

1. Theoretical background

0. Introduction

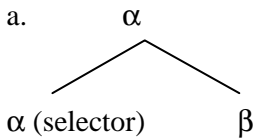
This chapter focuses on two basic issues. The first one concerns the theoretical model within which the analysis undertaken here will be carried out. The model in question is the MP of Chomsky (2000, 2001a, b). Only the aspects of the framework relevant for our analysis in subsequent chapters are examined. The second issue addressed in the chapter relates to various approaches to PRO and control within the MP. Two major lines of analysis which have emerged recently are scrutinised, i.e. the null Case approach to PRO and the movement theory of control. Their strengths and weaknesses are presented in sections 2.1 and 2.2, respectively.

1.0. Minimalist Program – an outline

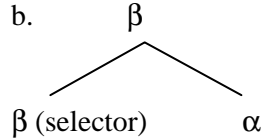
The Minimalist Program of Chomsky (2000, 2001a, b), just like its earlier versions (cf. Chomsky (1993) and Chomsky (1995b) chapter 4), is driven by the desire to discover to what extent a language is a ‘“perfect solution” to minimal design specifications’ (Chomsky (2000:93)). It aims to dispense with superfluous elements in representations and superfluous steps in derivations. These ‘least effort’ conditions predict that, on the one hand, convergent derivations must meet Full Interpretation and on the other, every operation takes place only if it is somehow motivated. A derivational approach to language is adopted, i.e. language is perceived as a step-by-step procedure for constructing expressions corresponding to <LF, PF> pairings. The derivation starts when a Lexical Array (LA) is selected from the Lexicon. There is just one-time selection from the Lexicon and it cannot be accessed any further. Then three operations affect lexical items from LA, namely Merge, Agree and Move. The operation Merge is responsible for structure building in the MP. It takes two lexical items α and β and forms from them a new object K, which consists of α and β and the label of either α or β . Chomsky (2000) extensively argues that labels are predictable. In the case of substitution (or set-Merge, as Chomsky calls it), α and β are merged to satisfy the selectional properties of either α or β . Hence, it is the selector which projects and supplies its label for the newly formed object K, as in (1).

(1)

a.

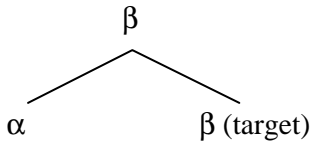


b.



In the case of adjunction (or pair-Merge) of α to β it is the target of adjunction which projects, i.e. β , and it supplies its label for K, as in (2).

(2)



Set-Merge is obligatory, as it is triggered by the need to satisfy the selectional properties of the selector, whereas pair-Merge is optional, as it does not involve any selection.¹ The selectional properties triggering set-Merge comprise thematic roles. Theta roles are not features and therefore cannot be checked and hence cannot license movement. Chomsky (2000:103) blocks movement into a theta-position by postulating the following condition:

(3)

Pure Merge in θ -position is required (and restricted to) arguments.²

As a result of (3) all arguments are merged in their theta positions and cannot reach these positions via movement. As will be shown in section 2.2, this approach to theta roles has been criticised and rejected by some linguists (cf. Hornstein (1999, 2001, 2003)).

Another operation affecting lexical items in the course of derivation is Agree. Agree is responsible for erasure of the uninterpretable features of α , the Probe,

¹ A detailed analysis of how adjunction operates is carried out in Chomsky (2001b) and is not presented here, as it does not bear on our analysis of PRO and control.

² Pure Merge is defined by Chomsky as Merge that is not a part of Move. Chomsky (2001b) mentions external and internal Merge, where the former corresponds to pure Merge in Chomsky (2000) and the latter to Merge as a part of Move. The latter kind of Merge will be discussed while presenting Move.

and β , the Goal, and thus replaces the feature checking of Chomsky (1993, 1995a,b). The conditions under which Agree operates are stated in (4):

(4)

- (i) Probe (α) as well as Goal (β) must be active for Agree to apply.
- (ii) α must have a complete set of ϕ -features (it must be ϕ -complete) to delete uninterpretable features of the paired matching element β .³
(Chomsky (2001a:6))

Active in (4i) means ‘with uninterpretable feature(s)’ and matching is understood to be identity of a feature, not a value of that feature. Chomsky (2000) suggests that structural Case should be treated as a single undifferentiated feature; its manifestation being dependent on the interpretable feature of the Probe, where finite T determines nominative Case, v - accusative Case, and non-finite T – null Case on the Goal. The same refers to the uninterpretable ϕ -features of the Probe, which are determined by the interpretable ϕ -features of the Goal and hence can be treated as undifferentiated as to their value. It is the task of Agree to value and delete the uninterpretable features of the Probe and the Goal. What is also worth noting is that uninterpretable features delete as a unit, i.e. either all features delete or none. This excludes the possibility of one Probe agreeing with two or more different Goals. However, not every matching pair triggers Agree. In fact Agree is subject to the Minimal Link Condition (henceforth MLC) stated in (5) below:

(5)

Minimal Link Condition

- a. The Probe P undergoes Agree with the Goal G when there is no closer potential Goal G’.
- b. G’ is a closer Goal than G if G is c-commanded by G’.

In a structure such as (6) below the MLC blocks Agree between P and Spec if XP is a potential Goal for the Probe P, since XP c-commands Spec and is therefore closer to P.

³ The reason why the Probe must be ϕ -complete to delete uninterpretable features of the Goal will be presented when discussing the operation Move.

(6)

[_{ZP}...P...[_{HP} XP [Spec [H YP]]]]

The search space between the Probe and the Goal is restricted, i.e. the Probe looks for a matching Goal within its c-command domain. Furthermore, the notion of equidistance, whose formulation is presented in (7), has a role to play in determining locality.

(7)

Terms of the same minimal domain are equidistant to probes.

(Chomsky (2000:122))

The minimal domain of a head H is a set of terms immediately contained in projections of H, where H immediately contains α if some segment of H immediately dominates α . For instance, in a structure like (6) above, XP, Spec and YP belong to the minimal domain of H and hence are equidistant to the Probe P. Equidistance guarantees that in a multiple specifier structure both specifiers can be targeted by some higher Probe.

Let us illustrate the application of Agree with the following example:

(8)

a. Mary should meet John.

b. [_{TP} T+should [_{vP} Mary v+meet John]]

In (8b) v has uninterpretable ϕ -features, hence it serves as an active Probe, which looks for a matching Goal within its c-command domain. The DP *John*, with the uninterpretable Case feature and interpretable ϕ -features, functions as an active matching Goal for this Probe. As a result of Agree holding between the Probe v and the Goal *John* the uninterpretable ϕ -features of v get deleted as they match the interpretable ϕ -features of the DP, and the uninterpretable Case feature of the Goal gets deleted under matching of ϕ -features. Consequently, Case in this version of the MP is treated as a reflex of agreement in ϕ -features (cf. George and Kornfilt (1981)). Another Agree relation in (8b) holds between the active Probe T, with uninterpretable ϕ -features, and the active Goal *Mary*, with an uninterpretable Case feature. This Agree operation leads to the deletion of the uninterpretable ϕ -features of T under matching with the interpretable ϕ -features of the DP. The uninterpretable Case feature of the DP is deleted as a result of the match in ϕ -features, yielding a convergent derivation.

The definition of Agree in (4i) makes reference to interpretability, i.e. the Probe and the Goal match if some features are valued (interpretable) for the Goal and unvalued (uninterpretable) for the Probe. However, there exist cases in which a valued uninterpretable feature participates in Agree with an unvalued uninterpretable feature. This scenario arises in control structures as analysed by Landau (2000) and is illustrated in detail in Chapter II (cf. Chapter II, footnote 32).

Although in order for Agree to apply, the Probe and the Goal must match, not every matching pair undergoes Agree. If the Goal is inactive, i.e. lacks uninterpretable features, it cannot delete the uninterpretable features of the matching Probe (cf. (4i)). However, an inactive Goal can still induce Defective Intervention Effects, i.e. in a structure such as (9) below, where $>$ stands for c-command and both β and γ match the Probe α , α and γ cannot undergo Agree even if β is inactive.

$$(9) \quad \alpha > \beta > \gamma$$

We will return to Defective Intervention Effects and their illustration when describing the operation Move.

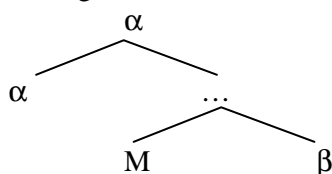
In addition to functioning as an independent operation, Agree can also act as a composite part of Move. Move in Chomsky (2000) is regarded as a complex operation consisting of Agree, Pied-Piping and Merge (the so-called internal Merge, cf. footnote 2). Since Move is a more complex operation than its composite parts, and since simpler operations are preferred to more complex ones, in accordance with good design conditions, Merge or Agree (or their combination) pre-empts Move. In other words, Move is a last resort operation, which applies if no other operation is possible. Move applies under the following conditions:

- (10)
- a. A Probe P in the label L of α locates the closest matching Goal in its domain.
 - b. A feature G' of the label containing Goal selects a phrase β as a candidate for pied-piping.
 - c. β is merged to a category K. (Chomsky (2000:135))

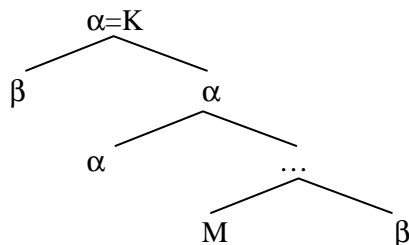
In (10) P and G' are uninterpretable. If G' is active, the uninterpretable feature of P deletes.⁴ G' also deletes but only after step (10b) has been completed. Finally, a new object K is formed by merging β to α , which retains the label of α . The application of Move is schematised in (11) below:

(11)

a. Target structure



b. Result structure



In (11b) β is merged to α leaving a copy in its original position. Since Agree is a composite part of Move, Move, just like Agree, must satisfy the MLC stated in (5) above (cf. (10a)).⁵

As has already been noted, the operation Move must be motivated. In the latest version of the MP, Move takes place to check the EPP-feature of C, v or T. The EPP-feature is understood as a selectional feature of C, v and T, all of which require a filled specifier position. This is reminiscent of the way the EPP is regarded in the GB theory of Chomsky (1981). However, it is not the case that anything can satisfy the EPP-feature of the Probe. It rather seems that anything related in terms of features to the head equipped with the EPP-feature can satisfy it. Hence, the EPP-feature is not like other features in that it cannot be checked independently, but rather depends on the prior establishment of Agree (cf. (10a)). The EPP-feature is obligatory for T and optional for C and v. The presence of this feature on T guarantees that [Spec, TP] must be filled (either by merging an expletive or by Move)⁶, while the EPP-feature on C and v is responsible for *wh*-movement and object shift, respectively. EPP-features are

⁴ Chomsky uses the term Suicidal Greed to refer to the deletion of the features of the Probe that render the Probe active.

⁵ The MLC subsumes the Shortest Movement Condition of Chomsky (1993) specifying that movement of type α (i.e. either A- or A'-movement) cannot skip a potential landing site of type α . Both the Shortest Movement Condition and the MLC make it possible to derive the Relativised Minimality effects of Rizzi (1990) within the MP.

⁶ Merge of a non-expletive into this position is not available in accordance with (3), which predicts that arguments are merged only in their theta-positions.

uninterpretable, though they establish configurations that affect interpretation. Unlike in earlier versions of the MP (cf. Chomsky (1995b)), Move never takes place to check Case. Thus, Case is checked without ‘dislocation’ via Agree and Move takes place only in order to check the EPP-feature. Chomsky argues that the EPP-feature on T is universal, while the EPP-feature on C/v varies parametrically across languages.⁷ To see how Move operates let us consider example (12a), with a simplified representation in (12b).

- (12)
- a. An unpopular candidate was elected. (Chomsky (2000:122))
 - b. T be elected an unpopular candidate.

T in (12b) has two uninterpretable features, i.e. ϕ -features and the EPP-feature. The ϕ -features of T make it an active Probe that looks for a matching Goal within its c-command domain. There is just one active Goal within this domain, i.e. the DP *an unpopular candidate*, with an uninterpretable Case feature. T and the DP undergo Agree as a result of which the uninterpretable features of both the Probe and the Goal delete under matching. The EPP feature of T must also be satisfied. The EPP-feature of T is satisfied by pied piping of the phrase *an unpopular candidate*, determined by the Goal of the Probe T (cf. (10a) and (10b)). This phrase merges in the Spec of TP, thus eliminating the uninterpretable EPP-feature of T (cf. (10c)).

Let us now return to condition (4ii) stating that the Probe must be ϕ -complete to be able to delete uninterpretable features of the Goal. Chomsky (2000, 2001a) draws a distinction between a ϕ -complete Probe and a defective Probe, lacking some ϕ -feature. He postulates this distinction in order to account for raising and ECM structures, such as (13) below:

- (13)
- a. Mary is likely to come.
 - b. We expect Mary to come.

The sentences above have the following representations:

⁷ However, in the literature numerous arguments have been presented that the EPP-feature on T can and should be eliminated. See, for instance Martin (1999) and Bošković (2002). Haeberli (2002) offers an interesting attempt at deriving the EPP from the checking of categorial features.

