Glossa a journal of general linguistics

Fischer, Silke. 2018. Locality, control, and non-adjoined islands. *Glossa: a journal of general linguistics* 3(1): 82. 1–40, DOI: https://doi.org/10.5334/gjgl.182

RESEARCH

Locality, control, and non-adjoined islands

Silke Fischer
University of Stuttgart, Institut für Linguistik: Anglistik, Keplerstr. 17, 70174 Stuttgart, DE
silke.fischer@ifla.uni-stuttgart.de

The goal of this paper is twofold: empirically, it is shown that obligatory control (OC) into islands is not restricted to control into certain adjuncts, but can also involve non-adjoined islands. This poses a serious problem for the movement theory of control (MTC), whose analysis of OC into adjuncts crucially relies on the fact that adjunction is involved.

Second, the paper seeks to explore to what extent control theory is compatible with phase theory based on a strict version of the Phase Impenetrability Condition (PIC). In order to reconcile these locality considerations with the observed control patterns in the context of islands, the paper assumes a moderately local relationship between controller and controllee. The basic idea of the proposed theory is that the controllee starts out as an empty argument which needs to be referentially identified under Agree. To this end, it moves from phase edge to phase edge (in accordance with the PIC) until it can be licensed by the controller.

In contrast to the MTC, the target position of controllee movement is not the controller position itself; thus, control into islands (including non-adjoined islands) can be derived more easily, since the control relation can already be established when the controller is at the edge of the highest phase inside the island and the controller is merged in the next higher phase. Hence, the theory is compatible with phase theory and can in particular account for the observed control patterns involving adjoined and non-adjoined islands.

Keywords: control; islands; locality; phase theory; Agree; German

1 Introduction

Since the development of the movement theory of control (MTC), which argues that the controllee in obligatory control structures is but a residue of A-movement (see Hornstein 1999 et seq.), a lively debate has been going on concerning the adequate handling of control (for alternative approaches, cf., for instance, Landau 2000; 2015; Culicover & Jackendoff 2001; 2006). In this paper, I want to focus on the question of how local control dependencies actually are in view of the fact that, on the one hand, controller and controllee might be separated by an island, but on the other hand, phase theory demands a certain degree of locality. So the question arises as to how these two aspects can be unified in a theory of control.

In fact, one major conceptual goal of this paper is thus part of a bigger enterprise, namely to explore the consequences of taking the phase model seriously. The phase model adopts a local-derivational view of syntax in which the accessible domain is restricted by the Phase Impenetrability Condition (PIC; see Chomsky 2000 et seq.).[1] As a consequence,

[1] I follow the standard definitions in (i)–(iv). Note that (i) is the more restrictive version of the PIC that Chomsky proposes. Following Müller (2004; 2010), Fischer (2004), a.o., I consider a weakened version of the PIC conceptually inferior since it involves a larger search space; a derivational syntactic theory, however, should try to reduce the representational residue as much as possible (cf. also Brody 2002). The goal of this paper is therefore to explore the possibility of modeling control theory on the basis of the PIC version in (i).

all syntactic operations are expected to be local, and apparent non-local dependencies must be reanalyzed in a way that allows a reconciliation with phase theory. So we need to take a look at all sorts of non-local syntactic phenomena and check whether they can be remodeled accordingly. One well-known example is to split up non-local movement relations into smaller steps by means of successive-cyclic movement, and there are many more examples in the literature where it has been proposed that apparent non-local relations should be analyzed in terms of local dependencies. For instance, with respect to long distance agreement, Legate (2005) argues that it involves cyclic agreement, and Polinsky & Potsdam's (2001) analysis of long distance agreement also aims to achieve an underlying local agreement configuration by means of covert movement to the edge of the embedded clause. Furthermore, Camacho's (2010) analysis of switch reference is also based on cyclic agreement operations, and early examples from binding theory (which do not yet involve the phase model, of course) include Pica's (1987) or Cole, Hermon & Sung's (1990) treatment of simple reflexives in terms of LF head-movement to derive long distance binding in a local way. Fischer's (2004; 2006) theory of reflexivization then adopts the phase model and proposes a PIC-compatible analysis of anaphoric and pronominal binding; and this paper aims to investigate control relations from a PIC-oriented perspective. Why should control be subject to the PIC to begin with? As will be shown in section 2, control is sensitive to certain syntactic island effects, which means that it is governed by syntactic locality. Since it would not be parsimonious to assume that there is a syntactic relation that obeys some syntactic locality constraints and yet is not subject to the PIC, we are led to assume that control is indeed restricted by the PIC.

In a non-movement theory of control, controller and controllee typically occur in different clauses throughout the derivation, and their relationship is therefore non-local. This means that it is not compatible with the PIC without further assumptions.[2] The MTC, by contrast, expresses the most local configuration one can think of, since controller and controllee are related by movement and thus represented by copies of the same DP; however, as the discussion in section 4.2 will show, in its current form, the MTC is not really compatible with phase theory either (cf. also Drummond & Hornstein 2014). Moreover, if we take seriously the notion that islands impose restrictions on syntactic movement, the idea that movement takes place all the way up to the controller's position (as suggested by the MTC) might be too radical given that obligatory control is possible into (certain types of) islands. In fact, proponents of the MTC have proposed some strategies to handle control into adjuncts in particular, but, crucially, these cannot be extended to non-adjoined islands. However, as section 2 reveals, control into islands of this type exists as well. An alternative is clearly needed.

