They’re saying things that I can hardly believe.
They really think we’re getting out of control.
―Elvis Costello, “Radio Radio”, This Year’s Model

4.1 Introduction
In this chapter, we will discuss control and raising constructions in several Romance and Germanic languages, to see if the analysis of control presented in the previous two chapters is tenable as a universal theory which reduces the properties of control constructions to independently motivated theories of theta-role assignment and Case-checking, as presented in chapters 2 and 3. We will argue that it is possible to analyze control constructions in both Romance and Germanic languages in this way. In §4.2 we will look at control data from Romance and Germanic languages, looking closely for important generalizations, which we will analyze in §4.3. There we will consider control constructions in French and English [±wh] clauses, drawing data from Kayne (1991) and offer a solution to the problems presented by that data. In §4.4 we will discuss adapt the analysis of non-finite complementation of Thráinsson (1993) to control and raising data from several Germanic languages, especially Icelandic.

4.2 Control Constructions in Comparative Grammar
In chapter 3, it became clear that there is a link between head movement and theta-role assignment. This connection is summarized by the following definitions, repeated from chapter 3 (ex. 2-3):
(1) **Theta-Role Assignment by Adjoined Heads**

If two theta-role assigning heads $\alpha$ and $\beta$ are amalgamated, then $\alpha$ and $\beta$ cannot both assign a theta role to the same LF object.

(2) **Amalgamation**

$\alpha$ and $\beta$ are amalgamated iff $\alpha$ adjoins to $\beta$, or iff $\alpha$ is contained immediately within $\gamma$, $\gamma$ adjoined to $\beta$, and $\gamma$ has a null interpretation at LF.

These definitions require that two heads assigning theta roles to the same LF object be sufficiently structurally distinct at LF—in accordance with the definition in (2), the heads cannot be amalgamated. This logical connection between theta role assignment and head movement depends critically on whether an intervening head (in the head-adjunction structure) has a non-null interpretation at LF. We argued in English that certain T° functional heads had a null interpretation at LF (in raising constructions) and that others (control constructions) did not, and this offered an explanation for a number of facts of English, including why *believe* was not a control verb in English and why control constructions are not possible with small clauses. Thus we showed a link between the tense semantics required of a verbal complement by a matrix verb, and whether the matrix verb was a control or a raising verb.

In English, both types of non-finite T° heads had the same PF interpretation, *to*, which did not alone serve to differentiate control versus raising constructions. However, based on general functional properties of language acquisition and language processing, we might expect that there is potentially a link between giving a certain element a non-null interpretation at one of the interfaces and a non-null interpretation for that element at the other interface. So, heads with a non-null interpretation at LF would also be pronounced—i.e. have a non-null interpretation at PF as well—as well as *vice versa*: a functional head with a null LF interpretation might have a tendency to be unpronounced at PF.
In fact, this tendency is observed throughout the Germanic and Romance languages: if a language alternates between a phonologically null non-finite T˚ (that is, a bare infinitive verb) and a phonologically overt non-finite T°, (that is, a infinitival marker, such as to in English) the pronounced T˚ is associated with control constructions and the unpronounced T° with raising constructions. Consider the following data from French and Italian, taken from Kayne (1981).

(3) (a) Jean a essayé / oublié / décidé de/*Ø partir
John has tried / forgotten / decided DE to leave
John has tried/forgotten/decided to leave.

(b) Gianni ha tentato / dimenticato / deciso di/*Ø partire
John has tried / forgotten / decided DE to leave
John has tried/forgotten/decided to leave.

(4) (a) Jean semble / parait / se trouve / s’avère (*d’)/Ø être parti
John seems / appears / happens / turns out to-be left
John seems/appears/happens/turns out to have left.

(b) Gianni sembra / pare / risulta (*di)/Ø essere partito
John seems / appears / happens to-be left
John seems/appears/happens to have left.

In both French and Italian, de/di appears to be incompatible with raising constructions, and required in control constructions; we will discuss this in more detail in §4.3, with interesting consequences. A similar situation is observed in Germanic. For instance,
consider the following table, from Thráinsson (1993):¹

<table>
<thead>
<tr>
<th></th>
<th>finite</th>
<th>control</th>
<th>modal</th>
<th>ECM</th>
<th>raising</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>that</td>
<td>to</td>
<td>Ø</td>
<td>to</td>
<td>to</td>
</tr>
<tr>
<td>German</td>
<td>daß</td>
<td>zu</td>
<td>Ø</td>
<td>Ø</td>
<td>zu</td>
</tr>
<tr>
<td>Dutch</td>
<td>dat</td>
<td>te</td>
<td>Ø</td>
<td>Ø</td>
<td>te</td>
</tr>
<tr>
<td>Danish</td>
<td>at</td>
<td>at</td>
<td>Ø</td>
<td>Ø</td>
<td>at</td>
</tr>
<tr>
<td>Norwegian</td>
<td>at</td>
<td>å</td>
<td>Ø</td>
<td>å</td>
<td>å</td>
</tr>
<tr>
<td>Swedish</td>
<td>att</td>
<td>att</td>
<td>Ø</td>
<td>(att)</td>
<td>(att)</td>
</tr>
<tr>
<td>Faroese</td>
<td>at</td>
<td>at</td>
<td>Ø</td>
<td>Ø</td>
<td>Ø</td>
</tr>
<tr>
<td>Icelandic</td>
<td>að</td>
<td>að</td>
<td>að/Ø</td>
<td>Ø</td>
<td>Ø</td>
</tr>
</tbody>
</table>

We see that most Germanic languages mark raising and control constructions with the same T˚ marker, but the languages in which there is a difference (in particular, Icelandic and Faroese) the situation is the same as French and German above: control constructions require a phonologically overt T˚, while raising constructions require a phonologically null T˚.

Several obvious generalizations may be drawn from this chart. The first is that there seems to be an implicational hierarchy which links lexical I˚ to the possibility of raising and control, at least for the Romance and Germanic languages.

(6) If ECM verbs take a non-finite IP headed by an overt T˚ (i.e., an infinitival marker), then so do raising verbs.

If raising verbs take a non-finite IP headed by an overt T˚ (i.e., an infinitival marker), then so to control verbs.