(14)

- a. [T is likely [_{TP} T to Mary come]]
- b. [We v+expect [_{TP} T to Mary come]]

If the embedded T were ϕ -complete, then it would delete the uninterpretable Case feature of *Mary* in both (14a) and (14b), thus making it inactive and hence unable to raise to the matrix clause (or ‘frozen in place’ in Chomsky’s (2000) terminology). Consequently, there would be no way to derive structures like (13a) and (13b). Chomsky argues that T in raising structures and in ECM constructions is defective in that, instead of a full set of ϕ -features, it has just a person feature. Being ϕ -incomplete, T cannot value and delete the Case feature of the Goal *Mary* in (14a) and (14b), which remains active and hence capable of entering another Agree relation and undergoing further movement. In (14a) and (14b) *Mary* raises to the Spec of the embedded TP to check the EPP-feature of T and it also checks T’s person feature, but its own Case feature remains unchecked by the defective T. Having raised to the Spec of the embedded TP, *Mary* in (14a) becomes the closest Goal for the matrix T, which is ϕ -complete and therefore deletes the uninterpretable Case feature of the DP. The DP *Mary* raises to the Spec of the matrix TP, checking the EPP feature of T. The derivation converges with all uninterpretable features deleted. In (14b) an analogous situation arises with a different last step, in which the matrix v, not the matrix T, triggers movement of the DP to its specifier to satisfy the EPP-feature of v.⁸ Unlike T in raising and ECM structures, the control T is ϕ -complete and therefore control structures lack an escape hatch for A-movement.

Although Move is feature-driven in the latest version of the MP, the movement of formal features as in Chomsky (1995b) has been eliminated. Doing away with feature movement in Chomsky (2000) leads to elimination of covert

⁸ An analysis of ECM along the lines presented in the text suggests that English has overt object shift. Assuming that this is the case, however, produces the wrong word order for English. This issue has been resolved by Lasnik (1999) by adopting the split VP hypothesis with object moving to [Spec, AgroP] sandwiched between vP and VP. This solution cannot be adopted in the most recent version of the MP, in which Agr projections have been dispensed with. Consequently, the proper treatment of ECM constructions still remains an issue to be dealt with.

movement.⁹ Instead of covert movement there is Agree at a distance, as in (15a) below, with the schematic representation in (15b):

- (15)
- a. there was elected an unpopular candidate (Chomsky (2000:119))
 - b. [_{TP} there was [_{VP} v+elected an unpopular candidate]]

In (15b) the EPP-feature of T is satisfied by merging the expletive *there* into [Spec, TP], not by moving the DP *an unpopular candidate*, as in (12a).¹⁰ The expletive has an incomplete set of ϕ -features, i.e. it only has a person feature. Because of being ϕ -incomplete, the expletive cannot value the ϕ -features of T, which looks for another Goal, namely the DP *an unpopular candidate*. The DP is ϕ -complete and hence values the uninterpretable ϕ -features of T, and has its uninterpretable Case feature checked as a reflex of agreement in ϕ -features. This way the uninterpretable ϕ -features of T get eliminated without invoking covert movement of the associate to the expletive, a solution which has been problematic ever since it was proposed by Chomsky (1986a) (cf. Lasnik (1992)). With the elimination of the overt/covert movement distinction there is no need to appeal to feature strength, a concept held responsible for overt movement in earlier versions of the MP (cf. Chomsky (1995b)).

⁹ Chomsky's (2000:147, footnote 71) argument against covert movement runs as follows: if covert movement affects binding domains, then the unavailability of anaphor binding in (i) below argues against the covert movement of *many men* into the matrix clause.

(i) * There seem to each other [to be many men in the room].

A similar argument is presented by Brody (1995:133) on the basis of instances of *wh*-movement like (ii):

(ii) * John wondered when Mary saw which picture of himself.

However, Chomsky (2001b) reintroduces covert movement, which, nonetheless, is not reduced to feature movement.

¹⁰ The Merge of expletive in (15a) is preferable to the movement of the DP, as it satisfies the economy condition Merge over Move. The DP must move in (12a), as the expletive is not present in the initial LA.

The problem of Defective Intervention Effects, relevant for Agree, surfaces also in the case of Move. It seems that the trace of A-movement does not give rise to Defective Intervention Effects.¹¹ This is illustrated in the Icelandic sentences in (16), quoted after Boeckx (2003:5):

(16)

- a. Mér virðast [_{t_{mér}} þeir vera skemmtilegir].
 me-DAT seem-3PL they-NOM be interesting
 ‘It seems to me that they are interesting.’
- b. *Mér fannst /*fundust henni leidast þeir.
 me-DAT seemed-3SG/*seemed-3PL her-DAT bore they-NOM
 ‘I thought she was bored with them.’

In (16a) the verb agrees in number with the embedded clause subject, whereas this is not possible in (16b). The agreement between the verb and the embedded subject in (16b) is blocked by the phrase with ϕ -features, namely *henni* ‘her’. In (16a) a phrase with ϕ -features also intervenes between the verb and the subject *þeir* ‘they’, but this phrase is a trace of A-movement, not a head of an A-chain as in (16b).¹² Consequently, it seems that only the head of A-movement, not a trace (or copy) of A-movement, blocks Agree relations and hence triggers Defective Intervention Effects.

Chomsky (2000, 2001a, b) argues that derivation proceeds by phase, where phases correspond to vPs and CPs. Chomsky takes phases to be propositions, i.e. verb phrases with a full complement of theta-roles, or full clauses with tense and force specifications.¹³ Neither TPs lacking force specifications nor unaccusative/passive VPs with a non-thematic external argument are phases. Chomsky puts forward the Phase Impenetrability Condition (henceforth PIC) stated in (17):

¹¹ Chomsky (2000:108) defines A- and A'-movement as follows: in A-movement the head H triggering movement must have ϕ -features, while in A'-movement the head H must have features of the peripheral system, such as topic, focus, etc.

¹² An English example analogous to (16a) is given below:

(i) There_i were likely [_{t_i} to be several men in the room]. (Grewendorf (2002:182))

In (i) the trace of the expletive does not block agreement between the verb and the associate of the expletive in the embedded clause.

¹³ Chomsky (2001b) calls CPs and vPs with all theta roles assigned strong phases, whereas vPs lacking external arguments (i.e. unaccusative and passive vPs) are referred to as weak phases.

(17)

Phase Impenetrability Condition

In phase α with head H, the domain of H is not accessible to operations outside α , only H and its edge are accessible to such operations.

(Chomsky (2000:108))

In (17) the domain of head H corresponds to the complement of H, and the edge of H to one or more specifiers of H or to elements adjoined to HP. In accordance with the PIC in (17), the head itself and its specifiers or elements adjoined to HP can be accessed by operations from within a higher phase, but not the complement of H. The PIC imposes a strong form of Subjacency by requiring that Move always proceeds through the edge of the phase in a successive cyclic manner. In the case of A-movement, cyclicity should follow from the theories of Case/agreement and locality. As for A'-movement, its successive cyclic operation must be stipulated.¹⁴ Example (18) below demonstrates the successive cyclic application of *wh*-movement.

(18)

a. What did Mary see in the theatre?

b. [_{CP} what did Mary [_{vP} t_{what} v+see t_{what} in the theatre]]

There are two phases in (18b), namely vP and CP. In order to satisfy the PIC *wh*-movement must first proceed to the edge of vP, from where it can further be moved to the Spec of the higher phase, i.e. CP.¹⁵ *Wh*-movement in (18) and elsewhere is triggered by the EPP-feature of C.¹⁶

Furthermore, the notion of a phase has a role to play in cases like (19):

(19)

There is a possibility [that proofs will be discovered].

(Chomsky (2000:103))

¹⁴ Although there are languages, like Irish, which signal the successive cyclic character of *wh*-movement by means of the form of C.

¹⁵ This again implies that English has object shift but only as a composite part of the successive cyclic *wh*-movement (cf. footnote 8).

¹⁶ Chomsky (2000:128) argues that *wh*-phrases possess an uninterpretable *wh*-feature and an interpretable Q feature, which matches the uninterpretable Q feature of the Probe C. The *wh*-phrase remains active until the feature [wh] is checked and deleted.

The above example creates the problem of why the Merge of *there*, being a simpler operation, does not pre-empt Move and hence block the movement of the DP *proofs* (cf. footnote 10). Chomsky suggests the following way of dealing with this problem: at each stage of the derivation a subset of LA is accessed, i.e. LA_i , which comprises exactly one occurrence of C or v, i.e. it corresponds to a phase. In (19), then, the DP *proofs* appears within the LA corresponding to the embedded CP phase, in which no expletive appears, as shown in (20):

- (20)
- [_{CP} that [_{TP} will be discovered proofs]]

Thus, the only possible way to satisfy the EPP-feature of the embedded T is by moving the DP *proofs* to its specifier. The expletive appears in the LA corresponding to the matrix CP phase, and it merges in the Spec of the matrix TP to satisfy T's EPP-feature. By restricting LA to phases, we can derive sentences like (19) without any complications. Thus, a cyclic approach to accessing lexical arrays seems to be justified.

So far it has been demonstrated that derivations are cyclic and so is the access to lexical arrays. Chomsky further argues that the operation Spell-Out is cyclic. Chomsky notes that the concept of Spell-Out applying at a single point in the derivation (cf. Chomsky (1995b)) is problematic, since deleted (uninterpretable) features must be invisible at LF and inaccessible for computation, but nonetheless they must be accessible to the phonological component. This creates a paradox: pre-Spell-Out the features of the Probe must delete when checked, but they must remain until Spell-Out. In order to eliminate this paradox, Chomsky suggests that Spell-Out operates cyclically at the phase level. Under this concept of Spell-Out, deleted features are erased, but only after they are sent to the phonological component together with the rest of the structure at the phase level. This concept of Spell-Out presupposes that there is only one cycle and there are no distinct LF and phonological cycles. The single Spell-Out thesis of Chomsky (1995b) maintains the distinction between overt (pre-Spell-Out) and covert (post-Spell-Out) operations. With cyclic Spell-Out, the distinction between overt and covert operations collapses, as there is only one cycle and all operations are cyclic.¹⁷

The effect of the cyclic Spell-Out, combined with the PIC in (17), is that the domain of the head H, i.e. its complement, can be spelt out by the phonological

¹⁷ Chomsky (2001b) makes an attempt at dealing with late insertion of adjuncts, a well-known exception to cyclicity.

component within its own phase, without waiting till the next phase. This is so because the domain of H is inaccessible to operations from outside its phase (cf. (17)). The edge of H, however, can be affected by operations from a higher phase, and therefore the position where it is spelt out is determined at a higher phase. Chomsky (2001:13) puts forward the following condition:

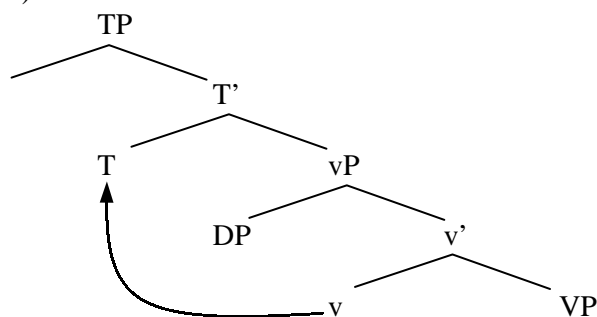
(21)

Phase₁ is interpreted/evaluated at the next relevant Phase₂.

The condition in (21) presupposes that not only phonological realisation is determined at a higher phase, but also the evaluation of the derivation for the MLC and cyclicity. Successive cyclic movement is unproblematic for (21), since it is based on the movement of a specifier of one phase to the specifier of the next higher phase, and the element that undergoes movement is spelt out in the position where the movement stops. The condition in (21) has implications for A'-movement, namely it predicts that A'-movement proceeds from [Spec, CP₁] to [Spec, CP₂] only if no vP phase (i.e. strong vP phase, cf. footnote 13) intervenes. Otherwise successive cyclic A'-movement must proceed via [Spec, vP] (cf. example (18) above).¹⁸

Evaluation of the derivation for cyclicity at the phase level as stated in (21) also makes predictions for head movement. Consider (22) below:

(22)



¹⁸ Boeckx (2003) opts for a different concept of cyclicity, which does not make reference to 'spurious' intermediate EPP-features. He follows Takahashi (1994) in assuming that successive steps are due to the requirement that each link of a chain be as short as possible. This requirement forces X which undergoes movement of type Y to stop at every position Y on its way to the ultimate landing site, independently of feature checking.

In (22) *v* moves to *T*. This movement takes place from within a *vP* phase to a non-phase *TP*, and hence the question of cyclicity does not arise. However, if one more head is present, as in (23) below, the problem arises of how to block a violation of the Head Movement Constraint.

(23)

[_{CP} ...*C* [_{TP}...*T* [_{vP} α [*v* *VP*]]]]

The PIC in (17) allows direct movement of *v* from the *vP* phase to the next higher phase, i.e. *CP*, skipping over the intervening head *T*. In order to avoid violations of the Head Movement Constraint some additional restrictions have to be invoked.^{19 20} The problem of how to derive the Head Movement Constraint effects disappears if one follows Chomsky (2001a) in treating head movement as a process that takes place in the phonological component, not in narrow syntax. Chomsky's major argument supporting this claim is that the semantic effects of head movement are slight or non-existent, unlike the effects of *XP*-movement. This statement is not uncontroversial, since there exist cases in which head movement affects semantics, for instance, *V2* effects in German and other languages (cf. Grewendorf (2002)), and incorporation processes in the sense of Baker (1988).