This paper will therefore explore a hybrid theory of control (HTC) which will combine aspects of both the MTC and non-movement approaches to control. It will assume that there is movement (to model control in terms of a local relationship and thereby make it compatible with phase theory), but not all the way up to the controller's position (to keep up the idea of strict islandhood). The basic idea is that the controllee is merged as

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(i) **Phase Impenetrability Condition (PIC)** (Chomsky 2000: 108)
The domain of a head X of a phase XP is not accessible to operations outside XP; only X and its edge are accessible to such operations.

(ii) The domain of a head corresponds to its c-command domain.

(iii) The edge of a head X is the residue outside X′; it comprises specifiers and elements adjoined to XP.

(iv) CPs and vPs are phases.

[2] This might not be the case to the same extent in all control scenarios since not all clause boundaries necessarily coincide with phase boundaries (cf., for instance, restructuring; see Wurmbrand 2001 a.o.); however, it is true for many control configurations.

an empty, referentially defective argument (EA) which probes upwards to find a suitable goal (= the controller) that licenses EA under Agree. As the search domain of EA is restricted by the PIC, EA has to move from phase edge to phase edge until it can be licensed; however, in contrast to the predictions of the MTC, it can stop moving when it is at the edge of the phase preceding the phase in which the controller enters the derivation. Hence, licensing of control and the availability of movement are dissociated – this means that even if EA is inside an island, it can be licensed by a controller as long as EA is at the edge of the island and thus still accessible when the controller enters the derivation.[3] So we can conclude that the HTC takes control dependencies to be local in a moderate way, meaning that while the HTC follows phase theory, it at the same time accepts that control dependencies might be disrupted by island boundaries.

Although the HTC contrasts with both the MTC and non-movement theories of control, the focus of this paper is on comparison with the MTC. Apart from the fact that PRO-based theories comprise a less homogeneous class of analyses, one basic insight of the paper is that control into non-adjoined islands is problematic for the MTC in particular.

The paper is organized as follows: section 2 starts with a brief overview of control into islands and presents the data involving obligatory control into non-adjoined islands. Section 3 reviews how the MTC accounts for OC into adjuncts and discusses why this strategy cannot be applied successfully in the case at hand. Moreover, the section reconsiders the Icelandic adjunct OC data involving extraposition discussed by Wood (2012; 2014), which are also problematic for the MTC, and a similar point is made for German. Section 4 then returns to the locality issue; it focuses on the compatibility of phase theory and previous analyses of control, before section 5 then introduces an alternative account, the hybrid theory of control (HTC). First, the underlying mechanism will be discussed, before concrete examples and further consequences of the proposal are illuminated. Section 6 then returns to control into islands and shows how this is captured under the HTC, including control into non-adjoined islands. Crucially, we will see that, while this is barred by the MTC, control relations of this sort can easily be derived by the HTC. In section 7, non-obligatory control is discussed, and section 8 contains some concluding remarks on the distribution of the underlying empty argument. Section 9 concludes with a brief summary.

2 Control into islands

2.1 The general picture

If we consider control into islands, the picture is bipartite. On the one hand, there are well-known examples of obligatory control into certain adjuncts that have been discussed in the literature before. These comprise sentences like (1) and (2) (the latter being an Icelandic example involving extraposition).[4]

(1) Hornstein (1999: 88)
John$_1$ heard Mary$_2$ [without PRO$_{1/*2}$ entering the room].

(2) *Icelandic* (Wood 2012: 323)

Þeir$_1$	ákváðu	(það)	[að PRO$_1$	heimsækja	Ólaf].
they.M.NOM	decided	it.ACC	to	visit	Olaf.ACC

'They decided to visit Olaf.'

[3] This central underlying idea that syntactic licensing requires movement from phase edge to phase edge until the appropriate licensing configuration can be established has already been proposed for binding relations in Fischer (2004; 2006).

[4] I will not discuss OC diagnostics for these examples; their status has already been considered in the literature. As for similar data from German, see section 3.2.

In view of these example, the question might arise of whether control is sensitive to syntactic islands at all. However, crucially, obligatory control relations cannot be established across all kinds of syntactic islands. Two cases in point are subject islands (see (3)) and speech act or sentence adverbial adjuncts (see (4), (5)), which involve non-obligatory control.[5] The grammaticality of sentence (3) shows that the matrix subject does not obligatorily control PRO; if this were the case, Binding Principle B would be violated (due to the coindexed pronoun in the infinitival clause) and the sentence would be expected to be ungrammatical. Similarly, in (4) and (5), PRO is not controlled by a local, c-commanding antecedent; instead, we observe instances of arbitrary or speaker PRO.

(3) *German*
Peter$_1$ behauptet, [PRO$_{2/*1}$ ihn$_1$ zu wählen] würde helfen.
Peter claims him to vote would help
'Peter$_1$ claims that it would help to vote for him$_1$.'