¹German, Dutch and Danish apparently only have ECM (AcI) constructions with perception verbs (e.g. see, hear). In Icelandic, most modal verbs take að-complements but three common ones take “bare” infinitives: munu ‘will’, skulu ‘shall’, and vilja ‘will, want’.
In light of chapter 3, we noted that it was the presence of interpreted functional heads which intervene between the embedded verb and the control verb which allow both verbs to assign theta roles to the same Case-chain. In English, we postulated two different functional heads at I* pronounced as *to*: one was uninterpreted at LF and blocked control, and the other carried a tense feature; therefore it was interpreted at LF and allowed the assignment of multiple theta roles to the same Case-chain.

However, in languages where there is a PF difference between functional heads which are interpreted at LF and functional heads which are not interpreted at LF, it can be argued that the cross-linguistic tendency is for heads with a non-null interpretation at LF also to have a non-null interpretation at PF. There is motivation for this assertion; since there is no direct evidence for LF during language acquisition, it simplifies the acquisition process if there is direct observational evidence of functional heads which are interpreted at LF. In English, in both cases the I* functional head is pronounced, but as we saw in the chart above, the cross-linguistic tendency is strongly confirmed for functional heads which are interpreted at one of the interfaces to be interpreted at both of them.

Based on this insight, in the remaining sections of this chapter we will consider data from control constructions in a variety of languages, starting with French and Italian. Looking at data from both Romance and Germanic languages, we will show that the movement analysis of control constructions is compatible with data from these languages. Moreover, we will argue that there are significant generalizations concerning functional head choice (for instance, the correlations discussed above), Case-checking and movement which is not within the reach of the standard Control Theory, which become explicable in this theory.

4.3 Control and Raising in Romance

In this section, “Romance” is taken to mean that we will be considering data from French and Italian. The Italian data is relatively straightforward, since the generalization above
that the nonfinite complements are preceded by *di* if and only if they are in a control construction is fully valid.\(^2\) However, this generalization is not true of French as it stands, and more investigation is required to get the right analysis for the presence of *de* in nonfinite complements in French. So, we start with the more difficult and more interesting task of analyzing control constructions in French.

### 4.3.1 Control in French

As seen in the examples in (3) and (4), repeated in (7) French requires *de* to be present in control constructions and to be absent in raising constructions.

\[\text{(7) (a) Jean a essayé / oublié / décidé de/*Ø partir}
\]
\[\text{John has tried / forgotten / decided DE to-leave}
\]
\[\text{John has tried/forgotten/decided to leave.}
\]

\[\text{(b) Jean semble / parait / se trouve / s’avère (*d’)/Ø être parti}
\]
\[\text{John seems / appears / happens / turns out to-be left}
\]
\[\text{John seems/appears/happens/turns out to have left.}
\]

However, there are some complications in this pattern, and in addressing them we can gain a greater insight into both the structure of French and our proposals.

The first complication is that not all control verbs in French take complements with *de*. One class of verbs which do not take complements with *de* are subject control verbs, like *désirer* ‘want’, *aimer* ‘love’, *détester* ‘hate’, *espérer* ‘hope’, *penser* ‘think’, and the

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\(^2\)Well, almost fully valid. There are a small number of Italian control verbs which do not require *di* in their complement clause. Besides causatives and modals, verbs like *volare* ‘want’ also do not require *di* in Italian, just as *vouloir* ‘want’ in French does no require *de*. However, it is not the case in Italian that all mental orientation control verbs do not take *di*, as is true in French. N.B. in any case, it is still strictly true that absolutely no raising verbs take *di*-marked nonfinite clauses. In addition, it does seem to be the case according to Burzio (1986) that, in Italian, all the control verbs that do not take *di* are restructuring verbs. (For references to and extended discussion of all the facts above, see Burzio 1986.)
whole class of verbs of the believe-class like *croire* ‘believe’, *reconnaître* ‘know’ and *admettre* ‘admit’. The other class are the modals, which can be interpreted as root modals—and hence as control verbs, as explained in chapter 3—but still do not take complements with *de*. However, it seems to be a correct generalization that all object control verbs take *de*-complements, as do a large class of subject control verbs like *essayer* ‘try’, *décider* ‘decide’, *consentir* ‘consent’ (although this verb takes not *de*, but *à*), *promettre* ‘promise’ and *jurer* ‘swear’. Although this at first seems to be a random split of control verbs, there is a principled way to understand and explain this division of control verbs.

First we observe, following Comrie (1984), that there is a clear semantic difference between subject and object control verbs, and between two types of subject control verbs. These three classes of control verbs break down in this way:

- The first type of subject control verbs have the lexical semantics of “mental orientation”, expectation or desire. Examples include *want*, *wish*, *hope*, *need*, *hate* and *expect*. These verbs also have a common set of theta roles to assign: an agent/experiencer role assigned to the entity who possesses the mental orientation, and the theme role to the complement clause describing the inclination of the mental orientation. Also, root modals (given a control analysis) seem to belong in this class, as well as the believe-class of control verbs, such as *croire* ‘believe’, *reconnaître* ‘know’ and *admettre* ‘admit’. (In English, of course, *believe* is not a control verb at all.)

- The second class of subject control verbs are verbs of “commitment”, and these include *try*, *promise*, *decide*, *agree*, *refuse* and *threaten*. (N.B. Some of the verbs in this class allow non-controlling objects, while other verbs do not.) These verbs also have in common a core set of theta roles: the agent/source role, assigned to the entity who makes the commitment, the goal theta role assigned to the entity to whom the commitment is made, and the theme theta role assigned to the
complement clause stating the nature of the commitment.

- The final class of control verbs, the class of all the object control verbs, are verbs of “influence”, such as persuade, ask, order, tell, forbid and cause. The theta roles assigned by this class of verbs are: an agent/source theta role assigned to the influencer, a patient/goal theta role assigned to the entity being influenced, and the theme theta role assigned to the complement clause describing the content of the influence being exercised.

Each of these three classes of control verbs share the same basic lexical semantics, assign the same theta roles, and have similar pragmatics. It is on these bases that the classes are defined.

