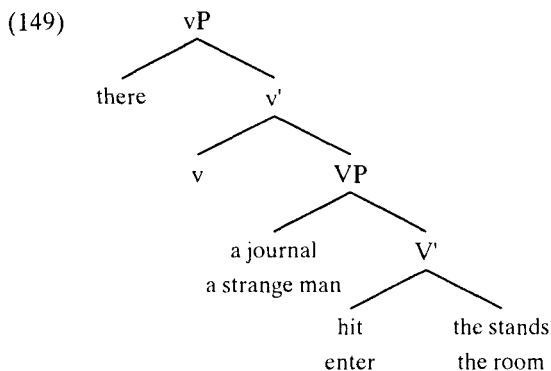
4.9   Transitive Expletive Constructions

Throughout this chapter, I have argued/assumed that expletives in French, English and other languages are merged in Spec,v. However, the presence of Transitive Expletive Constructions (TECs) in some languages tells us that a class of expletives is merged with a higher category. I will argue that this instance of expletive merge is triggered by the same logic as the ones we have discussed so far and I make a proposal for the parameter that teases apart languages with and without TECs. Further, I show that Icelandic TECs provide surprising empirical evidence for local Agree.

The following is an example of a TEC:

(150) Það   klaruðu   margar mys   ostinn   alveg
       there finished   many mice the.cheese   completely
       'Many mice completely finished the cheese.'

Bobaljik and Jonas (1996: 217)

The immediate solution would be simply to say that Icelandic T has an EPP feature and the expletive is merged in its spec position. EA is in Spec,v and IA is in Spec,V and the adverb adjoined to a lower projection of V – essentially the structure of transitive predicates in English except for the presence of the expletive in Spec,T. However, if expletives could generally be merged with T', the fact that English and French existentials as well as German *es gibt*, Spanish *se da* and Italian *ci* obligatorily exclude

an EA would remain mysterious. A possible strategy to approach this problem is that an expletive can merge in Spec,T if T has a certain property, present in Icelandic, absent in the other languages.

Throughout the 1990s, evidence has accumulated that languages with TECs have a clausal structure more complex than those languages without TECs, at least in the realm of the Germanic languages. Bobaljik and Thráinsson (1998) have argued that TECs correlate with other phenomena – two subject and two object positions, multiple inflectional morphemes in one stem, obligatory V raising – which provide evidence for a complex structure hypothesis. They further argue that the added complexity is due to the presence of AgrPs for subject and object, which are projected by some notion of "rich" inflection.

They propose the following structure for (150) (actually taken from Bobaljik and Jonas 1996): [17]

(151)   C [það Agr [EA T [IA Agr [Adv t(EA) V t(IA)]]]]

Although Bobaljik and Jonas marshal abundant empirical evidence for this structure, a couple of problems linger in connection to having expletives merge in Spec,Agr. One question one could ask is why expletives cannot merge in the lower Spec,Agr, giving rise to Object Expletive Constructions (see López 2001 for discussion of this problem).

A second problem concerns the motivation for merging the expletive in Spec,Agr. Within their early minimalist framework, Case assignment and ϕ-feature checking take place in a spec–head relationship. However, in (150) Agr does not agree with the expletive in Spec,Agr but with the EA in Spec,T. I think it is implicitly assumed that expletive and EA are in some sort of relation – coindexing, expletive replacement – that allows Agr to access the ϕ-features of EA, but the issue remains as to why the expletive merges in Spec,Agr at all. Chomsky (1993) argues that the expletive satisfies the EPP of T – but notice that this is the case only if T raises to Agr before the expletive is merged, which is not assumed in their framework (or mine). It is peculiar that an expletive merges in Spec,Agr in order to satisfy a property of T. One can only conclude that expletives in early minimalism are freely merged in positions where apparently they do not play any syntactic role.

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[17] However, see Svenonius' (2002) criticism based on the fact that Dutch has TECs and no agreement.

In the following I present an alternative proposal. Above I argued that expletives can merge in Spec,v because v has a selectional D feature as a residue of a bleached semantic selection for an external argument. Consistent with my own assumptions, I argue that a similar selectional requirement is present in T when φ-features are not a sublabel of it.

I follow Bobaljik and Thráinsson (1998) (although the original idea harks back to Pollock 1989), and assume that the unvalued φ-features of T may form their own separate projection: Agr (or maybe there are separate projections for person and number, as in Sigurðsson 2002).[18] I also follow Bobaljik and Thráinsson (1998) that whether Agr is an independent syntactic head or not is subject to parametrization: Icelandic has AgrPs while English, French and Mainland Scandinavian do not. The question now is why Icelandic has Agr as a syntactic head while the others do not.

In a language like English, T is associated in Lex with unvalued φ-features. Unless we assume this association is arbitrary, I take it to mean that T has a certain requirement to associate with something "nouny" that is satisfied if T has φ-features as a sublabel. Following a long tradition (Chomsky 1995, among many others), let's say that T selects [N], [N] referring to any nominal-type feature.[19] In English, [N] plays no role in the syntax, it being satisfied by the φ-features that are adjoined to T already in Lex.