(4) *German* (Pittner 1999: 338)
Er$_1$ ist, [ohne PRO$_{speaker/*1}$ zu übertreiben], weit und breit der beste Billiard-Spieler.
he is without to exaggerate widely and broadly the best billiard-player
'He is, without exaggeration, the best billiard player in the world.'

(5) Landau (2013: 232)
Potatoes$_1$ are tastier [after PRO$_{arb/*1}$ boiling them].

This shows that control is not completely insensitive to islands, which means that it is subject to syntactic locality restrictions.

Turning to the MTC, which derives OC via movement, it is a priori unexpected that we observe OC into islands at all, since extraction out of islands is generally blocked. In order to derive cases like (1), Hornstein (1999 et seq.) therefore proposes an analysis based on sideward movement, which does not involve movement out of the adjunct. As Wood (2012) already points out, this analysis cannot readily be extended to the extraposition data in (2) (see also section 3.2). Crucially, however, these data are not the only problematic island data for the MTC, because there is a third type of construction that displays OC into islands which the MTC cannot account for: OC into non-adjoined islands.

2.2 OC into non-adjoined islands

In this section, the focus will be on data from German. The general scenario we want to look at involves infinitival clauses located inside an island in the verb's complement position. Typically, these infinitival clauses can be extraposed in German (and sometimes have to be), but, crucially, extraposition is by no means always obligatory, as the broad range of examples shows.[6,7] The crucial point is that we do find grammatical non-extraposed exam-

[5] I will return to non-obligatory control (NOC) in section 7. As regards the discussion of when adjunct control involves OC or NOC, see also Fischer & Flaate Høyem (2017).

[6] Note that Wood (2014) has already pointed out for the Icelandic data involving sentential pronouns that "[t]he presence of the [sentential] pronoun does not force extraposition, and clauses occurring with the pronoun are islands for extraction whether extraposition takes place or not" (Wood 2014: 4).

[7] Different factors seem to influence the acceptability of the non-extraposed examples. Haider, who also lists some German examples of this type (see (i)), points out "[they] may sound somewhat clumsy to an informant because of their complexity" (Haider 2015: fn. 9) (and due to the fact that the extraposed alternative is also available and is easier to process); cf. also Hartmann (2013) regarding prosodic influences on extraposition possibilities. In fact, slow and careful articulation in conjunction with the heaviness of the material following the CP seem to facilitate acceptability. So, for instance, the clumsiness of example (i) seems to reduce in (ii).

ples (cf. also Kiss 2005: fn. 6), and these have to be derived. Note, moreover, that, due to the underlying OV-structure in German, it is easy to see whether extraposition has taken place or not because of the different resulting surface word order: if the infinitival CP is extraposed, the participle (being located in V) occurs between the sentential pronoun or the embedding DP and the right-adjoined CP; otherwise, it occurs sentence-finally. In the following examples, the latter can be observed (i.e. the participle is the last word), which means that they do not involve extraposition and clearly are of the type control into a non-adjoined island. (6) involves a sentential proform plus related CP, and (7)/(8) are standard complex NP constraint configurations. The corresponding (b)- and (c)-examples confirm the islandhood of the underlying constituent γP, since both wh-movement and topicalization are blocked.

(6) *German*

a. Peter$_1$ hatte [$_{\gamma P}$ darauf, [PRO$_1$ dieses Spiel zu gewinnen]], sein Leben lang gehofft.
Peter had on it this match to win his life long hoped
'Peter had hoped to win this match all his life.'

b. *Welches Spiel$_2$ hatte Peter$_1$ [$_{\gamma P}$ darauf [PRO$_1$ t$_2$ zu gewinnen]] sein Leben lang gehofft?
which match had Peter on it to win his life long hoped
'Peter had hoped to win which match all his life?'

c. *Dieses Spiel$_2$ hatte Peter$_1$ [$_{\gamma P}$ darauf [PRO$_1$ t$_2$ zu gewinnen]] sein Leben lang gehofft.
this match had Peter on it to win his life long hoped
'This match Peter had hoped to win all his life.'

(7) a. Hans$_1$ hat [$_{\gamma P}$ den Gedanken (daran), [PRO$_1$ sie zu besuchen]], wieder verworfen.
Hans has the thought at it her to visit again discarded
'Hans again discarded the thought of visiting her.'

b. *Wen$_2$ hat Hans$_1$ [$_{\gamma P}$ den Gedanken (daran) [PRO$_1$ t$_2$ zu besuchen]] wieder verworfen?
who has Hans the thought at it to visit again discarded
'Hans again discarded the thought of visiting whom?'

c. *Maria$_2$ hat Hans$_1$ [$_{\gamma P}$ den Gedanken (daran) [PRO$_1$ t$_2$ zu besuchen]] wieder verworfen.
Mary has Hans the thought at it to visit again discarded
'Hans again discarded the thought of visiting Mary.'

(i) *German* (Haider 2015: 6)
Man hat ihn [davon, [das Land zu verlassen]], abgehalten.
one has him from it the country to leave prevented
'He was prevented from leaving the country.'

(ii) Man hat ihn [davon, [das Land zu verlassen]], auf hinterhältige Weise abgehalten.
one has him from it the country to leave on perfidious way prevented
'In a perfidious way, he was prevented from leaving the country.'