Whereas Merge is indispensable in any recursive system, other operations such as Agree and Move seem to be *prima facie* imperfections and hence require empirical motivation. However, Chomsky (2001a,b) argues that the 'displacement' operation has external motivation in terms of distinct kinds of semantic interpretation and processing. Likewise, Agree, which is a composite part of Move, is not an imperfection. Consequently, Chomsky takes Agree and Move to be only apparent imperfections, and argues that they in fact constitute an optimal solution to minimal design specifications.

¹⁹ One can, for instance, appeal to the fact that the intervening head triggers Defective Intervention Effects, and thus derive the Head Movement Constraint. The problem is, however, what feature triggers head movement and hence, what underlies Defective Intervention Effects.

²⁰ Head movement gives rise also to other problems. One relates to the fact that it violates the Extension Condition. Various ways of dealing with this problem have been proposed in the literature, cf., for instance, Bobaljik and Brown (1997) and Nunes (2001). Another problem concerns the Chain Uniformity Condition, which head movement regularly violates, as the lower copy is non-maximal (cf. (22)), whereas the upper copy is maximal.

2.0. Minimalist approaches to PRO and control

This section investigates two alternative approaches to PRO and control in the MP. One suggests analysing PRO in terms of Case theory, where PRO is regarded as bearing a special Case, the so-called null Case (cf. section 2.1). The other eliminates PRO from the inventory of empty categories altogether by postulating the treatment of PRO as a trace (copy) of A-movement (cf. section 2.2). This way control structures and raising structures become indistinguishable. The section presents a critical overview of these two major approaches and their subsequent elaborations.

2.1. *PRO and null Case*

This section investigates the Case-theoretic approach to PRO originated by Chomsky and Lasnik (1993) and developed, among others, by Martin (1996, 2001) and Bošković (1996, 1997).²¹ These three analyses are scrutinised in detail and afterwards some critical remarks concerning the Case-theoretic approach are presented.

2.1.1. *Chomsky and Lasnik's (1993) analysis*

Chomsky and Lasnik (1993) observe that PRO as perceived within the GB theory creates a problem for the Visibility Condition stated in (24):

(24)

An A-chain is visible for θ -marking if it contains a Case position (necessarily, its head).

Although PRO is θ -marked, the chain headed by it does not contain a Case position. The reason why this is so is that, in accordance with the PRO Theorem (cf. (4) in Introduction), PRO is ungoverned and since Case is assigned only under government, PRO bears no Case. In order for PRO to be subsumed under the Visibility Condition it is necessary to formulate it in a new, disjunctive way, i.e.:

²¹ The analysis of control in English undertaken in Chapter II is also based on the Case-theoretic approach to PRO.

(25)

An A-chain is visible for θ -marking if it contains a Case position (necessarily, its head) or is headed by PRO.

However, the disjunctive formulation above does not explain why the chain headed by PRO is exempt from Case marking; all it does is simply states the problem.

Furthermore, the binding-theoretic approach to PRO advocated in the GB theory cannot account for the fact that PRO, just like other arguments, cannot move from a Case marked position.²² A comparison of the data in (26) with those in (27) makes this point clear:

(26)

- a. * We want John_i to strike t_i [that the problems are insoluble].
- b. * We want John_i to seem to t_i [that the problems are insoluble].

(27)

- a. * It is rare for it PRO_i to strike t_i [that the problems are insoluble].
 - b. * It is rare for it PRO_i to seem to t_i [that the problems are insoluble].
- (Chomsky and Lasnik (1993:118))

Examples (26) show that the argument DP *John* cannot move from a Case marked position, while sentences (27) demonstrate that the same is true of PRO. PRO cannot move from a Case marked position even in order to escape government. In (27a) and (27b) PRO appears in an ungoverned position heading a θ -marked chain, but nevertheless both sentences are illegitimate.

Chomsky and Lasnik suggest that the anomalous behaviour of PRO just described ceases to be anomalous if it is assumed that PRO, like other arguments, bears Case.²³ If PRO has Case, then the non-disjunctive formulation of the Visibility Condition in (24) can be maintained and the ban on PRO's movement from a Case position can be explained in terms of Last Resort, in the same way as for other arguments. However, the Case borne by PRO is different from other Cases. Chomsky and Lasnik call it null Case and propose that it is

²² However, PRO can move from a non-Case marked position, as shown in (i):

(i) John wanted [PRO_i to be greeted t_i by the President].

²³ Sigurdsson (1991) entertains the idea that PRO is Case marked in Icelandic, but concludes that PRO is governed in this language.

checked in the specifier-head relation with the non-finite T (or with *-ing* in clausal gerunds). Since PRO cannot bear any other Case than null, the ungrammaticality of sentences like (28) follows:

(28)

- a. * Mark noticed PRO.
- b. * Mark believes [PRO will visit him].
- c. * Mark noticed pictures of PRO on the table.

Moreover, PRO is the only DP compatible with null Case, which explains why sentences like (29) below are ungrammatical:

(29)

- a. * Mary tried [John to learn physics].
- b. * Mary persuaded John [Mark to learn physics].

The main advantage of the Case-theoretic approach to PRO is that by associating PRO with Case, it makes it possible to treat PRO on a par with other arguments, obeying the Visibility Condition as well as Last Resort. Another merit of this approach is that it does not impose the necessity of analysing PRO as a pronominal anaphor, in contradistinction to the binding theoretic approach. On the contrary, by deriving PRO's distribution from the domain of Case, it opens up a possibility of regarding PRO either as an anaphor or a pronominal. This kind of treatment for PRO may be justified in the light of the fact that obligatorily controlled PRO behaves in a way similar to anaphors, whereas non-obligatorily controlled PRO shows some properties typical of pronouns.²⁴

The problem with Chomsky and Lasnik's analysis is that it is unable to account for PRO's distribution, as it predicts that PRO can be found in the subject position of any infinitival. This prediction, however, is not borne out, as shown in (30):

²⁴ The treatment of obligatorily controlled PRO as an anaphor and of the non-obligatorily controlled one as a pronoun is advanced by Bouchard (1984, 1985), Koster (1984) (cf. Introduction), and Hornstein (1999, 2001, 2003) (cf. section 2.2.1). However, many linguists oppose the view that non-obligatorily controlled PRO represents a pronoun (cf. section 2.2.2 and Chapter II, section 3.3).

(30)

- a. * Mark believes [PRO to be true].²⁵
- b. * It seems to Mark [PRO to have seen the play].

Since Chomsky and Lasnik's account fails to rule out sentences like (30), Martin (1996, 2001) attempts to modify their analysis to make it applicable also to the problematic sentences in (30). The details of Martin's proposal are presented in the next section.

2.1.2. *Martin's (1996, 2001) account*

The core of Martin's (1996, 2001) proposal lies in postulating a difference between the non-finite T in control infinitivals, and the non-finite T in ECM and raising infinitivals. Following Stowell (1982), Martin argues that only control infinitivals are specified for tense. More precisely, they express a time frame that is unrealised with respect to the tense of the matrix clause. ECM and raising infinitivals, on the other hand, are unspecified for tense and have their time frame determined by the time frame of the main clause. Consequently, Martin suggests, in a way analogous to Stowell (1982), that control infinitivals are [+tense], whereas raising and ECM infinitivals are [-tense]. He claims that only T with the features [+tense, -finite] can check null Case, while T with the features [-tense, -finite] cannot check any Case. This explains why PRO, which bears only null Case, can appear in the subject position of control infinitivals, but not in the subject position of raising or ECM predicates. This way Martin's analysis provides an adequate account of sentences (30a) and (30b), which are problematic for Chomsky and Lasnik's (1993) analysis.

Martin provides evidence based on the occurrence of eventive predicates that the tense contrast between control infinitivals on the one hand, and ECM and raising predicates on the other, is real. He notes, following Enç (1990), that eventive predicates exhibit variables which have to be bound by tense or a modal /temporal operator. If control infinitivals are [+tense], they should allow eventive predicates, whereas the two remaining predicate classes, which are [-tense], should resist eventive predicates. This prediction is borne out by the data, as can be seen in (31):²⁶

²⁵ Watanabe (1993) argues that the ungrammaticality of sentences like (30a) may follow from the fact that PRO cannot check the accusative Case feature of the verb *believe*. Although this explanation may be valid for (30a), it does not extend to (30b).

²⁶ Martin (2001, footnote 20) notes that the following are grammatical:

(31)

- | | |
|--|--------------------------------|
| a. Geno tried [PRO to win the game]. | control |
| b.*Geno believed [Rebecca to win the game]. | ECM |
| c.*The defendant seems to the DA [to steal the car]. | Raising
(Martin (2001:150)) |

The possibility of having eventive predicates in control infinitivals, as in (31a), strongly supports the claim that they are tensed, in contradistinction to ECM and raising infinitivals, which are tenseless and therefore cannot host eventive predicates (cf. (31b) and (31c)).

Martin's proposal gets independent support from VP-ellipsis facts. Lobeck (1991) and Saito and Murasugi (1990) argue that ellipsis of the complement is possible in case the functional head undergoes Spec-head agreement, e.g.:

(32)

- a. John likes reading and [_{IP} Mark [_I does [_{VP} e]]] too.
- b.*John thinks that Mark likes reading but I don't believe [_{CP} that [_{IP} e]].

In (32a) I (or T) undergoes Spec-head agreement with its subject *Mark* and hence the ellipsis of its complement is possible. In (32b), on the other hand, the C *that* does not enter a Spec-head relation with any element and therefore its complement cannot be affected by ellipsis. Let us now check how VP-ellipsis applies in the infinitival clauses under scrutiny. The sentences in (33) below show that VP-ellipsis can operate in control structures (cf. (33a)), but is banned from ECM constructions (cf. (33b)):

(33)

- a. Kim isn't sure she can [_{VP} solve the problem], but she will try [PRO [_T to] [_{VP} e]] as well.
- b.*I consider Pam to [_{VP} like soccer], and I believe [Rebecca [_T to] [_{VP} e]] as well.
(Martin (2001:154))

(i) a. Geno believed [Rebecca to have won the game].

b. The defendant seems to the DA [to have stolen the car].

He notes that the predicates in (i), in contradistinction to those in (31b) and (31c), are perfective and can thus be considered stative (cf. Enç (1990)).

Martin argues that the contrast between control and ECM infinitivals with respect to VP-ellipsis follows naturally from his analysis. According to him, control infinitives, unlike ECM ones, are tensed and hence can check PRO's null Case in the Spec-head relation. Since the infinitival *to* in (33a) undergoes Spec-head agreement with the PRO subject, it can license ellipsis of its complement. No Spec-head agreement obtains between the Inflection *to* in ECM constructions like (33b) and the DP *Rebecca* (which has its Case checked by the matrix verb) and hence the VP ellipsis is not possible. Thus, the contrast between (33a) and (33b) provides evidence in support of Martin's account.

Another point to be mentioned in relation to Martin's account concerns *want*-type verbs, as in (34):

(34)

a. John wants [PRO to win].

b. John wants [for his team to win].

c. John wants [his team to win].²⁷ (Martin (2001:155))

Verbs of this type exhibit the striking property of having either PRO or a lexical DP as their subject. Martin argues that the infinitival T in sentences like (34) above must be able to check null Case, as evidenced by the fact that it can license PRO (cf. (34a)). He further claims that even the overt subject in sentences like (34b) and (34c) bears null Case checked by the non-finite T.²⁸ This claim is supported by the fact that *want*-type verbs, no matter whether used with PRO or with the lexical DP allow VP-ellipsis, as illustrated in (35):

²⁷ (34c) is not an instance of ECM, as supported by the fact that the subject of the non-finite clause cannot be passivised:

(i) * The team was wanted to win.

²⁸ *Want* in (34c) is different from *believe* in (33b) in that only the former, but not the latter, allows the VP-ellipsis within its non-finite complement. The contrast is illustrated in (35c) and (33b). Since the verb *want* allows the VP-ellipsis within its non-finite complement, the non-finite T must undergo Spec-head agreement with its subject and thus checks its Case. In contrast, the verb *believe* does not license VP-ellipsis within its non-finite complement, which indicates that the non-finite T does not undergo Spec-head agreement with the ECM subject, and hence this subject must have its Case checked outside the non-finite clause.

(35)

- a. John wants to win but Jill doesn't want to [_{VP} e].
- b. John wants for his team to win whereas Jill wants for her team to [_{VP} e].
- c. John wants his team to win whereas Jill wants her team to [_{VP} e].