Accompanying the lexical semantic differences, we might also expect structural differences in the clauses headed by the different classes of control verbs, and in fact we see syntactic differences between these classes as well. We have already argued in §2.4 that promise requires an extra VP shell in order to make a subject control construction possible in the presence of a matrix object over which the subject of the embedded clause must move in order to check Case against the [T+AgrS] head adjunction structure in the matrix clause. The “extra” VP shell in these verbs is headed by a light verb which facilitates the assignment of the goal theta role and dative case. It is natural to extend the analysis of promise of §2.4 to all verbs of the “commitment” class of control verbs, and hence argue that they all share the same structural properties.

There are also Case assignment differences among control verbs in French. The “mental orientation” class of control verbs does not allow objects. However, the other two classes do allow objects (and in the “influence” class an object is required, since the object of the control verb is the controller.) In one interesting respect, though, French

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3 At least when they are used in control constructions. Some of the verbs in the mental orientation class can also be ECM verbs—e.g. want and need—and in these cases it might be argued that these verbs have objects. However, here the verbs are no longer being used as control verbs, and therefore are not a counterexample to this generalization.
differs from English, since French control verbs may take either accusative or dative objects. For instance, compare English (8a) with French (8b-d) from Kayne (1981).

(8) a. I asked him to leave

b. Je lui ai demandé de partir
   I to-him have asked DE to-leave
   *I asked him to leave.*

c. Jean a promis à Marie de partir
   Jean has promised to Marie DE to-leave
   *Jean promised Marie to leave.*

d. Jean lui a promis de partir
   Jean to-him has promised DE to-leave
   *Jean promised him to leave.*

In these examples the object controller is in the Dative case: either a Dative pronoun or a DP preceded by the Case-marker/preposition à. Other French control verbs, however, take accusative objects (Marlyse Baptista p.c.):

(9) a. I persuaded him to leave

b. Je l’ai persuadé de partir
   I him have asked DE to-leave
   *I persuaded him to leave.*
c. Jean a persuadé Marie de partir
   Jean has persuaded Marie DE to-leave
   \textit{Jean persuaded Marie to leave.}

d. Jean l’ a convaincu/menacé de partir
   Jean him has convinced/threatened DE to-leave
   \textit{Jean promised him to leave.}

e. Jean l’ a forcé à partir
   Jean him has forced DE\textsuperscript{4} to-leave
   \textit{Jean forced him to leave.}

Such case assignment possibilities, available in French but not in English, are not surprising. The goal-like properties of the theta role assigned to the object in both the “commitment” and the “influence” class of control verbs would lead to a tendency for the verb to check Dative case, rather than Accusative case, with those objects. The lack of such dative case assignment in English would then be solely due to the loss of the dative in English. However, the Dative versus Accusative case does not align itself with the classification given above. For example, the “commitment” class includes both \textit{promettre} ‘promise’, a Dative assigner, and \textit{menacer} ‘threaten’, an Accusative assigner, while the “influence” class includes both \textit{dire} ‘say’, a Dative assigner, and \textit{persuader} ‘persuade’, an Accusative assigner. However, this is to be expected, since as mentioned above, both classes assign “goal-like” theta roles to those objects, and insofar as there is a tendency for a language to associate goal theta roles with dative case, it has happened here (with only partial

\textsuperscript{4}In certain control constructions in French, à is found instead of de. There seems to be no other structural or interpretative difference between à and de before nonfinite clauses, so in the absence of evidence I will assume that they are allomorphs—though possibly with the condition that the same control constructions cannot contain both a Dative object (marked with à) and a nonfinite complement with à. (The same might be true of de, as well.)
penetrance). Finally, note that both the “influence” and the “commitment” class allow both Dative and Accusative objects, although only in the “influence” class are those objects actually controllers. So, perhaps the Case-features of these verbs are unrelated to the other structural features, and it is these structural features which determine their control properties.

One bit of puzzling data in French and Italian is the grammaticality of the following sentences:

(10) a. Il me semble avoir compris
    it to-me seems to-have understood
    *It seems to me that I have understood.

    b. *Il me semble d’avoir compris
       it to-me seems DE to-have understood
       *It seems to me that I have understood.

    c. *Mi sembra pare intelligente
       to-me seems to-appear intelligent
       *It seems to be that I appear intelligent.

    d. Mi sembra di pare intelligente
       to-me seems DE to-appear intelligent
       *It seems to me that I appear intelligent.

However, this is what we would predict, if Italian control verbs always take complements with di, while French control verbs of the “mental orientation” class do not. The only variation here is that the controller is not the subject of the matrix clause, but this is easily
explained. The Case-chain headed by *me* in (10a) moves up from the embedded clause, where it is assigned the theta role of *compris*. When it gets to the matrix clause, it must land in an available Case-checking position, which usually would be SpecAgrSP. However, the expletive in the matrix sentence is assigned a quasi-argumental theta role which nevertheless insures its position in SpecAgrSP; therefore the head of the Case-chain lands in SpecAgrOP, where it is assigned Dative case.

An important puzzle remains to be explained, though: why do “mental orientation” class control verbs not need *de*? First, let us make a concrete proposal for control constructions in Romance. We propose that French (as well as Italian) T˚ must have an overt interpretation at both PF (as *de*), as it has an overt interpretation at LF (as a tense specification separate from that of the matrix clause). The latter is necessary in control constructions to prevent the amalgamation of the two theta-role assigners, as discussed in chapter 3. In a similar vein, raising verbs select a form of T˚ without an overt interpretation at LF, which in French also lacks an interpretation at PF. Thus, we derive the basic control data (for control verbs of the “commitment” and the “influence” classes) as a consequence of the typology of functional categories in French.

Two indications that might lead to a solution are the following. First, as explained in Burzio (1986) and in a footnote of this chapter, control verbs in Italian which undergo restructuring (i.e. verbs which move overtly to adjoin to the matrix verb) do not have *di*-marked complements. Second, as we will see in the next section, French nonfinite *de* can be replaced by a phonologically null T˚ as a last resort under certain circumstances. Following this lead, a possible line of argumentation is clear. Mental orientation control verbs are characterized as a class by a particular set of semantic/pragmatic properties. It is reasonable to suppose that these properties are reflected in the syntactic structures they derive (much like the shell structure for *promise*-type verbs we argued for in chapter 2). For example, this might take the form of some sort of “closeness” requirement on PF adjacency between the mental orientation control verb and its complement’s nonfinite
verb. (This might be implicated in modal and perception verbs, as well.) If so, then we could argue that the same “last resort” conditions which were found elsewhere would also operate here. Obviously, this is very sketchy and requires much more work to make it a working hypothesis, but it seems nevertheless to be a potentially fruitful approach.