(8) a. Mathis$_1$ hat [$_{\gamma P}$ das Angebot, [PRO$_1$ Hockey mitzuspielen]], natürlich
Mathis has the offer hockey with.to.play of course
gerne angenommen.
gladly accepted
'Of course, Mathis accepted gladly the offer to join the hockey game.'

b. *Was$_2$ hat Mathis$_1$ [$_{\gamma P}$ das Angebot [PRO$_1$ t$_2$ mitzuspielen]] natürlich
what has Mathis the offer with.to.play of course
gerne angenommen?
gladly accepted
'Mathis accepted gladly the offer to join in what?'

c. *Hockey$_2$ hat Mathis$_1$ [$_{\gamma P}$ das Angebot [PRO$_1$ t$_2$ mitzuspielen]] natürlich
hockey has Mathis the offer with.to.play of course
gerne angenommen.
gladly accepted
'Of course, Mathis accepted gladly the offer to join the hockey game.'

Note that these structures are clear instances of obligatory control. This is confirmed in the following by applying several OC diagnostics from the literature (see, for instance, Hornstein 1999; Landau 2000; 2013; Sichel 2010). First, OC PRO requires a local, c-commanding antecedent; i.e., the controller must be an argument of the embedding clause and long-distance or arbitrary control are ruled out. This is illustrated in (9) and (10), in which non-c-commanding or non-local controllers are illicit.

(9) *German*
[Peters$_2$ Vater]$_1$ hatte [darauf, [PRO$_{1/*2}$ dieses Spiel zu gewinnen]], sein
Peter's father had on it this match to win his
Leben lang gehofft.
life long hoped
'Peter's father had hoped to win this match all his life.'

(10) Karl$_2$ erzählte, dass Peter$_1$ [darauf, [PRO$_{1/*2/*arb}$ dieses Spiel zu gewinnen]],
Karl told that Peter on it this match to win
sein Leben lang gehofft hatte.
his life long hoped had
'Karl said that Peter had hoped to win this match all his life.'

Moreover, in (11), Binding Theory helps to make this point even clearer. Note that the German verb *blamieren* can be used in a reflexive or a transitive context: *sich blamieren* ('to make a fool of oneself') vs. *jemanden blamieren* ('to embarrass someone'). The fact that, in (11-a), it is impossible to use a pronoun that is bound by the matrix subject in the infinitival clause suggests that Principle B is violated, which means that PRO must be controlled by *Hans* (i.e., we have OC).[8] In (11-b), on the other hand, the pronoun is replaced with the simple anaphor *sich* in the infinitival clause. Since this is grammatical, we can conclude that *sich* is locally bound (following Principle A), which suggests that PRO is coreferent with the matrix subject *Hans* and can thus license the anaphor.[9]

[8] This contrasts with the NOC scenario in (3), where this test has also been applied: in NOC structures, a coindexed pronoun in the infinitival clause is licit.
[9] Note that German *sich* must be locally bound (unlike, for instance, Icelandic *sig*).

(11) *German*

a. Hans$_1$ hat [den Gedanken (daran), [PRO$_{1/*2}$ ihn$_{*1/2}$ zu blamieren]],
   Hans has the thought at it him to Embarrass
   nicht ertragen.
   not endured
   'Hans could not endure the thought of embarrassing him.'

b. Hans$_1$ hat [den Gedanken (daran), [PRO$_{1/*2}$ sich$_1$ zu blamieren]], nicht
   Hans has the thought at it REFL to embarrass not
   ertragen.
   endured
   'Hans could not endure the thought of making a fool of himself.'

What is also well-known is that OC PRO only allows a sloppy interpretation under ellipsis; this is illustrated in (12). The meaning of (12-a) is represented in (12-b), and as the indexation shows, a sloppy reading of PRO is obligatory – hence, this must be obligatory control.

(12) *German*

a. Mathis$_1$ hat [das Angebot, [PRO$_1$ Hockey mitzuspielen]], natürlich gerne
   Mathis has the offer hockey with.to.play of course gladly
   angenommen, und Lasse auch.
   accepted and Lasse too
   'Of course, Mathis accepted gladly the offer to join the hockey game, and Lasse did too.'

b. Mathis$_1$ hat [das Angebot, [PRO$_1$ Hockey mitzuspielen]], natürlich gerne
   Mathis has the offer hockey with.to.play of course gladly
   angenommen, und Lasse$_2$ hat [das Angebot, [PRO$_{*1/2}$ Hockey
   accepted and Lasse has the offer hockey
   mitzuspielen]], natürlich gerne angenommen.
   with.to.play of course gladly accepted
   'Of course, Mathis accepted gladly the offer to join the hockey game, and Lasse accepted gladly the offer to join the hockey game.'

Finally, it has been observed that OC PRO need not be human (see Landau 2013 a.o.). Since we find such examples involving the structure under discussion (see (13)), this also suggests that this is OC.

(13) *German*

Der Roman$_1$ hat [darauf, [PRO$_1$ den Leser zu manipulieren]], von
the.NOM novel has on it the.ACC reader to manipulate from
Beginn an abgezielt.
beginning on aimed at
'The novel aimed at manipulating the reader from the very beginning.'