(Martin (2001:155))

Since the possibility of VP-ellipsis is dependent on T's checking Case in its specifier (cf. (33a)), the grammaticality of the above sentences indicates that T enters a checking relationship with its specifier also in (35b) and (35c), where the lexical subject occurs. The question arises why lexical subjects, marked for null Case, can co-occur with *want*-type verbs but not with other types of control verbs. Martin suggests that standard control infinitives like *try* disallow a lexical subject in their complements because the non-finite T lacks ϕ -features. If one assumes that PRO, unlike lexical DPs, lacks ϕ -features, then PRO is sufficient to check the null case of [+tense, -finite] T. Martin also assumes that *for* has ϕ -features but does not check Case. Under this assumption, the lexical subject in (34b) has its null Case checked overtly in the Spec-head relation with *to*, whereas its ϕ -features are checked covertly in the specifier of *for*, as schematised in (36) below:

(36)

- a. John wants [_{FP} for [_{TP} his team to [_{VP} t win]]].
- b. John wants [_{FP} his team for [_{TP} t to [_{VP} t win]]].

As for (34c), Martin assumes, following Chomsky (1981), that it contains the null counterpart of *for* and the derivation proceeds in a way analogous to that schematised in (36).²⁹

Hornstein (2003) points out some problems with Martin's account. Firstly, he notes that there exist perfectly acceptable raising constructions with embedded eventive predicates, such as (37) below:

²⁹ The impossibility of PRO co-occurring with either *for* or its null equivalent (i.e. ϕ_{for}), as in (i) below, follows from the fact that PRO lacks ϕ -features and hence cannot check the ϕ -features of *for*/ ϕ_{for} .

(i) * John wants [for PRO to win].

(37)

- a. Rebecca seemed to win the game right then.
- b. John appeared to take the wrong medicine.
- c. John is likely/certain/sure to eat a bagel. (Hornstein (2003:17))

The acceptability of the above sentences suggests that eventive predicates can be embedded with both control and raising predicates, but not ECM predicates (cf. (31b)). Consequently, the contrast between raising and control predicates that Martin tries to establish does not seem to hold. Martin (1996:80-105) notices the facts mentioned by Hornstein, but suggests that such cases represent control, not raising. Hornstein (2003) provides two arguments against treating the predicates in (37) as control verbs. On the one hand, he notes that the verbs in (37) can co-occur with idioms and expletives, as in (38):

(38)

- a. The shit appeared to hit the fan then.
- b. It seemed to start to rain exactly then.
- c. ? There appeared to enter several men at that very moment.
(Hornstein (2003:18))

If the predicates in question were control verbs, we would expect neither expletives nor idioms to be allowed in the matrix subject position in (38). The acceptability of the above sentences strongly suggests that they represent raising structures. Another argument in support of the same conclusion is based on passivisation. Hornstein observes that voice transparency holds for the predicates in (37) even if they co-occur with eventive predicates. This is illustrated in (39):

(39)

- a. The doctor seemed to then examine Mary.
- b. Mary seemed to then be examined by the doctor. (Hornstein (2003:18))

Since voice transparency is characteristic of raising structures, sentences (39) serve as evidence that the predicates under scrutiny are actually raising, not control predicates.³⁰

³⁰ Hornstein (2003) also notes that one ECM predicate, i.e. *expect*, can take eventive predicates, as shown in (i) below:

To sum up, Martin's modification of Chomsky and Lasnik's Case-theoretic approach to the distribution of PRO, based on the claim that it is [+tense, -finite] T, rather than any non-finite T, that checks null Case, seems to correctly account for the fact that PRO appears only as the subject of control infinitives, but is banned from the subject position of ECM and raising infinitives. Hornstein (2003) adduces some counterevidence against Martin's proposal. He observes that certain raising predicates behave like control predicates in that they can host eventive predicates within their complements. This suggests that the test based on eventive predicates does not distinguish between control verbs on the one hand and raising predicates on the other, but rather serves to establish a contrast between control and raising versus ECM predicates. For this reason it seems to be irrelevant for determining the distribution of PRO.³¹

2.1.3. Bošković's (1996, 1997) analysis

Bošković (1996, 1997) adopts the Case-theoretic approach to PRO put forward by Chomsky and Lasnik (1993) and modified by Martin (1996, 2001), to show that the c-selection account of infinitivals advocated within the GB theory is inadequate. He is preoccupied with the following paradigm:

-
- (i) John expected Mary to leave the party. (Hornstein (2003:18))

He observes that *expect* in (i) cannot be treated as an object control verb, since it can be followed by idioms and expletives, as can be seen in (ii):

- (ii) a. John expected the shit to hit the fan at exactly 6.
b. John expected there to erupt a riot. (Hornstein (2003:19))

It is impossible to treat *expect* as analogous to *want* (cf. (34c)), i.e. as a verb that takes an empty C assigning Case to *Mary* in (i), as schematised in (iii):

- (iii) John expected [C Mary to leave the party].

The analysis in (iii) turns out to be problematic in the light of the fact that the empty C can never be overt and hence there is a contrast between *want* and *expect*, which is illustrated in (iv):

- (iv) a. John wants very much for Mary to leave.
b.* John expects strongly for Mary to leave.

³¹ Hornstein (2003) observes that gerunds create a problem for Martin's analysis. Since the tense specifications of gerunds are determined by the matrix clause, gerunds seem to be [-tense]. Since gerunds are [-tense], they are incapable of checking null Case and hence it becomes unclear how they license PRO.

(40)

- a. John believed [him to be crazy].
 - b.*John believed [PRO to be crazy].
 - c. John tried [PRO to win].
 - d.*John tried [him to win].
- (Bošković (1996:271-272))

The above data are accounted for within the GB theory by appealing to c-selection in the following way: ECM verbs like *believe* subcategorise IP-complements, whereas control verbs like *try* subcategorise CP-complements. Since the IP-boundary, unlike the CP-boundary, does not block government, PRO, which must be ungoverned, is banned from occurring in the subject position of IP-complements of ECM verbs. This explains the ungrammaticality of (40b). The unacceptability of (40d) follows from the fact that the subject pronoun *him* in the CP-complement is ungoverned and hence is not assigned Case in violation of the Case Filter. Although the c-selection account correctly derives the paradigm in (40), Bošković argues that the Case-theoretic approach to PRO is capable of accounting equally well for the data in (40) without making any recourse whatsoever to c-selection. He notes that under the Case-theoretic approach, (40b) is illicit because T in ECM infinitivals in [-tense] and hence unable to check PRO's null Case. (40d), on the other hand, is ungrammatical, since T in control infinitivals, being [+tense], can check only null Case and is incapable of checking the accusative Case of the subject pronoun. Bošković observes that the alternative account of the data in (40) crucially relies on PRO's null Case but remains neutral on the issue of whether the infinitival complements are IPs or CPs.

Bošković further argues that the possibility of treating control complements as IPs opened up by the Case-theoretic approach to PRO, is independently motivated by certain phenomena that cannot be explained by assuming that these complements are CPs. One such phenomenon concerns the distribution of empty complementisers. Stowell (1982) argues that empty Cs are subject to the ECP, i.e. an empty C must be properly governed. This explains the contrast between (41a) and (41b) below:

(41)

- a. It was believed [_{CP} C [_{IP} John would make a mistake]].
- b.*[_{CP} C [_{IP} John would make a mistake]]_i was believed t_i.

However, infinitival clauses show a different behaviour, as can be seen in (42):

(42)

- a. I tried two days ago [_{CP} C [_{IP} PRO to leave]].
- b. [_{CP} C [_{IP} PRO To buy a car]] was desirable at that time.

The grammaticality of sentences (42) is unexpected since the empty C found in them is not properly governed. However, this problem only arises if one treats the infinitival clauses in (42) as CPs. If these clauses are regarded as IPs, then the grammaticality of (42) is straightforwardly explained: since there is no empty C in (42), there is no violation of the ECP and therefore these sentences are perfectly licit. Bošković takes this to be an argument for the IP-status of control infinitivals.

The fact that infinitival complements of control verbs are IPs independently follows from the Minimal Structure Principle stated in (43):

(43)

The Minimal Structure Principle

Provided that lexical requirements of relevant elements are satisfied, if two representations have the same lexical structure, and serve the same function, then the representation that has fewer projections is to be chosen as *the* syntactic representation serving this function.

Given the Minimal Structure Principle, control infinitivals like (40c) and (42a), which are potentially ambiguous between the IP- and CP-status, are disambiguated in favour of the more economical IP-status. Within Bošković's system, the only infinitivals whose categorial status is that of CPs are indirect questions like (44), which have the *wh*-element in the [Spec, CP] position and therefore must contain a CP projection.

(44)

John was wondering [_{CP} what PRO to buy for himself].

Furthermore, Bošković argues that the tense distinction between control infinitivals on the one hand, and ECM and raising infinitivals on the other, postulated by Martin may be derived from the s-selection properties of these verbs. Bošković observes that ECM verbs like *believe* s-select a proposition, while control verbs like *try* s-select a non-propositional (or 'irrealis') complement. The difference between these two predicate types becomes easily noticeable in the following sentences:

(45)

- a. John believed Peter to have played football, which was false.
- b.*John tried to play football, which was false.

As the above data show, the truth or falsity can be predicated of the complement of *believe*, but not of *try*. If one assumes that the truth or falsity of irrealis complements is left unspecified at the time of utterance, then the unacceptability of (45b) is explained in a straightforward way. Consequently, Bošković suggests that the presence of unrealised tense in the complement of *try* and the absence of this kind of tense in the complement of *believe*, may result from the s-selectional properties of these predicates, i.e. the s-selection properties of *try* are satisfied only by [+tense] infinitival complements, while the s-selection properties of *believe* are satisfied only by [-tense] infinitival complements.

Bošković also addresses the question of the lack of complementary distribution between PRO and lexical DPs with *want*-type verbs as in (34). His analysis is different from that of Martin, as he argues that only PRO in sentences like (34a) bears null Case checked by the infinitival I, whereas lexical DPs in (34b) and (34c) have their accusative Case checked by the overt C *for* or its null equivalent, respectively. Bošković follows Watanabe (1993) in assuming that *for* and *to* together form a complex that checks the Case of the lexical DP in [Spec, IP] under Spec-head agreement, and afterwards *for* undergoes movement to C.³² This way Bošković manages to account for the ellipsis facts in (35) and to avoid the unwelcome consequence of Martin's analysis, namely that not only PRO can bear null Case. However, Hyde (2000) notes that Bošković's treatment of *want*-type verbs is not free from problems.³³ If the Case of the lexical DP is checked in the same way in (34b) and (34c), why does there exist a grammaticality contrast between (46a) and (46b) below:

³² Watanabe (1993) argues that *for* and *to* form a complex on the basis of the data such as (i) below from *for-to* dialects spoken in Northern Ireland (cf. also Henry (1992)):

(i) a. I believe them *for to* have done it.
b.*I believe *for* them *to* have done it.

The data above clearly show that in these dialects *for* and *to* form a complex unit, as no lexical material can come between them.

³³ It will be argued in Chapter II, section 4.0 that these problems are only apparent and do not in fact endanger Bošković's analysis.

(46)

- a. *It was preferred John to leave.
 b. It was preferred for John to leave. (Hyde (2000:38))

If the null C checked the Case of the DP in (46a), this sentence should be as good as (46b). Additionally, Hyde (2000:38) notes that passive raising is possible from within the infinitival complement of *prefer*, as can be seen in (47):

(47)

Wedding dresses are preferred to be white.

Again, under Bošković's analysis, (47) should be unacceptable as the DP would have to raise from one Case position to another Case position. Consequently, it seems that the grammaticality of (47) casts doubts on Bošković's account of *want*-type predicates.

Hyde (2000) offers a different analysis of *want*-type predicates and control structures in general. He suggests that *to*, which is commonly analysed as non-finite T, should rather be regarded as a P. Under his analysis, subject control structures exhibit a PP headed by *to* taking a VP complement, as in (48a), whereas object control sentences and ECM structures contain a small clause structure with an abstract verb, as shown in (48b) and (48c), respectively:

(48)

- a. Agnes_i tried [_{PP} to [_{VP} PRO_i win the race]].
 b. Agnes ordered [_{SC} Bill_i (abstract verb) [_{PP} to [_{VP} PRO_i win the race]]].
 c. Agnes expected [_{SC} Bill_i (abstract verb) [_{PP} to [_{VP} PRO_i win the race]]].
 (Hyde (2000:28))

Hyde (2000:39) assumes that only prepositions like *to* may assign null Case across a VP boundary, which explains why PRO can be found in cases like (48). *Want*-type verbs, which turn out to be problematic both for Martin and Bošković, are accounted for within Hyde's model in the following way: (34a) has the same representation as (48a), where PRO has its null Case checked by the preposition *to* across a VP boundary. (34b) has the representation in (49), which is similar to (48b) and (48c), except that the small clause serves as a complement within a PP headed by the preposition *for*, which checks the accusative Case of the DP *his team*.

(49)

John wants [_{PP} for [_{SC} his team₁ (abstract verb) [_{PP} to [_{VP} PRO₁ win]]]].

Finally, (34c) has a structure analogous to (48b) and (48c), where the accusative Case of the DP is checked by the matrix verb. It is worth noting that sentences like (46a) and (46b), which cast doubts on Bošković's analysis, are unproblematic in Hyde's model; (46a) is ungrammatical since *John* bears no Case on account of the fact that the passive participle is not a Case assigner and the *P* *to* cannot assign Case to its left, whereas (46b) is licit, since *John* is assigned Case by the *P* *for*.