4.3.2 A Complication in French

Another class of potential problems is discussed by Kayne (1991). He is concerned with data from French and English as in (11&12).

(11)  a. *He doesn’t know if to go to the movies.
     b. He doesn’t know if he should go to the movies.
     c. He doesn’t know whether to go to the movies.
     d. He doesn’t know where to go to the movies.

(12)  a. *Il ne sait pas si aller au cinéma.
     he NE knows NOT if to-go to-the cinema
     He doesn’t know if to go to the movies.
     
     b. Il ne sait pas s’il devrait aller au cinéma
     he NE knows NOT if-he should to-go to-the cinema
     He doesn’t know if he should go to the movies.’

     c. Il ne sait pas où aller au cinéma.
     he NE knows NOT where to-go to-the cinema
     He doesn’t know where to go to the movies.

In both English and French, if/si excludes the control construction, although other [+wh]
phrases in CP are compatible with control constructions in both languages. On the other hand, English has a separate lexical item *whether*, semantically very close to *if*, which is compatible with control constructions, as in (11c), but French seems to entirely lack a corresponding lexical item.

As for Italian, consider the following data:

(13) a. Gianni non sa se dovrebbe andare al cinema (Kayne 1991)
     Gianni not knows SE he-should to-go to-the cinema
     *Gianni does not know if he should go to the movies.*

     b. Gianni non sa se andare al cinema (Kayne 1991)
     Gianni not knows SE to-go to-the movies
     *Gianni does not know whether to go to the movies.*

     c. Su questo punto, non saprei che dirti (Rizzi 1982)
     on this point not I-would-know what to-tell-you
     *On this point, I would not know what to tell you.*

Apparently, Italian *se* can function like *whether* in English—rather than its cognate *si* in French—in control contexts. Kayne (1991) notes the surprising correlation between Romance languages which allow control with *se* (or its cognates) and languages in which the pronominal clitics follow in non-finite verb. Consider the following data from Kayne (1991 ex.1-4):

(14) a. Lui parler serait une erreur.
     him(Dat) to-speak would-be an error
     *To speak to him would be an error.*
b. *Parler-lui serait une erreur.

c. Parlargli sarebbe un errore.
   to-speak-him(Dat) would-be an error

d. *Gli parlare sarebbe un errore.

In the French examples in (14a,b), the clitic must precede the nonfinite verb, whereas in the Italian examples in (14c,d) the clitic must follow the non-finite verb. This correlation between verb-clitic order and se-control constructions holds throughout the Romance languages. Like French, Sardinian and Occitan require clitic to precede non-finite verbs, and also do not allow control constructions with the cognates of se/si. On the other hand, Spanish, Catalan and Galician are like Italian in that they require clitics to follow non-finite verbs and also allow control constructions with the cognates of se/si.

Our explanation for these data in Romance requires us to take a step back, so to speak. Let us stipulate that clitic movement in Romance consists of the movement of clitics to T\textsuperscript{\ast}, as well as stipulating, as usual, that cliticization is invariably to the left of the hosting head. The clitics can get to T\textsuperscript{\ast} in only a few ways:

i. The clitics can “hitch a ride” to T\textsuperscript{\ast} by cliticizing to V\textsuperscript{\ast}. Although the clitics must check their relevant features with T\textsuperscript{\ast} before Spell-Out, that is not a problem since all the Romance languages have overt V-to-T movement. In this case, the clitics invariably precede the verb.

ii. The clitics can move directly to T\textsuperscript{\ast}. However, this will be a violation of the Head Movement Constraint (Baker 1988) unless V-to-T movement has already happened. Since V-to-T movement is overt in all Romance languages, once again it is not problematic for the clitics to move to T\textsuperscript{\ast} overtly. However, once again, we expect the clitics to precede the verb.

iii. There seems, then, to be only one way to avoid having the clitic precede the non-finite verb: if the language allows T-to-C in non-finite clauses. In this case, if
V-to-T is followed by T-to-C, which is then followed by the clitics moving to T°, we can derive the correct word order for Italian and the other languages in its class: V_{[-fin]}–clitic.

Although this is a plausible explanation for cliticization in Romance, how does it connect to the question of control? For this we rely on a theory of barriers.

Barriers have been generally neglected in this thesis, as well as in the entire Minimalist Program, possibly in reaction to the perceived difficulties of the pre-Minimalist approach to minimality, which crucially relied on a very intricate theory of barriers, as in Chomsky (1986b). However, the residue of the Barriers approach which was not subsumed by Relativized Minimality (Rizzi 1990) and then later by the Shortest Move Condition still remains to be explained by some reference to barrierhood. Clearly, a approach to barriers much simpler than Chomsky (1986b) is appropriate, such as the approach presented in Cinque (1990).

In Cinque’s (admittedly pre-minimalist) analysis, a barrier was any maximal projection which was not selected by a [+V] head. In the words of Cinque (1990 p.42: italics his):

\begin{equation}
\text{(15) Definition of barrier for binding (final)}
\end{equation}

Every maximal projection that fails to be \textit{(directly or indirectly) selected in the canonical direction} by a category nondistinct from [+V] is a barrier for binding.

To adapt this for use in Minimalism, we suppose that this definition was applied derivationally, and a category’s barrierhood could be changed in the course of the derivation by syntactic operations. In particular, head movement, which creates a single object out of two separate heads, could change the V-feature status of a maximal projection. Suppose a [+V] head moves to a [–V] head. If the resulting object becomes [+V], then the complement of the original [–V] head, previously a barrier, would cease to be a barrier. Also, we construe “the canonical direction” to mean that, for a maximal projection to fail
to be a barrier, it must be in the complement domain of a [+V] head.