To sum up, this is what the data in this section tell us: (i) the controlled clauses in (6-a)–(8-a) involve OC (see (9)–(13)); (ii) the infinitival clauses are embedded inside islands because they block extraction (see (6-b)/(6-c)–(8-b)/(8-c)); (iii) and, as the word order clearly shows, these examples do not involve extraposition but are genuine examples of the type OC into a non-adjoined island.

3 OC into islands and the MTC

Recall that, at first sight, OC into adjuncts (as in (14-a)) seems to be problematic for the MTC, since its central assumption is that control involves movement of the controllee to the controller's position; however, extraction out of adjuncts is typically barred (see (14-b)).

(14) Drummond & Hornstein (2014: 450)
 a. John laughed at Mary [without <John> falling over].
 b. *Who did John laugh at Bill before Mary spoke to <who>]?

The MTC's answer to this dilemma is sideward movement. The underlying idea is that the controller DP (*John* in (14-a)) is moved out of the adjunct into the matrix clause while adjunct and matrix clause are still unconnected – that is, according to the MTC, control into adjuncts relies on an interarboreal operation before adjunction takes place. The concrete derivation of (14-a) thus proceeds as follows: first, *John* is merged into the adjunct, which in the beginning is not yet connected to the matrix clause (see (15-a)). Next, sideward movement takes place, meaning that *John* is copied into Specv of the matrix clause (see (15-b)), and only then is the adjunct merged into the matrix clause (see (15-c)).

(15) Drummond & Hornstein (2014: 450)
 a. *John* is merged into workspace 2:
 Workspace 1: [$_{vP}$ laughed at Mary]
 Workspace 2: [$_{PP}$ without **John** falling over]
 b. Sideward movement of *John* from workspace 2 to workspace 1:
 Workspace 1: [$_{vP}$ **John** laughed at Mary]
 Workspace 2: [$_{PP}$ without <John> falling over]
 c. Workspace 2 is merged as an adjunct in workspace 1:
 [$_{vP}$ [$_{vP}$ John laughed at Mary] [$_{PP}$ without <John> falling over]]

In other words, the MTC argumentation allows us to distinguish between licit movement out of adjuncts and illicit movement out of adjuncts by considering the timing of extraction: if it occurs *before* the adjunct is connected to the work space containing the landing site of movement, it is licit (i.e., we have an instance of sideward movement, and when movement occurs we do not yet have an adjoined structure, strictly speaking; see (15-b)); if extraction occurs *afterwards* (i.e., when the adjunct has already been merged into the main derivation), the result is ungrammatical, yielding a standard CED effect.[10]

3.1 Predictions by the MTC

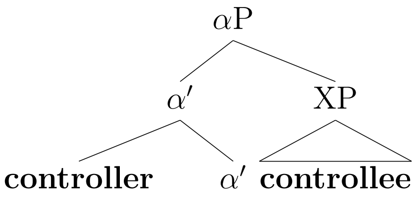
The argumentation by Drummond & Hornstein (2014) outlined above provides one important insight: for the MTC, whether an adjunct is created by external merge or by internal merge (i.e. by movement) is of crucial importance.

The external merge scenario covers examples such as (16). The general underlying scheme is illustrated in (17).

(16) a. John$_1$ heard Mary$_2$ [without PRO$_{1/*2}$ entering the room]. (=(1))
 b. John$_1$ laughed at Mary$_2$ [without PRO$_{1/*2}$ falling over]. (=(14-a))

[10] See Huang (1982), who unifies the Subject Condition (according to which extraction out of subjects is not possible) and the Adjunct Condition (which claims that extraction out of adjuncts is not possible) under the Condition on Extraction Domain (CED).

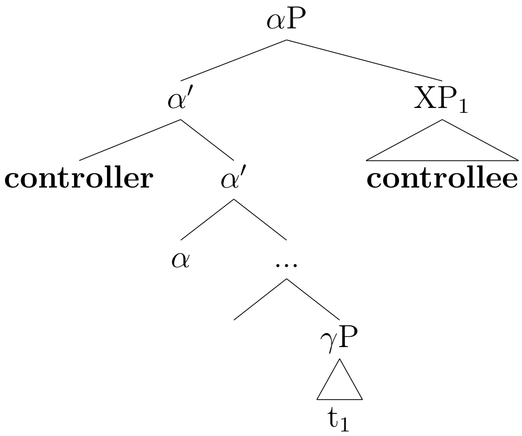
(17) **scenario 1: XP adjunct created by external merge**[11]



As shown above, the MTC can account for data like these by invoking sideward movement: before XP is merged with a projection of *α*, the DP occupying the controllee position inside XP can move sideways to the controller position and thereby establish the control relation.[12] This means that sideward movement precedes adjunction (and is therefore licit).

The scenario which concerns adjuncts created by movement is illustrated in (18).

(18) **scenario 2: XP adjunct created by movement (internal merge)**



The crucial difference between (17) and (18) is that in the latter case concatenation of XP with the main derivation takes place much earlier, namely inside *γ*P. Hence, sideward movement is blocked: at the point in the derivation when XP (and with it the controllee inside it) is still unconnected to the rest (i.e. before *γ*P is completed), the target position of the required movement (= Spec*α*, the controller position) is not yet part of the derivation, given a bottom-up derivation. In addition, movement out of XP at the point represented in (18) (i.e. after adjunction has taken place) yields a classical CED effect. So neither ordering, first sideward movement and then adjunction to *α*P, nor first adjunction to *α*P and then movement from the controllee to the controller position, can derive (18).