Although Hyde's analysis successfully avoids the problems created by Bošković's account, it raises a number of new questions. First of all, the treatment of *to* as a *P*, which constitutes the core of Hyde's proposal, gives rise to numerous problems. In fact Pullum (1982) meticulously lists ten reasons why *to* cannot be regarded as a *P*.³⁴ The only argument in support of the claim that *to* is a *P* presented by Hyde is based on the similar behaviour of *to* and the preposition *from* with respect to the placement of floating quantifiers, as demonstrated in (50) and (51):

(50)

- a. They refrained from all leaving.
- b.*They refrained all from leaving.

(51)

- a. They tried to all leave.
- b.*They tried all to leave.

(Hyde (2000:56))

The above data show that the floating quantifier *all* can follow both *from* and *to*, but it cannot precede them. However, this lone argument does not seem to be sufficient to classify *to* as a *P*.³⁵

Another problem with Hyde's account is how to handle the difference between ECM and object control predicates. In his system both these predicate classes are treated in the same way (cf. (48b) and (48c)). Nonetheless, Hyde

³⁴ Due to space limitations we do not present these arguments here and instead refer the reader to Pullum's (1982) paper.

³⁵ The ungrammaticality of (50b) might follow from the fact that *refrain* and *from* constitute a single verb, unlike *try* and *to*.

notes that these predicates differ in that only the former allow expletives in the infinitival clause, but not the latter, as illustrated in (52a) and (52b), respectively:

(52)

a. John expected [there to be a problem].

b.*John ordered [there to be a problem]. (Hyde (2000:49))

In order to account for this difference between ECM and object control verbs Hyde introduces the notion of a null theta role, and suggests that ECM predicates like (52a) have the representation in (53), where the abstract verb assigns a null theta role to the expletive.

(53)

John expected [there (abstract verb) to be a problem]
null theta-role

Object control structures like (52b), on the other hand, contain an abstract verb which does not assign a null theta role, and therefore they are incompatible with the expletive, which requires this kind of theta role. Although a solution of this kind is capable of deriving the difference between ECM and object control predicates, it relies on the notion of a null theta role, which has no independent motivation in the theory. This fact seriously undermines the validity of Hyde's proposal.³⁶

To recapitulate, the major insight of Bošković's analysis lies in rejecting the c-selection account of infinitival complements, which is prevalent in GB theorising. Bošković notes that once the Case-theoretic approach to PRO is adopted, it is no longer necessary to maintain the distinction between IP-complements to ECM verbs and CP-complements to control verbs. In fact it is

³⁶ Hyde (2000) also needs the notion of a null theta role in order to maintain the difference between subject control verbs and raising predicates. In his system both these predicate classes are treated in the same way, i.e. the raising structure in (i) below has the same representation as the subject control sentence in (48a):

(i) John seemed [_{PP} to [_{VP} PRO leave]].

Hyde claims that in raising structures like (i) the raising predicate assigns a null theta role to its subject, unlike the control predicate, which has the ability to assign a specific theta-role to its subject. Raising predicates, like ECM predicates, can have an expletive as their subject, as can be seen in (ii). Hyde argues that this fact supports the claim that the two should be treated on a par (cf. (ii) with (52a)).

(ii) There seemed [_{PP} to [_{VP} PRO be a problem]].

desirable from the point of view of the economy of derivation to treat control infinitivals minimally as IPs. Such an account is also empirically justified. What seems to be problematic is Bošković's treatment of *want*-type verbs. The problems created by Bošković's analysis can be overcome if one adopts Hyde's account. However, adopting Hyde's model forces one to make assumptions which are either dubious on empirical grounds or stipulative in nature.

2.1.4. Criticism of the null Case approach to PRO

Two types of critical remarks concerning the Case-theoretic approach to PRO appear in the literature. One type points out the existence of empirical data not covered by this approach, and the other type pinpoints its conceptual shortcomings. Let us present these two types of criticism in turn.

Baltin (1995) argues that the Case-theoretic account turns out to be problematic in the light of data concerning the placement of preverbal elements like floating quantifiers and adverbs like *ever*, as illustrated in (54):

(54)

- a. *They tried all to leave.
- b. They seemed all to be happy.
- c. I would prefer for these people all to leave. (Baltin (1995:200))

The above data show that floating quantifiers like *all* can precede *to* in infinitival complements of raising and ECM predicates (cf. (54b) and (54c), respectively), but this is not possible in control infinitivals (cf. (54a)). Baltin argues that the contrast in (54) can be accounted for if one assumes that preverbs can introduce predicative constituents. He treats predication as a syntactic relation, in which an element is not inherently predicative but can acquire the status of a predicate by virtue of being c-commanded by an appropriate DP. He further argues that the subject of raising and ECM complements, though originating in the VP-internal position, moves to the [Spec, IP] position, from which it c-commands I' and hence makes it a predicate. Since I' functions in this case as a predicate, it can be modified by a preverb. This explains the grammaticality of (54b) and (54c). As for control complements like (54a), Baltin argues that PRO, unlike lexical subjects, remains in the VP-internal position, from which it fails to c-command I'. Therefore the configuration required for predication is not established in this case and hence no preverb can be inserted.

Baltin's analysis of preverbs crucially relies on the assumption that PRO remains within the VP and does not move to [Spec, IP]. This assumption is at

odds with the Case-theoretic account of PRO, according to which PRO has its null Case checked via Spec-head agreement with infinitival I and therefore must appear in [Spec, IP].³⁷ For Baltin, PRO checks its null Case in the VP-internal position, which has the unwelcome consequence of making the VP-internal position a Case-checking position. This, in turn, presupposes that lexical DPs in ECM and raising infinitivals move from a Case-checking position to another Case-checking position, which contradicts the Visibility Condition in (24). Baltin tries to overcome this difficulty by distinguishing two types of Case, i.e. [+actualised], corresponding to morphologically realised Case, and [-actualised], corresponding to Case rendering an argument visible to θ -marking. Under this concept of Case, PRO bears [-actualised] Case, whereas lexical DPs bear both Case types. Movement can apply from a [-actualised] Case position to a [+actualised] Case position.

The question is whether Baltin's analysis actually fares better than the Case-theoretic account. On the one hand, it accounts for the data in (54), which remain problematic for the Case-theoretic model, but on the other, it complicates Case checking by abandoning the concept that Case checking takes place outside the lexical layer of structure, and by introducing two different Case types. What is more, this complication of Case checking makes it impossible for him to account for the ungrammaticality of the sentences mentioned by Hyde (2000:54) and reproduced in (55) below:

(55)

a. *John_i was tried to t_i open the door.

b. *John_i was decided to t_i enter the race.

In the above sentences the DP moves from a position marked with [-actualised] Case to one marked with [+actualised] Case. This kind of movement is allowed in Baltin's analysis and therefore the sentences in (55) are predicted, contrary to fact, to be grammatical.

All in all, it seems that the costs of adopting Baltin's approach outweigh its advantages. Although the data in (54) still pose a challenge for the Case-

³⁷ Baltin's claim that PRO does not leave VP is also at odds with Chomsky's (2000, 2001a, b) conception of the EPP, according to which T in control complements, like any other kind of T, has the EPP-feature, which forces overt movement of the VP-internal subject to [Spec, TP] (cf. section 1.0). However, Baltin adopts a different version of the EPP, namely the one of Rothstein (1983), which demands that predicates have subjects, and therefore his analysis does not give rise to an EPP violation.

theoretic account, we believe that they need an alternative explanation to that offered by Baltin, one which does not reject the basic tenets of the Case-theoretic model.

Conceptual criticism of the Case-theoretic account of PRO has been put forward by advocates of an alternative treatment of PRO like Hornstein (1999, 2001, 2003), and Manzini and Roussou (2000).³⁸ These linguists claim that the null Case approach to PRO essentially stipulates its distribution, since PRO and null Case only appear in connection with each other, and no lexical expressions or other empty categories can bear it. Since only non-finite T can check null Case, it follows that PRO can appear only in the subject position of non-finite clauses. Thus, it seems as if the Case properties of PRO and non-finite T were constructed in such a way as to fit the observed facts. For this reason the Case-theoretic approach does not really explain why PRO appears where it does, but only stipulates its distribution.

Although we agree with the criticism that the null Case-based account of PRO's distribution is stipulative in nature, we believe that at this stage in the development of the MP we have no better account available. The analyses of Hornstein (1999, 2001, 2003) and Manzini and Roussou's (2000), described in section 2.2, though not making reference to null Case, run into a lot of serious problems. Unless these problems are given a principled account, these analyses cannot be treated seriously as a viable alternative to the Case-theoretic approach.

2.2. *Control as raising*

This section focuses on two analyses, whose common denominator is their treatment of control on a par with raising.³⁹ In section 2.2.1 Hornstein's (1999, 2001, 2003) approach is presented, while in section 2.2.3 an overview of Manzini and Roussou's (2000) study is undertaken.

³⁸ The details of these two analyses are presented in section 2.2.

³⁹ Hyde (2000) also treats control predicates on a par with raising ones (cf. footnote 36), but he does so without adopting the assumptions underlying Hornstein's and Manzini and Roussou's accounts.

2.2.1. Hornstein's (1999, 2001, 2003) analysis

Hornstein, following O'Neil (1995), suggests that control structures should be collapsed with raising ones, that is, both should be derived via NP-movement.⁴⁰

⁴¹ As a consequence of such an analysis PRO ceases to exist as a separate construct and is reduced to a trace (copy) of the moved NP.

However, before presenting the details of Hornstein's account, let us first state what he takes to be the characteristic properties of OC and NOC, as they will be relevant for our analysis of these two control types.⁴² The properties of OC are illustrated in (56):

(56)

- a.*It was expected PRO to shave himself.⁴³
- b.*John thinks that it was expected PRO to shave himself.
- c.*John's campaign expects PRO to shave himself.
- d. John expects PRO to win and Bill does too (=Bill win).
- e.*John₁ told Mary₂ PRO₁₊₂ to leave together.
- f. The unfortunate expects PRO to get a medal.
- g. Only Churchill remembers PRO giving the BST speech.

(Hornstein (2001:31))

⁴⁰ Hornstein (1999, 2001, 2003) regards PRO as the residue of NP-movement, where NP is to be understood as equivalent to DP.

⁴¹ Kayne (2002) puts forward a movement approach to control, which does not collapse control with raising. For details of Kayne's analysis cf. Chapter IV, section 4.1.5.

⁴² Hornstein states that he adopts the criteria for distinguishing OC from NOC after Williams (1980). In fact Williams uses only tests (56a) and (56c) in addition to other tests (cf. Chapter II, section 2.1). Test (56g) first appeared in Fodor (1975), and is also mentioned by Higginbotham (1980).

⁴³ The verb *expect*, as observed by Bresnan (1982), is in fact ambiguous between a control and ECM use. This fact has been overlooked by Hornstein (1999, 2001) and has consequently led him to the inadequate claim that OC PRO can be replaced by a reflexive. Actually no such replacement is possible with unambiguously OC verbs, as in (i):
(i) *Mark tried/hoped himself to succeed.

This oversight, as remarked by Culicover and Jackendoff (2001, footnote 46), has consequences for Hornstein's analysis of reflexive verbs, as in (72), to which we will return.

OC PRO requires an antecedent (cf. (56a)), which has to be local (cf. (56b)), and which must c-command PRO (cf. (56c)). Under VP Deletion OC PRO allows only a sloppy reading (cf. (56d)), and it cannot have split antecedents (cf. (56e)). Furthermore, OC PRO allows only the *de se* interpretation in (56f), according to which the unfortunate believes of himself that he will get a medal. Finally, (56g) can be interpreted as: only Churchill has the memory because Churchill alone gave the speech, that is, *only Churchill* must act as PRO's antecedent.

NOC regularly contrasts with OC and displays the characteristics illustrated in (57):

(57)

- a. It was believed that PRO shaving was important.
- b. John₁ thinks that it is believed that PRO₁ shaving himself is important.
- c. Clinton's₁ campaign believes that PRO₁ keeping his sex life under control is necessary for electoral success.
- d. John thinks that PRO getting his resume in order is crucial and Bill does too.
- e. John₁ told Mary₂ that PRO₁₊₂ washing each other would be fun.
- f. The unfortunate believes that PRO getting a medal would be boring.
- g. Only Churchill remembers that PRO giving the BST speech was momentous. (Hornstein (2001: 32))

(57a) shows that NOC PRO does not require an antecedent. (57b) indicates that its antecedent may be non-local, whereas (57c) demonstrates that the antecedent does not need to c-command NOC PRO. VP Deletion in (57d) may give rise to a strict reading, i.e., one in which Bill thinks that getting John's resume in order is crucial. NOC PRO allows control by split antecedents, as can be seen in (57e), and can have a *de re* reading in (57f). Finally, NOC PRO in (57g) does not need to be interpreted as having *only Churchill* as its antecedent.