Let us assume, then, that *if/si/se* are (in Cinque’s terms) “distinct from [+V]”—in other words, they do not possess the relevant V-features (possessed by phonologically null [+wh] C°, for example) which make them nondistinct from [+V] and which therefore insure that TP is not a barrier. Therefore, *if/si/se* make TP a barrier for movement in the absence of other (derivational) moves to counteract it. However in languages with T-to-C in nonfinite clauses, the chain created by T-to-C creates a single object which subsumes the features of the two functional heads which created it. Thus, it is expected that the T-to-C chain has V-features, and is therefore nondistinct from [+V] from that point thereon in the derivation. Thus, TP is no longer a barrier, and after T-to-C in the derivation, Case-movement by the embedded subject is possible to a matrix Case-checking position. Thus, for Italian and the Romance languages like it, we derive the combination noted in Kayne (1991) that a language will allow control constructions with *if/si/se* if and only if clitics follow the nonfinite verb in that language. In French and its group of Romance languages, we argue that these languages lack T-to-C, and therefore have the clitics preceding the nonfinite verb obligatorily, as well as not allowing control constructions with *si/si*. In all of the Romance languages, a phonologically null [+wh] C°, checking a wh-phrase in SpecCP, has V-features which render TP not a barrier; therefore, in all Romance languages Case-movement is possible from these clauses. Hence, control constructions are allowed there.

English also does not have T-to-C, so *if* will now allow control constructions. (Of course, the clitic question is moot in English, at least in this discussion.) However, English has the lexical item *whether*, which occupies SpecCP, and checks its wh-features with the null C° head. This C°, as in Romance, has V-features which make TP not a barrier, and therefore Case-movement to the matrix clause is possible, as the control construction requires.

One remaining puzzle in Romance is that control constructions with *se/si* or a wh-phrase
in SpecCP are incompatible with *de/di preceding the nonfinite verb, even if the matrix verb would usually require it. For example, along with (12-13) which are also ungrammatical with *de/di, consider the following sentences:

(16) a. Je lui ai dit où aller
    I to-him have told where to-go
    I told him where to go.

b. *Je lui ai dit où d’aller
    I to-him have told where DE to-go

The apparent generalization is that *de/di is incompatible with any overt C°. This is not entirely implausible, since it can be argued that *de/di requires itself to be adjoined to a V° which selects it, and when this is impossible because of the presence of an intervening C° head, the grammar, as a last resort, allows a phonologically null T° which can both adjoin to C° and which has selectional features acceptable to the matrix control verb. Another possible way to implement this generalization is to assume that the nonfinite V° must adjoin to (a phonologically non-null) C°, so that it is immediately adjacent at PF.5 We know that adverbs cannot intervene between si/se and the nonfinite verb (Andrea Calabrese, p.c.), just as adverbs cannot intervene between di and the nonfinite verb in Italian but can—at least marginally—in French (Marlyse Baptista, p.c.). This provides evidence for the immediate adjunction of the nonfinite verb to si/se in C°. Only by utilizing the option of a phonologically null *de/di in T° can the non-finite verb be adjacent at PF to C°.

5Although we argued that clitics always left-adjoin, clearly it is impossible for other heads only to left-adjoin (including verbs) in the theory we have given here. We have already proposed V-to-T movement where the verb follows *de/di in T°. Therefore, the current proposal, which requires the [V+T] cluster to right-adjoin to C°, is not entirely surprising.
4.4 Control and Raising in Germanic

In the Germanic languages, we observed the same basic pattern as in Romance languages: if there is an overt tense marker in raising constructions in a language, then that language will also have overt tense markers in control constructions. Evidence for this is given in the following table, repeated from Thráinsson (1993) and also given in §4.1.

<table>
<thead>
<tr>
<th>Language</th>
<th>finite</th>
<th>control</th>
<th>modal</th>
<th>ECM</th>
<th>raising</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>that</td>
<td>to</td>
<td>Ø</td>
<td>to</td>
<td>to</td>
</tr>
<tr>
<td>German</td>
<td>daß</td>
<td>zu</td>
<td>Ø</td>
<td>Ø</td>
<td>zu</td>
</tr>
<tr>
<td>Dutch</td>
<td>dat</td>
<td>te</td>
<td>Ø</td>
<td>Ø</td>
<td>te</td>
</tr>
<tr>
<td>Danish</td>
<td>at</td>
<td>at</td>
<td>Ø</td>
<td>Ø</td>
<td>at</td>
</tr>
<tr>
<td>Norwegian</td>
<td>at</td>
<td>å</td>
<td>Ø</td>
<td>å</td>
<td>å</td>
</tr>
<tr>
<td>Swedish</td>
<td>att</td>
<td>att</td>
<td>Ø</td>
<td>(att)</td>
<td>(att)</td>
</tr>
<tr>
<td>Faroese</td>
<td>at</td>
<td>at</td>
<td>Ø</td>
<td>Ø</td>
<td>Ø</td>
</tr>
<tr>
<td>Icelandic</td>
<td>að</td>
<td>að</td>
<td>að/Ø</td>
<td>Ø</td>
<td>Ø</td>
</tr>
</tbody>
</table>

In this section, we will consider the status of raising and control constructions in Icelandic, based on the discussion of sentential complementation and infinitivals in Thráinsson (1993).

That paper reviews the variation in the Germanic languages with respect to sentential complementation and infinitivals, especially Icelandic, and the literature relating to it. In Icelandic, for instance, finite complements and several forms of non-finite complements are introduced by the lexical element að. To explain this, Thráinsson proposes that að is actually several different words in different head position, depending on whether it is

\( ^6 \) (Repeated from footnote 1 of this chapter, on page 88.) German, Dutch and Danish apparently only have ECM (AcI) constructions with perception verbs (e.g. see, hear). In Icelandic, most modal verbs take að-complements but three common ones take “bare” infinitives: munu ‘will’, skulu ‘shall’, and vilja ‘will, want’.
introducing a finite clause, a control clause or a modal clause. In a finite clause, $a\delta$ is a C˚, in control clauses $a\delta$ is a AgrS˚, and in modal clauses (at least for epistemic modals) $a\delta$ is a T˚. Critically, the position of $a\delta$ is the absolute highest position in the clause; control clauses have no CP functional layer, and modal clauses have neither a CP nor a AgrSP functional layer. So the LF structure for sentences demonstrating each of these constructions is given below (from Thráinsson 1993, ex. 13):

(18) a. Hann segir $a\delta$ hún lesi bækur
    he says that she reads books

    [Hann segir
      \[CP \ A\delta \ AgrS \ hún \ AgrS \ lesi \ TP \ t \ AgrO \ bækur \ AgrO \ t \ VP \ t \ \]
    ]

    He says that she reads books.

b. Hann lofar $a\delta$ lesa bækur
    he promises to read books

    [Hann lofar
      \[AgrSP \ A\delta \ TP \ PRO \ lesa \ AgrO \ bækur \ AgrO \ t \ VP \ t \ \]
    ]

    He promises to read books.

c. Hann verður $a\delta$ lesa bækur
    he must to read books

    [Hann verður
      \[AgrSP \ A\delta \ TP \ PRO \ lesa \ AgrO \ bækur \ AgrO \ t \ VP \ t \ \]
    ]

    He must read books.