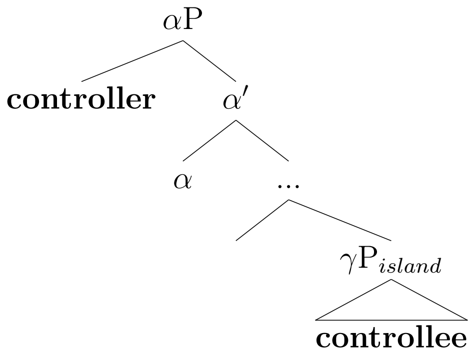
There is, however, a third possibility to allow for movement from the controllee to the controller position in (18): if movement takes place after XP is merged into the derivation but before it is adjoined to *α*P (in (18), this would correspond to movement out of *γ*P to Spec*α*, before XP moves to the adjoined position). Note, however, that this option is only available if *γ*P itself is not an island for extraction (nor is any other YP an island that is dominated by *γ*P and dominates (the base position of) XP).

[11] The labeling in the trees follows Bare Phrase Structure, according to which the labels are defined on the basis of their relative positions. The different projections can thus be defined as follows: *α* is a maximal projection iff *α* does not project; *α* is a minimal projection iff *α* is directly selected from the numeration; *α* is an intermediate projection iff *α* is neither a maximal nor a minimal projection. As a result, the mother node of the controller is *α*′, not *α*P.

[12] Landau (2003) and others have questioned whether sideward movement should be allowed or not (see Landau's 2003 objections against it), but this debate will be ignored here. What is crucial for us is that the MTC has a means to derive the scenario illustrated in (17).

This leads to a third scenario involving control into islands: the one illustrated in (19). It does not involve control into an adjunct but rather control into a non-adjoined island. For the MTC, such a structure cannot exist (recall that we are talking about obligatory control): it is impossible to extract the controllee out of γP *before* the latter is merged into the structure and becomes an island (i.e. sideward movement, in analogy to control into adjuncts, is not an option), because the landing site is not yet available at this point; but once it is concatenated, extraction out of γP is blocked because of γP's island status; see (19).

(19) **scenario 3: control into non-adjoined islands**



To sum up, the MTC makes the following predictions: (i) OC into an extraposed adjunct (= scenario 2) can only be derived if the underlying constituent γP is not an island; (ii) OC into non-adjoined islands (= scenario 3) is predicted to be impossible. However, control scenarios of the latter type do exist – this has been shown explicitly in section 2. And this means that they fall outside the purview of what the MTC can handle.

3.2 Extraposition in Icelandic and German

But as mentioned above, even control into extraposed clauses is problematic for the MTC if the underlying constituent from which extraposition takes place is an island. This has already been reported for Icelandic in Wood (2012; 2014), and in this section, I will moreover have a brief look at object extraposition in German.

The set of data from Icelandic considered here is taken from Wood (2012), who made this observation: if we look at sentences with an extraposed infinitival clause, an asymmetry arises between movement and control. While obligatory control across the sentential pronoun *það* is grammatical (see (20)), this pronoun blocks movement of all sorts; i.e., both standard A′- and A-movement across *það* is impossible, as illustrated in (21) (involving topicalization) and (22) (involving raising).

(20) *Icelandic* (Wood 2012: 323)
Þeir$_1$ ákváðu (það) að PRO$_1$ heimsækja Ólaf. (= (2))
they.M.NOM decided it.ACC to visit Olaf.ACC
'They decided to visit Olaf.'

(21) *Icelandic* (Wood 2012: 323)
Ólaf$_2$ ákváðu þeir$_1$ (*það) að PRO$_1$ heimsækja t$_2$.
Ólaf.ACC decided they.M.NOM it.ACC to visit
'Olaf, they decided to visit.'

(22) *Icelandic* (Wood 2012: 324)
Hún$_1$ virðist (*það) t$_1$ elska Svein.
she.NOM appeared it.ACC love Sveinn.ACC
'She appeared to love Sveinn.'

Let us now take a look at similar data from the literature on German. We can observe that, in German, we also find sentential pronouns of the *það*-type; moreover, as has been noted before (cf., for instance, Webelhuth 1992; Müller 1995), they also occur optionally and block CP topicalization; see (23).

(23) *German* (Webelhuth 1992: 101)

a. Ich bereue (es), dass Maria wegfährt.
I regret it that Maria goes away
'I regret that Maria is going away.'

b. Dass Maria wegfährt, bereue ich (*es).
that Maria goes away regret I it
'I regret that Maria is going away.'

While (23) involves only finite complement clauses, (24)–(26) show that the pattern can also be extended to non-finite complement clauses and topicalization involving extraction out of the embedded CP: as in Icelandic, the latter is illicit (see (24-b)–(26-b)), whereas control across the intervening pronoun is not blocked (see (24-a)–(26-a)).[13]

(24) *German*

a. Er$_1$ hat (es) bereut/bedauert, PRO$_1$ Maria verletzt zu haben.
he has it regretted Maria hurt to have
'He regretted having hurt Maria.'

b. Maria$_2$ hat er$_1$ (*es) bereut/bedauert PRO$_1$ t$_2$ verletzt zu haben.
Maria has he it regretted hurt to have
'He regretted having hurt Maria.'