Having briefly mentioned the properties of OC and NOC distinguished by Hornstein (1999, 2001, 2003), let us present the details of his analysis. The major assumptions that Hornstein adopts are listed in (58) below:

(58)

- a. θ -roles are features on verbs
- b. Greed is enlightened self-interest

- c. A D/NP “receives” a θ -role by checking a θ -feature of a verbal/predicative phrase that it merges with
- d. There is no upper bound on the number of θ -roles a chain can have.
(Hornstein (2001:37))

Hornstein’s crucial departure from the classical minimalist theory as outlined in Chomsky (1995b, 2000, 2001a) (cf. section 1.0) lies in treating θ -roles on a par with other features that need to be checked (cf. (58a) and (58c)), which consequently makes movement into a θ -position a viable option (cf. (58d)).⁴⁴ Equipped with these assumptions, Hornstein derives obligatory subject and object control in the same way, namely via movement of the controller NP from within the embedded clause, which is motivated by the need for this NP to receive a θ -role from the matrix predicate.^{45 46} For illustration, let us analyse (59a) and (59b), which instantiate subject and object control, respectively:

- (59)
- a. Mark tries to sleep.
 - b. Mark ordered Mary to sleep.

Within Hornstein’s approach, (59a) is derived in the way schematised in (60a):

⁴⁴ The idea that multiple θ -roles can be discharged on DPs as a result of movement also appears in Bošković (1994).

⁴⁵ Polinsky and Potsdam (2002) argue that NP-movement in control structures can also be covert. According to them, movement of this kind takes place in instances of backward control as schematized in (i) and attested in a Nakh-Daghestanian language such as Tsez:

(i) Δ tried [John to leave].

In (i) Δ is to be understood as an empty subject co-referential with the subject of the non-finite embedded clause.

⁴⁶ Pires (2001) argues that clausal gerunds, such as (i), which appear in sentence positions other than that of the subject, exhibit OC and hence can be analysed in terms of NP-movement. Clausal gerunds occurring in the subject position allow NOC and therefore are not susceptible to the same kind of analysis.

(i) Susan worried about [PRO being late for dinner].

(60)

- a. [_{IP2} Mark [_{VP} Mark [tries [_{IP1} Mark to [_{VP} Mark sleep]]]]]⁴⁷

In (60a) *Mark* first merges with *sleep* thereby checking the predicate's theta role, then it moves to [Spec, IP1] in order to check the EPP-feature of the embedded I. Afterwards, *Mark* moves to [Spec, VP], where it checks the theta role of the matrix verb *try*, and finally, it moves to [Spec, IP2] in order to check the EPP-feature of the matrix I and to have its nominative Case checked.⁴⁸ Consequently, the upper copy of *Mark* ends up with two theta roles, one discharged by *sleep* and one by *try*; it is the only copy which has nominative Case checked, and the only one which survives at PF.⁴⁹ In more traditional terms, the lowest copy of *Mark* in (60a) corresponds to PRO, and the upper copy to its antecedent.

As for the object control structure in (59b), its derivation can be handled in the way shown in (60b):

(60)

- b. [_{IP2} Mark [_{I2} past [_{VP3} Mark v+ordered [_{VP2} Mary ordered [_{IP1} Mary to [_{VP1} Mary sleep]]]]]]

In (60b), the derivation starts with the merger of *Mary* with *sleep*, whereby the theta role of the latter is discharged. After *to* is merged with VP1, *Mary* moves to [Spec, IP1] to check the EPP-feature of I1 and after the merger of V2 *order*, *Mary* moves to the specifier of VP2, where it receives its internal argument theta role. The next steps in the derivation involve the merger of *v*, the raising of *order* to *v*, and the subsequent merger of *Mark* in [Spec, VP3], where it checks the external theta role of *order*. Finally, the EPP-feature of I2 and the necessity to check its nominative Case, force the movement of *Mark* to [Spec, IP2].⁵⁰ Thus, in (60b) the lowest copy of *Mary* corresponds to PRO in non-movement analyses of control, and the upper copy of *Mary* to its antecedent. Hornstein notes that the derivation outlined in (60b) twice violates the Merge over Move

⁴⁷ We use here IP, instead of TP, as in Hornstein (1999, 2001). The choice of either of these symbols is irrelevant for the presentation carried out in the text.

⁴⁸ In Hornstein's analysis Case is checked in the specifier-head configuration (cf. Chomsky (1995b)), not as a result of Agree (cf. section 1.0).

⁴⁹ Actually it is the copy of *Mark* in the specifier of the matrix VP that receives the theta role from *try* and hence bears two theta roles, but only the upper copy has two theta roles and checked Case.

⁵⁰ *Mary* in (60b) has its accusative Case checked covertly in the outer Spec of VP3 (or in [Spec, AgroP]).

Economy Condition, as firstly, it would be more economical to merge *Mark* in [Spec, IP1] to satisfy its EPP-feature than to move *Mary* there and secondly, the merger of *Mark* in [Spec, VP2] would be less costly than the movement of *Mary* to this position. Had either of these mergers taken place, we would not be able to derive object control effects in sentences like (59b). Hornstein justifies these two violations of Merge over Move in derivations like (59b) by making recourse to the Shortest Movement Condition.⁵¹ The merger of *Mark* in [Spec, IP1] would give rise to the following representation:

- (61)
- [_{IP2} Mark [_{I2} past [_{VP3} Mark v+ordered [_{VP2} Mary ordered [_{IP1} Mark to [_{VP1} Mary sleep]]]]]]

The above derivation violates Shortest Movement, as *Mary* moves over the closer NP *Mark* and likewise *Mark* moves across *Mary* to check the external theta role of *order*.⁵² If *Mark* is merged in [Spec, VP2], then we obtain the following derivation:

- (62)
- [_{IP2} Mark [_{I2} past [_{VP3} Mark v+ordered [_{VP2} Mark ordered [_{IP1} Mary to [_{VP1} Mary sleep]]]]]]

What is problematic in the representation in (62) is how *Mary* gets its accusative Case checked. As has already been noted (cf. footnote 50), *Mary* checks its Case covertly in[Spec, VP3] and in order to reach this position in (62) it must move across *Mark* in violation of Shortest Movement. Since both (61) and (62), which respect Merge over Move, violate the Shortest Movement Condition, a less economical, but still convergent, derivation, namely the one in (60b) making use of Move, must be chosen. The assumption underlying the Shortest Movement violations in (61) and (62) is that copies are relevant for the computational system and hence must be taken into account when evaluating the derivation for the Shortest Movement Condition.

As far as NOC is concerned, Hornstein argues that it does not result from NP-movement, unlike obligatory control in his system. His major argument for the non-movement treatment of NOC results from the fact that NOC typically

⁵¹ Hornstein claims that Shortest Movement covers the Minimal Distance Principle of Rosenbaum (1967). For the formulation of the Minimal Distance Principle cf. Chapter II (92).

⁵² Distance is calculated in terms of c-command.

holds where movement is banned, for instance in *wh*-islands, as in (63a), or in sentential subjects, as in (63b):

(63)

a. John told Sam [how PRO to hold oneself erect at a royal ball].

b. It was believed that [PRO shaving] was important.⁵³

(Hornstein (2001:57))

Alternatively, he opts for treating the NOC PRO as an empty pronoun, little *pro*, which can be interpreted as definite or indefinite. For him, the use of *pro* in NOC contexts in English is analogous to the use of *do*-support, both are costly last resort mechanisms adopted only when other options have failed. Hornstein argues that in cases like (63a) and (63b) the features of the embedded I must be checked, and this cannot be done by merging some element and then moving it to check its own features, as movement from the relevant positions in (63a) and (63b) is illicit. He claims that in (63a) and (63b) *pro* is inserted to check the features of I and does not move due to the lack of Case.⁵⁴ The last resort approach to *pro* found in NOC contexts predicts that OC and NOC are in complementary distribution, the latter obtains only where the former cannot be derived.

Let us now turn again to (56) and (57) to check how the analysis just outlined accounts for the distinctive properties of the two types of control. If OC PRO results from NP-movement, it is expected to have an antecedent which is local (cf. (56a) and (56b)) and c-commanding (cf. (56c)).⁵⁵ PRO as the residue of movement cannot have split antecedents (cf. (56e)), as two (non-conjoined) NPs cannot both have moved from the same position. The sloppy reading of OC PRO also follows from the movement analysis, since, for instance, in (56d) the copy of *Bill*, not *John*, originates in the specifier of the deleted VP and thus determines the sloppy reading as the only available one. Likewise the *de se* inter-

⁵³ PRO in (63a) and (63b) is only to be taken as marking the NOC position, and does not suggest a commitment to any analysis making use of PRO in these cases.

⁵⁴ Hornstein (2001, footnote 78) observes that *pro* found in NOC in English may in fact be different from the one found in *pro*-drop languages. However, he does not develop this idea any further.

⁵⁵ The c-command relation between the moved element and its copy follows, as observed by Hornstein (2001:39), from the Extension Condition. He also notes that the c-command requirement is valid only for movement within a single rooted subtree and does not apply to sideward movement (cf. example (64) and the discussion following it).

pretation of OC PRO gets a natural account within Hornstein's analysis, as in cases like (56f) it is the copy of *the unfortunate* that occupies the embedded subject position, thus determining the reflexive interpretation. Finally, in (56g), under Hornstein's analysis, the copy of *only Churchill* fills the subject slot in the embedded clause and hence is responsible for the resulting interpretation. On the other hand, NOC PRO, which is regarded by Hornstein as an empty pronoun, behaves like a typical pronoun in not requiring an antecedent (cf. (57a)), and if it has one, it does not have to be either local (cf. (57b)) or c-commanding (cf. (57c)). NOC PRO, just like pronouns, may give rise to strict interpretation in cases of VP Deletion like (57d), and may have split antecedents (cf. (57e)). The treatment of NOC PRO as an empty pronoun which may refer to indefinite individuals, explains the possibility of the *de re* interpretation in (57f) and the interpretation of (57g), according to which many people other than Churchill recall his speech as momentous. Consequently, it seems that Hornstein's analysis is capable of deriving all the properties of OC and NOC stated in (56) and (57) without making any additional stipulations.

What is also worth addressing is the question of how to obtain the obligatory subject control effect in adjunct clauses, such as (64) below.⁵⁶

(64)

John₁ saw Mary without/while/before/after PRO₁ entering the room.

(Hornstein (2001:46))

Sentence (64) is an instance of OC, in which PRO is controlled by the matrix subject, i.e. *John*, but not by the matrix object, i.e. *Mary*.⁵⁷ Is this predicted by Hornstein's analysis of OC? In order for his analysis to work for adjuncts Hornstein must assume that movement out of an adjunct is possible.⁵⁸ Furthermore, he assumes that movement out of an adjunct is a type of sideward movement as proposed by Nunes (1995).⁵⁹ What characterises this type of

⁵⁶ Hornstein (2001, footnote 24) notes that object control is possible in adjunct clauses which represent rationale clauses, as in (i):

(i) John₁ arrested Harry₂ for PRO₂ driving his car too fast.

⁵⁷ We leave it to the reader to verify that (64) shows the typical diagnostics of OC presented in (56).

⁵⁸ This assumption contradicts the Condition on Extraction Domains of Huang (1982), which bans movement out of adjuncts. Hornstein argues that it must be reanalyzed in such a way as to make it sometimes violable.

⁵⁹ Sideward movement is also referred to as interarbores movement by Bobaljik and Brown (1997).

movement is that an element from one subtree is copied and merged in another ‘unconnected’ subtree. Sideward movement does not take place into a c-commanding position (cf. footnote 55). The two assumptions just made, together with the assumptions in (58), allow Hornstein to come up with the following derivation for (64): first, the adjunct is assembled by successive mergers and the movement of *John* from its thematic position to [Spec, IP], where it checks the EPP-feature of I, as shown in (65):

- (65)
- [_{adjunct} without [_{IP} John [_I ing [_{VP} John [entering the room]]]]]
- (Hornstein (2001:48))

Next, the main clause is built by merging *Mary* with *saw* and consequently we obtain two unconnected subtrees such as (66):

- (66)
- [_{VP} saw Mary], [_{adjunct} without [_{IP} John [_I ing [_{VP} John [entering the room]]]]]

Then, *John* is copied and merged in the specifier position of the unconnected main clause subtree, thereby checking the external theta role of *saw*. This is an instance of sideward movement, which produces the following outcome:

- (67)
- [_{VP} John [saw Mary]], [_{adjunct} without [_{IP} John [_I ing [_{VP} John [entering the room]]]]]

Subsequently, the two subtrees merge to yield (68):

- (68)
- [_{VP/VP} [_{VP} John [saw Mary]] [_{IP} John [_I ing [_{VP} John [entering the room]]]]]

Finally, *John* raises to the specifier of the matrix I to check the EPP-feature of I and to check its own nominative Case, as shown in (69):

- (69)
- [_{IP} John [_I past [_{VP/VP} [_{VP} John [saw Mary]] [_{IP} John [_I ing [_{VP} John [entering the room]]]]]]]

Three remarks need to be made in relation to the derivation in (69). First, the movement of *John* to the Spec of *ing* violates Merge over Move, as we could

have merged *Mary* instead. This latter step, however, is blocked, as a Shortest Movement violation, since the movement of *John* out of the adjunct for Case (and thematic) reasons would necessarily have to pass over the copy of *Mary* in the Spec of the adjunct. Second, the question arises if the sideward movement of *John* crossing *Mary* on its way to the external argument position of *saw* violates Shortest Movement. Hornstein argues that it does not, as *Mary* in the complement position of *saw* and *John* in the Spec of the adjunct do not c-command each other, and hence their positions cannot be related in terms of Shortest Movement. What is more, at the point at which sideward movement of *John* takes place the two subtrees are unconnected (cf. (67)), and therefore the issue of c-command does not even arise. Third, object control in cases like (64) is disallowed, as it would give rise to the following representation:

- (70)
- [_{IP} Mary [_I past [_{VP/VP} [_{VP} Mary [saw John]] [_{IP} John [_I ing [_{VP} John [entering the room]]]]]]]]

To obtain object control in (70) we must move *John* to the internal argument position of *saw*. This step, however, is illicit, as a more economical derivation exists, namely the one in which *Mary* is merged in the complement position of *saw*. This is what blocks object control in adjuncts of this type.