Thráinsson demonstrates that this analysis has a breadth of explanatory power unavailable to the other theories he reviews. Since $a\delta$ is a head, it affects the movement of other
heads as predicted by various minimality principles. It explains why the verb does not move to \( \text{AgrS}^* \) in control constructions (because the position is already occupied by \( a\delta \)), and why there is no evidence for \( \text{V-to-T} \) movement in (epistemic) modal constructions. This correlates to the observed position of negation and adverbials in non-finite complement clauses in Icelandic. The differences in the available functional heads also explains the observed differences in Case assignment and agreement among the constructions, and topicalization is impossible in all non-finite complements (assuming it requires movement into the \( \text{C}^* \) domain, which is not available in non-finite complements.)

However, for our purposes we are especially concerned with the implications of the analysis with respect to control and raising constructions. Thráinsson (1993) assumes the existence of PRO, and the distribution of PRO is determined by Case Theory, following Chomsky and Lasnik (1991) and Martin (1996), theories which were discussed in chapter 1. However, it is possible to modify slightly Thráinsson’s proposals so that they are consistent with a movement analysis of control, which maintains the current empirical coverage of Thráinsson (1993) and also extends it (slightly).

First we adopt the analyses of chapters 2 and 3 for control constructions. Therefore, \( a\delta \) in control constructions is selected by (and must be licensed by) the matrix control verb. Now consider the structure for (18b) in this formulation, repeated below:

(19) Hann lofar a\(\delta\) lesa bækur

\[
\begin{align*}
\text{He promises to read books.} \\
\text{[A}_{\text{AgSp}} \text{Hann}_1 \text{[A}_{\text{AgS}} \text{lofar}_4 \text{[TP} t_1 \text{[T} t_4 \text{[VP} t_1 \text{[V} t_4} \\
\text{[A}_{\text{AgSp}} \text{[A}_{\text{AgS}} \text{a}\delta \text{[TP} t_1 \text{[T} \text{lesa}_2 \text{[A}_{\text{AgOp}} \text{bækur}_3 \text{[A}_{\text{AgO}} t_2 \text{[VP} t_1 \text{[V} t_2 t_3 \text{]]]]]]] \text{]]]]]]]} \\
\end{align*}
\]

This is completely parallel to the instances of subject control which we have previously encountered.

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Also parallel are raising to subject constructions. Consider the following sentence (from Thráínsson p.c.) and its LF structure.

(20) María virðist aldrei hafa lesið bókina
Mary seems never to-have read the-book
\[
\begin{align*}
\text{[AgrSP} & \text{ María}_1 \text{ [AgrS'} \text{ virðist}_4 \text{ [TP} \text{ t}_1 \text{ [T'} \text{ t}_4 \text{ [VP} \text{ t}_1 \text{ [V'} \text{ t}_4 \\
\text{[TP} & \text{ aldrei} \text{ [TP} \text{ t}_1 \text{ [T'} \text{ hafa} \text{ [AgrOP} \text{ bókina}_3 \text{ [AgrO'} \text{ lesið}_2 \text{ [VP} \text{ t}_1 \text{ [V'} \text{ t}_2 \text{ t}_3]]]]]]]]]]]]]]]
\end{align*}
\]

*Mary seems never to have read the book.*

We assume that raising verbs such as *virðist* select complements with a null T˚ (in example (20) trivially filled by an infinitival auxiliary). The same phonologically null T˚ is selected by ECM verbs:

(21) Ég taldi Maríu aldrei hafa lesið bókina
I believe Mary-Acc never to-have read the-book
\[
\begin{align*}
\text{[AgrSP} & \text{ Ég}_5 \text{ [AgrS'} \text{ taldi}_4 \text{ [TP} \text{ t}_5 \text{ [T'} \text{ t}_4 \text{ [AgrOP} \text{ Maríu}_1 \text{ [AgrO'} \text{ t}_4 \text{ [VP} \text{ t}_5 \text{ [V'} \text{ t}_4 \\
\text{[TP} & \text{ aldrei} \text{ [TP} \text{ t}_1 \text{ [T'} \text{ hafa} \text{ [AgrOP} \text{ bókina}_3 \text{ [AgrO'} \text{ lesið}_2 \text{ [VP} \text{ t}_1 \text{ [V'} \text{ t}_2 \text{ t}_3]]]]]]]]]]]]]
\end{align*}
\]

*I believe Mary never to have read the book.*

Like the Romance languages we discussed in §4.3, the complement head selected in a control construction is phonologically overt while the complement head selected in a raising construction is phonologically null, because of the different LF interpretations of the control and raising complement.

As discussed in chapter 3, the complement of modal verbs come in two forms. Epistemic modal verb do not assign a theta role to their subject, and therefore have the structure of raising verbs, whereas root modals assign a theta role to the raised subject and therefore have the LF structure of control verbs. However, modal verbs complement
structures tend to be homogenous within a language. In Icelandic, most modals, whether they are being used as a root or an epistemic modal, take \( a\delta \)-complements (Thráinsson p.c.):

\[(22) \quad \text{Hann, kann } [\text{TP} \ t \ ] t \ [\text{\textit{a}}\delta [\text{VP} \ t \ \textit{fara}]]] \]

he may to to-go

He may go.

However, three common modals take “bare” complements: \textit{munu} ‘will’, \textit{skulu} ‘shall’, and \textit{vilja} ‘will, want’. Aside from the semantic similarity of these three modals, it seems necessary to stipulate the type of complement each modal takes. However, in general we will assume that modal verb (particularly epistemic modals) act like raising verbs.