(25) a. Er$_1$ bittet dich (darum), PRO$_1$ die Unterlagen morgen mitzubringen.
he asks you for it the documents tomorrow with.to.bring
'He is asking you to bring the documents tomorrow.'

b. Bierwisch (1963: 135)
Die Unterlagen$_2$ bittet er$_1$ dich (*darum), PRO$_1$ t$_2$ morgen mitzubringen.
the documents asks he you for it tomorrow with.to.bring
'He is asking you to bring the documents tomorrow.'

[13] Note that these data are quite robust and the contrasts in grammaticality very clear for native speakers. All examples in this section crucially also involve obligatory control; see (i) and (ii), which illustrate some of the standard tests: (i) shows that the matrix subject and PRO are obligatorily coreferent; (ii) illustrates that we only get a sloppy reading of PRO under ellipsis (the only available reading is the one according to which Peter regrets having hurt Maria).

(i) *German*

a. Peter$_1$ hat (es) bereut [PRO$_{1/*2}$ Maria verletzt zu haben].
Peter has it regretted Maria hurt to have
'Peter regretted having hurt Maria.'

b. Maria$_3$ hat Peter$_1$ (*es) bereut/bedauert PRO$_{1/*2}$ t$_3$ verletzt zu haben.
Maria has Peter it regretted hurt to have
'Peter regretted having hurt Maria.'

(ii) a. Peter$_1$ hat (es) bereut [PRO$_1$ Maria verletzt zu haben], und Hans auch.
Peter has it regretted Maria hurt to have and Hans too
'Peter regretted having hurt Maria, and Hans did too.'

b. Peter$_1$ hat (es) bereut [PRO$_1$ Maria verletzt zu haben], und Hans$_2$ hat (es) bereut
Peter has it regretted Maria hurt to have and Hans has it regretted
[PRO$_{*1/2}$ Maria verletzt zu haben].
Maria hurt to have
→ **only sloppy reading available (= OC property)**

(26) a. Lasse$_1$ hatte (darauf) gehofft, PRO$_1$ dieses Hockeyspiel zu gewinnen.
Lasse had on it hoped this hockey match to win
'Lasse had hoped to win this hockey match.'

b. Dieses Hockeyspiel$_2$ hatte Lasse$_1$ (*darauf) gehofft PRO$_1$ t$_2$ zu gewinnen.
this hockey match had Lasse on it hoped to win
'Lasse had hoped to win this hockey match.'

In fact, the observed intervention effect does not only occur with topicalization; other instances of A′-movement are equally affected, as example (27) involving wh-movement shows.[14] The same holds for A-movement: as in Icelandic (see (22)), the sentential pronoun is ruled out in raising constructions (cf. the ambiguous verb *beginnen* ('begin'), which occurs in a raising construction in (28) and in a control construction in (29)).

(27) *German*
Wen$_2$ hat er$_1$ (*es) bereut, PRO$_1$ t$_2$ verletzt zu haben?
who has he it regretted hurt to have
'Who did he regret having hurt?'

(28) Es$_1$ begann (*damit), t$_1$ heftig zu regnen.
it began with it heavily to rain
'It began to rain heavily.'

(29) Er$_1$ begann (damit), PRO$_1$ Briefe zu schreiben.
he began with it letters to write
'He began to write letters.'

To sum up, it has been shown that these extraposition data from German behave like Icelandic in neither allowing A- nor A′-movement out of the extraposed infinitive. This means that there is no point in the derivation at which extraction is possible, which suggests that the underlying constituent from which extraposition takes place must be an island for leftward movement.[15] However, control into the extraposed infinitive is common, hence, these extraposition data also pose a problem to the MTC.

4 Locality and control

After having considered the empirical data that motivate the development of an alternative, let us now briefly return to the second issue of this paper: control and its compatibility with phase theory. In general, the typical control scheme looks as illustrated in (30): the controller is part of the matrix clause and the controllee functions as the subject of an infinitival complement clause.

(30) a. John$_1$ tries [$_{CP}$ [$_{TP}$ PRO$_1$ to win]].
b. [$_{matr.clause}$ controller … [$_{emb.clause}$ controllee …]]

[14] Similar examples have been reported from Dutch as well. As Bennis (1986: 104) points out, "extraction from sentential complements is excluded if a corresponding *het* is present".

(i) *Dutch* (Bennis 1986: 104)
Wat betreurde jij (*het) dat hij gezegd had?
what regretted you it that he said had
'You regretted that he had said what?'

[15] That rightward and leftward movement behave differently is well-known; while rightward movement seems to be less sensitive to island restrictions, it is, on the other hand, strictly clause-bounded (cf. the Right Roof Constraint), which is not true for leftward movement. I have nothing to say about why this is the case, but see, for instance, Müller (1995), who proposes an account of this asymmetry in terms of improper movement.