Icelandic T may enter the derivation with φ-features, just like English. If so, we have an ordinary clause. However, T in Icelandic may also enter the derivation without φ-features – in that the case, the latter form a separate category that selects T, cf. (152).

If T is merged without φ-features, [N] is still active in the syntax. T immediately selects an expletive in its spec: that's how we get TECs, cf. (153).

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[18] Chomsky (1995) eliminates AgrPs because they have no effect on either interface. However, AgrPs may play a role in the Chomsky (2001a) model. Assume that the presence of AgrPs is connected with topic/focus structure (Bobaljik and Jonas 1996, Meinunger 2000). If this assumption is correct, then AgrPs do have "an effect on outcome" and should be allowed to exist. Alternatively, the φ-features may be housed in a functional category located between TP and CP, maybe Rizzi's (1997) FinP.

[19] [N] could be identified with [person], a feature that seems to play an important role in syntactic dependencies according to some recent work.

(152) a. RegularT   b. SplitT

$$T$$

$$[\alpha\phi] \quad [\pm PAST]$$

$$AgrP$$

$$[\alpha\phi] \quad TP$$

$$T$$

$$[\pm PAST]$$
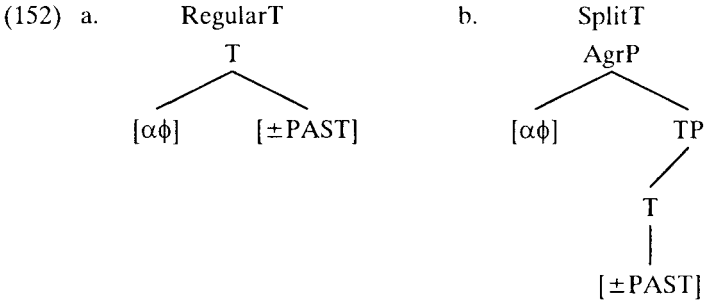
(153) C [$_{AgrP}$ Agr [$_{TP}$ það T [EA … [$_{vP}$ t(EA) v [$_{VP}$ V IA]]]]]

In much previous work, from Chomsky (1981) to Chomsky (2000), it has commonly been assumed that T has some property that is satisfied by Merge of an expletive: EPP/D/[person]. However, this failed to explain why not every language has TECs. Bobaljik and Jonas pointed out that languages with TECs are also languages in which, arguably, the φ-features form their own functional head, but failed to explain what motivated merging an expletive in Spec,Agr. With my account, I connect expletive Merge in Spec,T with a parametrized property of T, thus explaining why languages with "poor" agreement do not have TECs.
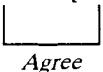
I still have to discuss the Spell-out positions of expletive and EA as well as how Agr gets to value its features against EA. As for the expletive, it is fair to assume that C is the assigner of nominative Case in Icelandic and expletive raises to Spec,Agr for Case. Icelandic is not a DCL, as defined in this book: the position(s) Spec,T and SpecAgr are privileged subject positions (as defined in Chapter 2, a DCL in the technical sense used here is such that T assigns Case and the higher positions can be occupied by either EA or IA). Before the expletive raises to Spec,Agr, it can co-value its [αC] with EA.

Since expletive and EA form a dependency, when Agr reaches the expletive the three of them form a Complex Dependency. Agr accesses the φ-features of EA:

(154)   Agr$_{[\alpha\phi]}$ Expl   EA$_{[\phi]}$

Agree
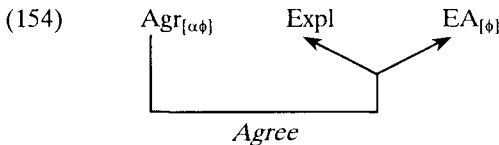
As for the EA, the logic of my analysis demands that it raises spec-to-spec until it can be probed by Expl – i.e. it has to be adjacent to T. Let's see how this prediction holds.

Bobaljik and Jonas (1996) argue that the position of the IA to the left of the VP-adverb indicates that it has been shifted beyond VP – and, consequently, the position of the EA to the left of the shifted IA indicates that it has not stayed in situ. I will not try to figure out what position this is in this book. However, it is important to point out that my assumptions require that EA be in the highest spec available to it: only in that position can it be probed by the expletive:

(155)   C [Agr [það T [EA ...]]]
                         |_____|
                          Agree

Interestingly, the empirical evidence clearly supports this assumption. Sigurðsson (1991), Frampton (1997) and Vikner (1995) have shown that in TECs EA raises to a fairly high position, to the right of the highest modal, to the left of the auxiliary:[20]

(156) a. ... að það mundi einhver hafa borðað eta þepli.
              that there would someone have eaten   this apple
           '... that someone would have eaten this apple'
       b. *...að það mundi hafa einhver   borðað þeta epli.
              that there would have someone eaten   this apple
                                                   Vikner (1995: 191)

This fact can be accounted for within my assumptions, since local Agree does as a matter of fact force raising of the EA to the highest spec available. It cannot be accounted for under any form of long distance agreement (Chomsky 2000, 2001a), since T should agree with the EA in situ and there would be no reason for it to raise. In particular, there is no reason why it should raise to a spec *below* T:

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[20] Although, as Sigurðsson (p.c.) points out, there can be adverbs between EA and the modal. EA and T are adjacent only in the sense that auxiliaries cannot stand in between. This is somewhat unexpected, since no adverbs can stand between v and IA. Possibly there is a restricted option of "tucking in" the raised EA, affecting only functional projections.