There are some other differences between control constructions and modal verb constructions. It is well known that Icelandic subjects may be assigned inherent, idiosyncratic case features — so-called “quirky” or inherent case — in addition to other verbs which assign the more common “structural” case. Quirky case is a lexical property licensed by only particular verbs, but otherwise quirkily case-marked subjects have the same properties as structurally Case-marked subjects. So, following Thráinsson (1993), assume that if a quirky-case-assigning verb moves to \( T^\circ \) than it can assign its quirky case to the subject of its clause. This happens in both finite clauses and non-finite clauses, including control constructions, as seen in the following data, from Thráinsson (1993). Notice in the data in (23) that the floated quantifier agrees in case with the subject:

\[(23) \quad \text{a. Strákarnir komust allir í skóla} \]

\begin{center}
the-boys(NPl,m) got all(Npl,m) to school
\end{center}

\textit{The boys all managed to get to school.}
b. Strákana vantaði alla í skólann  
   the-boys(Apl,m) lacked all(Apl,m) to school

   *The boys were all absent from school.*

c. Strákunum leiddist öllum í skóla  
   the-boys(Dpl,m) bored all(Dpl,m) in school

   *The boys were all bored in school.*

d. Strákanna var allra getið í ræðunni  
   the-boys(Gpl,m) was all(Gpl,m) mentioned in the-speech

   *The boys were all mentioned in the speech.*

We assert, following the general line of Freidin and Sprouse (1991), that DPs are required to undergo structural Case checking at the appropriate structural position, in addition to the inherent Case, if any, which is assigned to them. In the context of the Minimalist Program, we modify Freidin and Sprouse’s proposals to require movement to check both structural Case and (if necessary) inherent Case. In the majority of situations—like the sentences in (23)—inherent Case may be checked at the same time as structural Case, from the same movement (parasitically, so to speak). However, in raising and control contexts we can see separate Case-checking events for structural and inherent Case.

Some questions relating to the realization of Case and (especially) Agreement are not yet well understood, but for Icelandic the relevant generalization is that if the embedded subject gets quirky case (i.e. inherent Case), then it shows up on the subject of the matrix predicate in raising constructions but not in control constructions. The following examples are from Thráinsson (p.c.):
(24) a. Strákarnir virðast [ komast allir í skóla]
the-boys(NPl,m) seem to-get all(Npl,m) to school

The boys seem to make it all to school.

b. Strákana virðast [ ekki vanta alla í skólann]
the-boys(APl,m) seem not to-lack all(Apl,m) in school

The boys seem not to be all absent from school.

c. Strákunum virðast [ ekki leiðast öllum í skóla]
the-boys(DPl,m) seem not to-bore all(Dpl,m) in school

The boys seem not to be all bored in school.

d. Strákanna virðast [ verða allra getið í ræðunni]
the-boys(GPl,m) seem to-be all(Gpl,m) mentioned in the-speech

The boys seem to be all mentioned in the speech.

The inherent Case, assigned by the embedded verb, appears on the subject after it has
been moved to the matrix subject position of a raising verb. In control constructions—in
contrast—we see the following pattern, again from Thráinsson (1993):

(25) a. Strákarnir vonast til [ að komast allir í skóla]
the-boys(NPl,m) hope for to get all(Npl,m) to school

The boys hope to make it all to school.

b. Strákarnir vonast til [ að vanta ekki alla í skólann]
the-boys(NPl,m) hope for to lack not all(Apl,m) in school

The boys hope not to be all absent from school.
c. Strákarnir vonast til [að leiðast ekki öllum í skóla]
the-boys(NPl,m) hope for to bore not all(Dpl,m) in school
_The boys hope not to be all bored in school._

d. Strákarnir vonast til [að verða allra getið í ræðunni]
the-boys(NPl,m) hope for to be all(Gpl,m) mentioned in the-speech
_The boys hope to be all mentioned in the speech._

Here, inherent Case is assigned in the embedded clause, as can be seen from the form of the floated quantifier in the embedded clause. However, as discussed above the DP needs to have its structural Case checked as well, and this causes the DP to raise to the matrix clause where it is assigned structural (nominative) Case, and this structural Case is what appears on the DP.

This difference is particularly surprising for our theory, since we assume that, broadly speaking, both the raising and the control constructions show the same pattern of Case-movement: from the embedded SpecVP, to embedded SpecTP/SpecAgrSP, and finally to matrix SpecTP (plus other possible positions not relevant for Case checking). If we argue (as we have in this thesis) that the DP-chain’s positions remain the same in both the raising and control sentences, then how can we explain the Case differences between these sentences?

We have already proposed (not originally, of course) two separate Case-checking subsystems: inherent Case and structural Case. In most situations (e.g. simple finite sentences), both inherent and structural Case will be checked in the same operation—by \( T^* \). On the other hand, it is usually assumed that a non-finite \( T^* \) cannot check Case (as we have previously argued in this thesis). However, we have shown that there are two different types of non-finite \( T^* \): one having an independent tense specification (found in
control constructions), and one without an independent tense specification, which depends on the matrix $T^*$ (“anaphorically,” perhaps) for its interpretation. Let us suppose, then, that tense specification, rather than finiteness, is a factor in the checking of inherent Case. (We retain the requirement that structural Case is checked by a finite $T$.) With this set of assumptions, we can explain the appearance of structural and inherent Case in the above examples, in a way that eliminates some of the problems of other approaches.

The argument of Thráinsson (1993), mentioned previously in this section, that control clauses have a maximal projection of AgrSP and overt V-to-$T$, whereas raising clauses have a maximal projection of TP and do not have overt V-to-$T$ is perhaps consequence of this difference between the two types of nonfinite $T^*$. One explanation might be that inherent Case, as well as structural Case, must be assigned in the presence of an Agr projection. Thus, control complements, which have an AgrS projection, can assign inherent Case to the clause’s subject, whereas raising constructions do not have an AgrSP projection, and therefore cannot assign inherent Case in any event—thereby making the presence of a Case-checking $T^*$ superfluous at best. (The direction of the causation between the absence of AgrSP and the tense specification of nonfinite $T^*$ is unclear. Perhaps the source of this “conspiracy”, like many others, is ultimately acquisitional.)