The major advantage of the movement analysis of control offered by Hornstein (1999, 2001, 2003) lies in the elimination of PRO and the whole control module from the theory of grammar.⁶⁰ According to this approach, OC PRO is just an NP-trace (copy) and as such it has a specific distribution and anaphoric interpretation. In this model no appeal needs to be made to either the PRO Theorem or null Case to derive the full range of properties of OC PRO (cf. (56)). As a consequence of Hornstein's analysis, control structures and raising structures are basically identical, save for the fact that the matrix predicate in the latter case assigns no theta role to its external argument.⁶¹ For the movement analysis of control to go through, however, Hornstein must make the unorthodox assumption that movement into a theta position is possible, which leads to the

⁶⁰ The postulation of PRO brings two complications into the theory of grammar: i) the need to account for its distribution, and ii) the need to explain its interpretation, and hence any attempt at its elimination is a welcome step. Even in the GB theory an attempt has been made to derive the distribution of PRO from either the Case theory (cf. Bouchard (1984) and Vanden Wyngaerd (1994)) or from the BT (cf. Introduction).

⁶¹ The unification of control and raising has also been achieved, though by different means, within Lexical-Functional Grammar and Head Driven Phrase Structure Grammar.

rejection of the bi-uniqueness condition on chains determined by the Theta Criterion. He considers this move to be only natural in the MP, where the ban on movement into a theta position seems to be the last relic of D-structure.⁶²

2.2.2. Criticism of Hornstein's analysis

In spite of its theoretical appeal Hornstein's analysis is not free from problems, which have even been noticed by Hornstein himself.⁶³ The most important problem is how to block NP-movement from object to subject position in cases like (71a):

- (71)
a. John saw.

In Hornstein's account there is nothing to block the derivation for (71a) sketched in (71b), where *John* first merges in the internal argument position of *saw* thereby checking the verb's internal theta role and then moves to [Spec, VP] to acquire the external theta role.

- (71)
b. [_{IP} John [_I past [_{VP} John [saw John]]]]

The sentence could then be interpreted as *John saw himself*. However, (71a) does not have a reflexive interpretation. Hornstein (1999) tries to account for sentences like this in terms of Case theory. He argues that transitive verbs like *see* in (71b) have an accusative Case feature that must be checked. The only checker of accusative in (71b) is *John*, which must also check the nominative feature associated with finite I. Since *John* cannot meet these two requirements at the same time, the derivation in (71b) crashes. Hornstein's solution, though accounting for cases like (71a), does not explain why reflexive verbs like *wash* or *shave* in (72a) and (72b) are possible in English.

⁶² D-structure in the GB theory is perceived as a representation of pure GF- θ . Thus, all lexical insertion takes place at this level, and therefore movement that operates after D-structure representations have been built may target only non- θ -positions. With the concept of D-structure abandoned in the MP, it becomes unclear why movement must be only into a non- θ -position.

⁶³ The problematic aspects of Hornstein's proposal in relation to Polish are presented in Chapter IV, section 4.1.5.

(72)

- a. Mary washed.
- b. John shaved.

These verbs are also transitive and hence should be subject to the same analysis as *see* in (71a). Nonetheless, unlike (71a), they do allow a reflexive interpretation. In order to account for this fact Hornstein suggests that the verbs in (72) can assign accusative Case optionally. It is unclear, however, why the same cannot be said in relation to the verb *see* in (71a), especially since we can regularly omit the object of this verb, as can be seen in (73) below.

(73)

Do you see?

Since OC PRO alternates with anaphors in Hornstein's analysis, he concludes that in cases like (72) PRO appears in object position. Since the claim about free alternation between OC and anaphors is not well-grounded (cf. footnote 43), Hornstein's analysis of reflexive verbs is seriously undermined.

Another problem with Hornstein's analysis relates to his treatment of NOC PRO. For him, this kind of control involves the use of the empty pronoun *pro*. However, as noted by Landau (2000), the distribution of pronouns does not always overlap with that of NOC PRO, as can be seen in (74) and (75) from Landau (2000:120):

(74)

- a. John said about Mary that it would be easy [**(for her) to prepare herself for the exam*].
- b. John sued Mary for divorce because it was no longer possible [**(for her) to support him*].

(75)

- a. John's wife thought that [**(for him) to indulge himself in drinking*] would destroy their marriage.
- b. [**(His_i) having shaved already*] shows that Mary arrived more than 5 minutes after John_i did.

Sentences (74) and (75) demonstrate that pronouns enjoy more freedom in their distribution than NOC PRO, which strongly argues against subsuming the latter

under the former. Another argument supporting the same conclusion comes from Brody (1999). He notes that NOC PRO, in addition to its pronominal properties, also displays some anaphoric ones, for instance, it is subject to some locality constraints, as is made clear by (76) from Brody (1999):

(76)

- a. John thinks that Mary dislikes PRO teaching herself/*himself/?oneself.
- b. John told Mary how PRO to teach herself/*himself/(?)oneself.

As indicated by the possibility of arbitrary interpretation, the above examples represent NOC structures. However, the choice of the controller is not free, but constrained by locality. This is unexpected if NOC PRO is just pronominal in nature, as assumed in Hornstein's analysis.

Still another problem that Hornstein's analysis cannot handle in a straightforward way is the case of Partial Control (henceforth, PC) recognised by Landau (2000) and Wurmbrand (2001) as holding where the reference of PRO includes but is not the same as the reference of the controller, as in (77):

(77)

John₁ wanted PRO₁₊ to meet at 7.⁶⁴

Hornstein's analysis, which predicts full identity between PRO (a copy of NP-movement) and its antecedent, cannot account in an easy way for PC data like (77). However, Hornstein (2003) suggests one way to accommodate PC within his movement theory of control. He proposes that PC can be treated as resulting from the meaning postulate such as (78) below:

(78)

If "DP Vs [_{TP} to VP]", then "DP Vs [_{TP} DP and some contextually specified others to VP]". (Hornstein (2003:42))

This postulate is valid only for verbs which trigger PC and which, according to Landau (2000), correspond to predicates that take non-finite [+tense] complements. For sentences like (77), the postulate in (78) will license the inference in (79):

⁶⁴ After Landau (2000) we use the symbol PRO₁₊ to denote PC.

(79)

John wants John and some other contextually specified others to meet at 7.

The inference in (79) is what underlies the PC interpretation in (77). The postulate as expressed in (78) is very crude, but serves the purpose of deriving PC within the movement theory of control (for some advantages of this approach over Landau's account cf. Hornstein (2003:43-44)). However, Hornstein's (2003) account of PC does not follow from his movement theory of control and is based on an additional assumption, particularly tailored to meet the requirements of PC.

What is problematic for Hornstein's account is the relation between the Minimal Distance Principle (henceforth MDP) and Shortest Move (or the MLC, cf. footnote 5). As observed in footnote 51, Hornstein subsumes the former under the latter and this enables him to derive object control. If the MDP and Shortest Move are one and the same thing, we expect that their violations would give rise to the same level of unacceptability. This, however, is not the case, as can be seen in (80) from Landau (2000:201):

(80)

- a. *Many people are likely there to be invited.
- b. John promised Mary to win.

(80a) violates Shortest Move, whereas (80b) represents a 'marked' violation of the MDP.⁶⁵ As indicated by the grammaticality judgements in (80), the former is totally unacceptable, while the latter is perfectly licit. The conclusion to be drawn from data like (80) is that either the MDP does not reduce to Shortest Move, or the MDP does not determine controller choice.

Control shift might also be treated as a challenge for Hornstein's account. One such case is presented in (81) below:

(81)

- a. Gandma promised the children_i [PRO_i to stay up late].
- b. The pupil_i asked the teacher [PRO_i to leave early].

⁶⁵ Hornstein (2001, 2003) treats *promise* as an exceptional case of subject control. He suggests that *promise* is structurally different from object control verbs in that it presumably contains a PP headed by an empty preposition. The preposition surfaces after the DP *promise*, as shown in (i), a fact that Hornstein uses to support his proposal.
(i) John's promise *of/to Mary (Hornstein (2003:35))

Promise, which is normally a subject control predicate, appears as an object control one in (81a), whereas *ask*, which normally triggers object control, acts as a subject control predicate in (81b). Hornstein (2003) argues that control shift data do not pose a problem for his analysis of control, as in fact control shift is an instance of NOC, not OC. As evidence he provides the following data:⁶⁶

(82)

- a. John was asked [PRO to be allowed to leave early].
- b. John₁'s mother asked Mary [PRO₁ to be allowed to shave himself before dinner].
- c. John asked Mary [PRO to be allowed to leave early] and Frank did too.
(OK with John's leaving early)
- d. John₁ asked Mary₂ [PRO₁₊₂ to be allowed to shave each other].
- e. The unfortunate₁ petitioned congress [PRO_{1/arb} to be allowed to get a medal].
(Hornstein (2003:36))

The sentences in (82) demonstrate that PRO in cases of control shift behaves like NOC PRO. In (82a) PRO lacks an antecedent, in (82b) PRO is controlled by a non-c-commanding DP, in (82c) PRO allows a strict reading under ellipsis, in (82d) PRO has a split antecedent, and in (82e) PRO allows a *de re* reading. Since control shift is derived by whatever mechanisms underlie NOC, Hornstein concludes that it does not put at risk the movement approach to OC. This, however, does not answer the question of how exactly control shift is licensed, especially in the light of the fact that Hornstein's account of NOC is problematic.

A potential problem for Hornstein's analysis, pointed out by Culicover and Jackendoff (2001), relates to the question of how to derive control in nominals, such as (83):

(83)

- a. the Anglo-French agreement to respect each other's territorial claims
(Culicover and Jackendoff (2001:501))
- b. [That sort of flattery of your professors, just in order to curry favour] is
frowned upon at this institution.
(Culicover and Jackendoff (2001:503))

⁶⁶ Many native speakers find Hornstein's grammaticality judgements in (82) dubious and assign a highly marginal status to the majority of these sentences.

In (83a) the controller is an adjective, whereas in (83b) the subject of *curry favour* is understood as identical with the specifier of *flattery*, although it is not at all clear where the appropriate controller should be located. Hornstein (2003) argues that control in nominals does not endanger his analysis of control in general since this kind of control does not represent OC, but rather instantiates NOC (cf. Williams (1980)). He observes that control in nominals, similarly to control shift (cf. (82) above), displays typical diagnostics of NOC. He notes that no overt controller is necessary in nominal control, as shown in (84a), arbitrary control and control by a split antecedent is allowed in nominals, as can be seen in (84b) and (84c), respectively, and strict readings can be obtained under ellipsis, as confirmed by (84d).

(84)

- a. any attempt/plan/desire PRO to leave
- b. any attempt/plan/desire PRO_{arb} to conceal oneself (Hornstein (2003:45))
- c. John₁ approved Bill₂'s attempt/plan PRO₁₊₂ to sneak each other/ themselves into the party.
- d. John's plan to sneak himself into the convention was not as clever as Mary's. (Hornstein (2003:46))

Since control in nominals is an instance of NOC, it does not endanger the movement theory of control developed by Hornstein.⁶⁷ However, to obtain an

⁶⁷ However, Hornstein (2003) must account for the fact that in phrases like (i) below *John* is understood as the controller of PRO:

(i) John₁'s attempt/plan/desire PRO₁ to leave (Hornstein (2003:45))

For cases like (i) Hornstein suggests the following analysis: genitive DPs must be treated as related in some contextually specified way to the rest of DP, the specification can be very lax, in (i) one salient way of relating *John* to the rest of DP is to treat *John* as both the attempter/planer/desirer and the leaver. In the right context, however, some other interpretation is possible, for instance, *John* could be the backer of the plan. This is feasible in a sentence like (ii) below if, for example, John is backing a plan in which he gets hidden by being buried in the pit

(ii) John₁'s plan to bury him₁ in the pit won't work. (Hornstein (2003:48))

Hornstein concludes that the relation which has been interpreted as control within nominals does not arise due to the mechanisms triggering control, but rather represents a reflex of a restriction imposed by genitive DPs on the DPs they modify. This approach still does not explain why (83a) and (83b) without genitive DPs are possible.

account of control within nominals one needs to face the problems that Hornstein's analysis of NOC gives rise to.

Other problems associated with Hornstein's analysis concern the following points mentioned by Brody (1999), Landau (2000) and Culicover and Jackendoff (2001):

- 1) the lack of an account for ungrammatical cases like (85) below:

(85)

*John was hoped to win.