(157) [$_{CP}$ C [$_{AgrP}$ það mundi [$_{TP}$ t(það) t(mundi) [einhver hafa …]]]]
                there would   someone have

Notice that matters become even more puzzling when we consider that in expletive constructions with unaccusatives and passives the word order is very different (McGinnis 1998: 152): the IA can stay in a postverbal position.

(158) Það   hafa   aldrei farist sjómann.
        there   have   never died   sailors
        'Sailors have never died.'

The question now is why the associate must raise in TECs but not in unaccusatives. The answer is relatively straightforward within my assumptions: with an unaccusative v(Ø), the expletive can merge in Spec,v. If so, 'sailors' only needs to move to Spec,V. The resulting word order is entirely predicted:

(159) [$_{CP}$ C [$_{AgrP}$ það hafa [$_{TP}$ t(það) t(T) [$_{vP}$ t(það) farist [$_{VP}$ sjómann t]]]]]
                there have   died   sailors

I return now to a loose thread left over from section 4.7 and Chapter 1: the appearance of 'there' in raising constructions:

(160) Það   þóttu   mergir   vera gáfaðir í   þessum bekk.
        there   seemed.pl many.NOM be   gifted   in   this   class
        'Many seemed to be gifted in this class.'   (=90)
                                                        Hrafnbjargarson (p.c.)

Recall that this datum is crucial to decide among our theoretical options. Chomsky argues that (161) is ungrammatical because of the Merge-over-Move principle that preempts complex operations (Move) over simple ones (Merge). In (161) 'a monk' is raised to Spec,*to* when Merge of the expletive is also available (recall that my account of (161) in section 4.7 is completely different, this sentence violates the Case filter because 'a monk' is too far from a Case assigner):

(161) *There is likely a monk to be t in the cloister.   (=78)

So, why is (160) grammatical? In a brief remark, Chomsky (2000: 105)

links the grammaticality of (160) to the presence of TECs in Icelandic. In other words, the DP would raise to a position intermediate between Spec,T and Spec,v within the subordinate clause and the expletive would then merge into Spec,T^{def}. This makes a clear empirical prediction: the DP should stay within the subordinate clause. This prediction is not confirmed: the DP must move into the matrix clause. As mentioned, it is obligatorily to the right of the highest auxiliary:

(162) a. Það   mundu   margir hafa virst   þekkja   Maríu.
         there would.3rd.pl many have seemed   know Mary
         'Many would have seemed to know Mary.'
     b. *Það mundu hafa margir virst þekkja Maríu.
     c. *Það mundu hafa virst margir þekkja Maríu.

<div align="right">Sigurðsson (p.c.)</div>

It seems clear that *margir* has moved to a fairly high position while the simpler operation of expletive Merge is delayed to the last minute. Merge-over-Move is not confirmed empirically.

(162) tells us that *það* cannot merge with nonfinite T'. Recall that an expletive can merge in Spec,T only if the ϕ-features of T formed a separate category and the latter can only happen, I surmise, when the ϕ-features are "strong" enough. The ϕ-features that one finds in a nonfinite clause are, in an intuitive way, not strong, so they presumably cannot form an independent category and must be associated with T. Since T's [N] is already satisfied by the ϕ-features, an expletive cannot merge in that position. In (162a), the expletive is merged in the matrix Spec,T^{fin} and the EA has raised to the spec of the complement of T^{fin}. In (162b) *margir* is too far from the expletive to be probed by it and therefore the Case filter is violated.

(162c) is a more complicated example. This word order obtains if the expletive merges in Spec,v($\emptyset$) (i.e. spec of v(EXP) without an EA). Nothing seen so far explains why the expletive cannot merge in Spec,v($\emptyset$) and this sentence remains unaccounted for in my model.

Not to end the chapter on this melancholy note, I finish by pointing out a correct prediction of my approach. Take the complement of the ECM predicate to be unaccusative, passive or the copula, i.e. a v($\emptyset$) without an EA. Since the expletive can merge in the lower Spec,v, it should be possible again to leave the IA downstairs while the expletive raises all the way up to Spec,Agr. This prediction is confirmed:

(163) Það   mundi virðast hafa   verið   seldir   margir bátar.
      there   would seem   have   been   sold   many   boats
      'Many boats would have been sold.'

<div align="right">Sigurðsson (p.c.)</div>

4.10   Conclusions

This chapter has been an in-depth exploration of expletive constructions from a cross-linguistic perspective. New empirical evidence has been found for local Agree, spec-to-spec Move and Complex Dependencies, which provides further confidence that the path taken in the previous chapters is in the right direction. The necessity of lexical arrays/numerations and the Merge-over-Move principle has been revisited, found empirically lacking and alternative analyses have been proposed.

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