In control constructions with embedded clauses assigning quirky case, as in (30), the DP subject of the embedded clause moves to the embedded SpecTP, where it is possible to check its inherent Case features. (Remember, as argued by Thráinsson 1993, there is overt V-to-$T$ movement in control clauses, but not in raising clauses.) Since the DP still needs to check its structural Case features, it moves to the matrix SpecTP, where its structural Case features may be checked. At Spell-Out, it is necessary to resolve which morphological case the DP has.
This is accomplished in the usual way, by having the last-checked Case features
“overrides” the previously checked Case features (see Sigurðsson 1989, 1991 for more detailed information relating to the “overriding” process). In the Minimalist Program, this overriding process might be best thought of as a Spell-Out process which looks at the position at the head of the Case-chain, determines which Case was checked there (i.e. last), and determines the DP’s morphology based on that. Therefore, in the control constructions above, we expect to see only the structural Case assigned by the matrix clause reflected by the DP’s morphological case, and that is exactly what is observed.

For instance, consider (28), the Spell-Out structure for (25c). In this tree, the long Case-chain is driven by the need of the DP strákarnir to check structural Case. However, it is also assigned inherent Case in the embedded clause, whose only morphological reflection is in the floated quantifier öllum. The intermediate inherent Case feature-checking operation has no other effect on the derivation. In the matrix clause, the DP checks its structural Case in a separate operation, and the latter operation overrides—one might say “overwrites”—the effects of the earlier operation with respect to the PF morphological processes.

Now, consider the examples of raising constructions given above, which have a similar structure to the control construction. However, there is one difference: the inherent Case of the embedded verb cannot be checked at the embedded SpecTP. This means that the DP moves up to the matrix SpecTP, where its Case can be checked immediately, and where the embedded verb’s inherent Case-features can be checked when the embedded V* finally makes its way to the head-cluster to check its features (after Spell-Out). The matrix SpecTP position, therefore, is where both structural and inherent Case features are checked. Hence, at Spell-Out, the morphological case of the DP cannot be determined by the order of the Case-checking operations, and we therefore fall back on the rule that inherent Case takes precedence over structural Case—as in the usual examples of quirky case in simple sentences like (23). Therefore, we predict that in raising constructions, the
raised DP shows quirky case, and this prediction is borne out.}

This analysis works without further elaboration in object-raising constructions involving quirky case, as in the following sentences (Thráinsson p.c.):

(27) a. Ég tel strákana hafa komist í skólann
    I believe the-boys(Apl) to-have gotten to the-school
    I believe the boys to have gotten to school.

b. Ég tel strákunum hafa leiðst í skólanum
    I believe the-boys(Dpl) to-have been-bored in the-school
    I believe the boys to have been bored in school.

In raising constructions, the T° is unable to check either structural or inherent Case. Therefore, the DP moves to the matrix SpecAgrOP to check both its structural Case (in the usual way) and inherent Case (by the post-Spell-Out movement of the embedded verb to the matrix head-adjunction complex and thence to AgrO°, where the inherent Case features of the embedded verb can be checked). Since in these examples, as in the subject-raising examples in (24), both inherent and structural Case are checked in the same position, the inherent Case (if any) is the one which is expressed morphologically.

Also, consider the puzzling status of modal verbs in Icelandic (from Thráinsson 1993):

\[\text{Notice that, in both the raising and control constructions, the stranded quantifier in the embedded clause shows the morphological “quirky case” assigned by the embedded verb. In the control constructions how this happens is obvious—the Case-chain in the embedded clause checks inherent Case only, and the floated quantifier agrees with that, since it is part of that inherent Case-chain. The structural Case checked in the matrix SpecTP cannot be transmitted back down the Case-chain to the quantifier, because the Case-chain is not uniform—only the structural and the inherent components of the Case-chain are. In raising constructions, however, the inherent Case assigned in the matrix clause percolates back down the (uniform) Case-chain to cause the quantifier to show the correct, “quirky” morphological case.}\]
(28) a. Strákarnir eiga að komast þangað einir
the-boys(Npl,m) ought to get there alone(Npl,m)
*The boys ought get there alone.*

b. *Strákarnir eiga ekki að vanta eina*
the-boys(Npl,m) ought not to lack alone(Apl,m)
*The boys ought not be absent alone.*

c. *Strákarnir eiga ekki að leiðast einum*
the-boys(Npl,m) ought not to be-bored alone(Dpl,m)
*The boys ought not be bored alone.*

d. *Strákarnir eiga ekki að vera getið einna*
the-boys(Npl,m) ought not to be mentioned alone(Gpl,m)
*The boys ought not be mentioned alone.*

(29) a. *Strákarnir eiga ekki að vanta einir*
the-boys(Npl,m) ought not to lack alone(Npl,m)
*The boys ought not be absent alone.*

b. *Strákarnir eiga ekki að leiðast einir*
the-boys(Npl,m) ought not to be-bored alone(Npl,m)
*The boys ought not be bored alone.*

c. *Strákarnir eiga ekki að vera getið einir*
the-boys(Npl,m) ought not to be mentioned alone(Npl,m)
*The boys ought not be mentioned alone.*
As discussed in Thráinsson (1993) and Thráinsson and Vikner (1995), the Case checking possibilities of root modals are given in (28-29), and epistemic modals allow the Case checking of (30). The precise difference between root and epistemic modals, as we argued in chapter 3, is that in our theory root modals are control constructions, while epistemic modals are raising constructions. If this is true, then we would predict that epistemic modals would exhibit the Case-checking properties of raising verbs, which we observe in (30). Also, we would expect root modals to demonstrate Case-checking properties comparable to control constructions. This is a little more difficult to check, since of the relevant “quirky Case” examples in (28-29), all the possibilities are ungrammatical. It is possible that there is a semantic reason for this; quirky Case-checking verbs are largely “impersonal” verbs, and as such might resist being embedded under root modals, or any control verb. In fact, as Thráinsson (1979) discusses, almost all examples of such constructions are embedded under vonast til ‘hope for’. It is likely that almost all the root modals—and many control verbs—are simply incompatible with quirky Case verbs like
vanta ‘lack’, leiðast ‘be bored’ and vera getið ‘be mentioned’.

4.5 Conclusion

In this chapter, we have applied the analysis of obligatory control constructions developed in chapter 2 and 3 to control and raising constructions in Romance (French and Italian) and Germanic (mostly Icelandic). We showed that the theory is consistent with a wide variety of data from those languages, which alone powerfully supports the idea that a simpler theory, in which the properties of control constructions are derived from other independently-motivated requirements on movement and Case-marking, is not only possible but superior to stipulating the properties of control constructions in the theory of grammar.