- 2) the lack of an account for implicit control, as in (86):

(86)

It is fun (for him) PRO to climb mountains.

- 3) the failure to block sideward movement in the case of object control, i.e. (87a) ((59b) repeated for convenience), which could be derived as in (60b) (repeated for convenience in (87b)), but also via copying and merge of *Mary* (i.e., via sideward movement) in the complement position of *order* before the merger of VP2 with IP1:

(87)

- a. Mark ordered Mary to sleep.
- b. [_{IP2} Mark [_{I2} past [_{VP3} Mark v+ordered [_{VP2} Mary ordered [_{IP1} Mary to [_{VP1} Mary sleep]]]]]]

- 4) the lack of an account for the possibility of either OC or NOC in infinitival questions, such as (88a) and (88b), respectively:

(88)

- a. John knows who to see.⁶⁸ (Culicover and Jackendoff (2001:500))
- b. John told Sam how to hold oneself erect at a royal ball.

⁶⁸ To be able to analyse (88a) as an instance of OC, Hornstein would have to claim that movement out of a *wh*-island is possible. This posits a serious threat for this account.

To sum up, Hornstein's movement analysis of control, in addition to the minor problems it gives rise to, cannot successfully block movement from object to subject position in cases like (71a), and it fails to offer an adequate account of NOC.

2.2.3. *Manzini and Roussou's (2000) account*

Manzini and Roussou's analysis is similar to that of Hornstein in rejecting the traditional conception of the Theta Criterion, and in postulating that an argument can bear more than one theta role. However, it differs from Hornstein's account in the way it associates theta roles with arguments. While in Hornstein's analysis this association is achieved via the overt movement of an argument from one theta position to another, in the account under scrutiny no overt movement takes place. What is postulated instead is the operation *Attract*, which consists in the formation of an ordered pair of elements comprising an argument and a predicate.⁶⁹ The application of *Attract*, according to Manzini and Roussou (2000), is constrained by the Scopal MLC, as stated in (89):

(89)

Scopal MLC

Feature F attracts feature F_A only down to the next F' that also attracts F_A .⁷⁰

The Scopal MLC guarantees that a DP attracts a predicate only as far down as the next DP. Other assumptions made by Manzini and Roussou are listed in (90):

(90)

- a. Arguments are generated in the position where they are spelt out.
- b. One DP can lexicalise only one D-feature.
- c. A non-finite I lacks a D-feature.

⁶⁹ Manzini and Roussou (2000) emphasise that *Attract* is not an instance of the operation *Move* in the sense of Chomsky (1995b), as, unlike *Move*, it does not involve *Copy* and *Merge*.

⁷⁰ Although the formulation of the Scopal MLC in (89) makes reference to features, Manzini and Roussou explicitly argue against the treatment of theta roles as features. For them, theta roles correspond to a relation between arguments and predicates in the sense of Hale and Keyser (1993).

The D-feature mentioned in (90) corresponds to the EPP-feature. Assumption (90a) together with (90b) presuppose that no overt movement takes place in control structures, whereas assumption (90b) blocks movement from one Case position to another.⁷¹ Equipped with the above assumptions, we can now show how the analysis described accounts for instances of subject and object control as in (91) and (92), respectively:

(91)

Mary wanted to go.

(92)

Mary persuaded Mark to go.

Under Manzini and Roussou's account the two sentences above have the following representations:

(91)

a. [_{IP} Mary I [_{VP} wanted [_{IP} to [_{VP} go]]]]

(92)

a. [_{IP} Mary I [_{VP} persuaded [_{VP} Mark v [_{VP} V [_{IP} to [_{VP} go]]]]]]

In (91a) and (92a) *Mary* is directly generated in the [Spec, IP] position, where it lexicalises the D-feature of the matrix I. In (92a) another argument *Mark* lexicalises the D-feature of v.⁷² In accordance with the Scopal MLC in (89), *Mary* in (91a) is capable of attracting both the matrix and the embedded predicate and hence can bear the theta roles associated with them. On the other hand, *Mary* in (92a) can only attract as far down as the next argument DP, i.e. *Mark*. For this reason *Mary* attracts only the matrix predicate, whereas *Mark* attracts the embedded one. This explains why subject control is not a viable option in cases like (92).⁷³

Assumption (90b) blocks the following cases:

⁷¹ Manzini and Roussou (2000) argue that Case does not have any syntactic import and should rather be subsumed under D-features.

⁷² Manzini and Roussou assume that v, like T, represents a D-position. This is in line with Chomsky (2000, 2001a), where it is argued that T and v (as well as C) contain an EPP-feature (cf. section 1.0).

⁷³ However, Manzini and Roussou do not offer any explanation why subject control is possible with verbs like *promise*.

(93)

- a. [_{IP} John I [_{VP} persuaded [_{VP} v [_{VP} V]]]] Manzini and Roussou (2000:423))
 b. [_{IP} John I [_{VP} believes [_{CP} that [_{IP} will [_{VP} eat]]]]]

(93a) is illicit either because the D-feature of v is not lexicalised, or because *John* first lexicalises the D-feature of v and then moves to Spec, IP to lexicalise the D-feature of I, in violation of (90b). (93b) is analogous to (93a), except that instead of v, the D-feature of the embedded I is involved.

Control and raising in Manzini and Roussou's account are driven by the same mechanism, the only difference between the two lies in the nature of the predicates involved. For instance, in the raising sentence (94) below, *John* attracts both the matrix and the embedded predicates, as they both lie within its attraction scope.

(94)

[John I [seems [to [eat]]]]

Thus, (94) is derived in a way analogous to (91). However, only in the latter does there exist a thematic relation between the argument and the matrix predicate, whereas no such relation holds in the former.

Arbitrary control is analysed by Manzini and Roussou in a way completely different from that proposed by Hornstein. Manzini and Roussou try to avoid the problems surrounding Hornstein's reduction of arbitrary control to *pro*, by suggesting that instances of arbitrary control exhibit an empty adverb of quantification located in C, which acts as an attractor for the predicate, as in (95) below:

(95)

- a. It is hard to work. (Manzini and Roussou (2000:428))
 b. [C [it is hard [to work]]]

In (95) the operator in C attracts the embedded predicate *work*, which is responsible for the fact that this sentence is interpreted as having a variable of a generic operator of some sort as an unexpressed argument. In order to support their analysis of arbitrary control Manzini and Roussou compare sentences like (95a), which have only a generic reading with those like (96), which have only a specific reading.

(96)

It was hard to work (on that beautiful sunny day).

(Manzini and Roussou (2000:428))

Both (95a) and (96) lack a lexical DP. However, only (96) contains a temporal expression, which determines the specific reading of this sentence. Manzini and Roussou explain the contrast between (95a) and (96) as follows: if C attracts both Tense and the predicate, then in (95a) the generic operator in C determines the generic interpretation for both the implicit argument and Tense, whereas the specific operator in (96) determines the specific interpretation for these two elements.⁷⁴ An analysis of this kind predicts that there exists a link between temporal and argument interpretation only when the argument is unexpressed, since only then do both depend on C. If, however, the argument is overtly present, then it attracts the predicate and thus excludes the possibility of an arbitrary reading, as illustrated in (97):

(97)

It is hard for us [to [work]].

(Manzini and Roussou (2000:429))

The Scopal MLC in (89) determines that the predicate *work* in (97) can be attracted only by the argument *us* and not by C, which in this case attracts only the matrix Tense. Thus, the independence of the temporal and argument interpretation in (97) directly follows from Manzini and Roussou's analysis.

Manzini and Roussou analyse adjunct control in cases like (98) as involving an underlying parasitic gap structure:⁷⁵

(98)

John I [left [before I [eating]]].

(Manzini and Roussou (2000:429))

The similarity between parasitic gap structure and the adjunct control in (98) lies in the fact that, just like in a parasitic gap structure one *wh*-expression binds

⁷⁴ Manzini and Roussou argue at length that the expletive *it* in (95a) and (96) does not attract the embedded predicate. They observe that the expletive *it* has the whole non-finite clause as its associate, and therefore it attracts the clause, not the embedded predicate.

⁷⁵ The similarity between adjunct control and parasitic gaps has been also recognized by Hornstein (cf. example (64)). In fact Hornstein and Nunes (2002) analyse parasitic gaps as derived via sideward movement in the same way that Hornstein (1999, 2001) analyses adjunct control.

multiple variables, in the case of adjunct control one argument attracts two predicates. For this analysis to go through Manzini and Roussou must assume that the adjunct in sentences like (98) is adjoined onto the VP, and hence is situated within the attraction scope of the matrix subject.⁷⁶ Rationale clauses like (99) below are different from the classical cases of adjunct control such as (98), in that in the former the matrix subject does not function as a controller of the embedded subject, but rather the unexpressed agent controls the infinitival subject.

(99)

The boat was sunk [(in order) to collect the insurance].

(Manzini and Roussou (2000:435))

In order to account for the contrast between sentences like (98) and (99), Manzini and Roussou argue that the adjunct clause in the latter is adjoined to a projection higher than the VP, i.e. to IP, and hence lies outside the scope of the matrix subject. This explains the impossibility of subject control in rationale clauses like (99).

Since Manzini and Roussou, in a way analogous to Hornstein, abandon the biuniqueness relationship between theta roles and arguments, their analysis shares the same problems as those pointed out in this respect for Hornstein's model (cf. example (71) and the discussion that follows it). Furthermore, by reducing control to raising, they are unable to explain some differences between these two constructions. One such difference concerns the fact that raising, unlike control, never triggers PC, as confirmed by the ungrammaticality of (100) below:

(100)

*John seems likely to meet tomorrow.

(Landau (2000:30))

⁷⁶ Manzini and Roussou (2000:418) account for the fact that the adjunct is in the scope of the matrix subject in (98) in terms of the Connectedness Condition of Kayne (1984) stated in (i):

(i) Connectedness Condition

- a. Let β attract α . Then β together with α and the g-projection of α must form a connected subtree.
- b. γ is a g-projection of α if it is a projection of α , or a projection of some δ such that a g-projection of α is a complement of δ .

Another difficulty that Manzini and Roussou's analysis must face concerns PRO's interpretation. If it is derivable from the Scopal MLC, it remains unclear why partial control or control shift are at all available (cf. examples (77) and (81)). A new problem that arises in Manzini and Roussou's account concerns the possibility of anaphoric interpretation in sentences like (101):

(101)

John thinks [that it is hard [to work]]. (Manzini and Roussou (2000:431))

The above sentence is ambiguous; it can denote either arbitrary control or control by the matrix subject. The analysis under scrutiny predicts only the former alternative. The other control possibility, Manzini and Roussou argue, is derived due to the fact that the operator in C can be either generic or specific and in the latter case is anaphoric to the matrix subject. An explanation along these lines, however, fails to cover cases like (102), where the only available interpretation is the anaphoric one:

(102)

We sank the boat [(in order) to collect the insurance].

(Manzini and Roussou (2000:436))

Manzini and Roussou (2000) analyse (102) on a par with (101), but they make the additional assumption that the anaphoric interpretation in (102) is forced by pragmatic factors. This assumption considerably weakens their account, since in order to determine PRO's interpretation an appeal must be made, not only to the Scopal MLC, but also to pragmatic factors. Manzini and Roussou, however, remain silent on the issue of when pragmatic factors can override syntactic ones. This, in turn, makes their derivation of anaphoric interpretation in cases like (102) highly stipulative and deprives it of explanatory power.

3.0. Summary

This chapter has been divided into two parts. In the first part the main focus has been laid on the crucial concepts of the MP of Chomsky (2000, 2001a, b), the framework adopted for the analysis of PRO and control carried out in subsequent chapters. The major issues presented here comprise the mode of and restrictions on the application of the three operations Merge, Agree and Move. The notion of a phase has been examined in detail and its relevance for the cyclicity of movement, access to lexical arrays and cyclic Spell-Out has been highlighted. The second part of the chapter has been devoted to the presentation

of the two competing views concerning the licensing of PRO and control. One view, due to Chomsky and Lasnik (1993), postulating that PRO is licensed via non-finite T checking PRO's null Case, has been modified by Martin (1996, 2001) to account for the contrast between non-finite T in control structures and that in raising and ECM constructions. The Case-theoretic approach has been further supported and developed by Bošković (1996, 1997). The other view, originated by Hornstein (1999, 2001, 2003), does away with the distinction between control and raising and suggests treating PRO as a trace of A-movement. Likewise, Manzini and Roussou (2000) regard PRO as a residue of movement, though their implementation of this idea differs from that of Hornstein. The weaknesses of both the Case-theoretic account and the control as raising approach have been pointed out. Although the former is capable of providing an adequate account of the distribution of PRO, it seems to be stipulative, as null Case has been introduced only to accommodate PRO. Although the latter approach makes an attempt at deriving the distribution of PRO from the mechanisms already available in the theory, it does so at the cost of forcing movement into theta positions. It also turns out to be problematic for NOC, reflexive verbs, control shift, Partial Control and control in nominals, among others. It seems that the raising approach to control, though promising at first glance, creates some problems insurmountable at present, and therefore we rather opt for the Case-theoretic approach to PRO. This approach is adopted in Chapter II for English, Chapter IV for Polish and Chapter V for Irish.