From a phase-theoretic point of view, this is problematic, because it implies that controller and controllee are separated from each other by a phase boundary (the embedded CP) and thus occur in different phases (recall the definitions from footnote 1). Since the controllee does not occur at the edge of the lower CP but rather in SpecT, the canonical subject position, it is no longer accessible when the controller enters the derivation in the next higher phase (see the illustration in (31), in which crossed out material represents those parts of the derivation that have already become inaccessible). So we can conclude that, following the standard view, control involves a dependency that is not readily compatible with phase theory.

(31) $[_{vP}$ controller … $[_{CP}$ $\cancel{[_{TP}\text{ controllee … }]}$]]

4.1 Phase theory and non-movement theories of control

Although focus here is on the comparison with the MTC, let us briefly take a look at traditional PRO-based theories of control. Here, the locality problem is relatively obvious. Without further assumptions, the distance between controller and controllee (= PRO) is too large to be compatible with phase theory, see (31).

Of course, considerations like these were not an issue when the first PRO-based theories were proposed in the 1980s. However, since the development of phase theory, little attention has been devoted to its compatibility with control theory. In fact, two PRO-based theories which have adopted the phase model at an underlying level are those by Landau (2000; 2015) (although locality considerations also do not play a central role there). The theory proposed in Landau (2000 et seq.) involves an Agree relation between a functional head in the matrix clause and PRO in the embedded SpecT position, for which he originally proposed a relaxation of the PIC in order to make it work (this was in connection with his analysis of exhaustive control); see Landau (2000: 69; 2004: 843). In Landau (2015), he adopted an alternative view: he commented on the Agree model and suggested that "OC complements […] are weak phases" (Landau 2015: 12). As a consequence, PRO is still accessible inside the infinitival complement clause even if it is not at its edge.

However, both views involve a relativization of the underlying locality restrictions (which means that the representational residue is enlarged, i.e. the amount of representation that must be kept in the workspace in between the spellout of two phases; see also footnote 1). So what this paper sets out to do is answer the following question: is it possible to model control in a strictly phase-based theory in which extra assumptions that ease locality restrictions are not needed? This is the conceptual motivation for sketching this alternative model, although Landau (2015) lists some more shortcomings of the Agree-based model from Landau (2000).[16]

In his two-tiered theory of control, Landau (2015) proposes movement of PRO to the edge of the embedded clause (= SpecFin in his model), which is thus compatible with the PIC (although this is not the driving force behind the assumed movement). The underlying idea is that exhaustive control (EC) is derived via a predication relation: PRO, which is assumed to be a minimal pronoun with the features {D, $u\varphi$}, moves to SpecFin (= the edge of the infinitival clause), since the predicative head Fin is looking for a nominal operator (i.e., [*u*D] on Fin attracts PRO). As a result, PRO-movement yields an open predicate, which is applied to the controlling DP and thereby saturated.

[16] They comprise, for instance, the trigger of the underlying Agree relation in Landau (2000), the status of the formative PRO, or the missing relation between OC and NOC PRO. For a more detailed discussion, the reader is referred to Landau (2015). In the theory developed in this paper, OC PRO and NOC PRO have the same origin, PRO is not a control-specific formative, and due to upward probing, Agree is triggered by deficiencies on PRO itself.

So in contrast to Landau (2000 et seq.), Landau (2015) also assumes movement of PRO to the phase edge, an assumption I will also argue for below. One major difference between his model and the basic assumptions of the approach developed here concerns the different impact of partial control (PC).[17] While Landau takes the EC-PC split to be the source of a distinct syntactic treatment, I follow Pearson (2013; 2016), Pitteroff et al. (2017a), a.o., in assuming that partial control readings are construed in the semantics and do not give rise to a different implementation in the syntactic component.[18]

On the other hand, the central data that lead to the postulation of the hybrid theory of control (OC into islands) is not discussed in Landau (2015); so the foci of the two approaches differ, and similarities in the technical implementation have developed independently.[19] A more thorough discussion of PC would go beyond the scope of this paper, but the interested reader is referred to Pitteroff et al. (2017a) as regards arguments for a semantic treatment of PC. The focus here will be control into islands and the locality of control dependencies. Therefore we now turn to the MTC and its compatibility with phase theory.

4.2 Phase theory and the MTC

Since the basic assumption of the MTC is that controller and controllee are related via movement, this puts the locality question in a different light. If the MTC is right, the control relation does not have to be established once the controller is merged into the derivation – instead, the only thing that must be guaranteed is that movement is an available option. In other words, the potential problem is not that the distance between controller and controllee might be too large to ultimately license control; that control involves a non-local dependency instead implies that movement has to be split into available movement steps, and the potential danger is that the designated controller position might not be accessible via movement. To stick with example (30-a) (*John tries to win*), consider the structures in (32). (32-a) displays the basic idea that the embedded subject is a copy of *John*, left behind by movement. Since the underlying idea of phase theory is that material that has been rendered inaccessible cannot be moved anymore and that only material in the previous phase head or phase edge is in the accessible domain (see footnote 1), the

[17] If controller and controllee are referentially identical, the result is exhaustive control; see (i-a). In examples like (i-b), by contrast, the controller is just a proper subpart of the set of people denoted by the controllee – this is partial control.

(i) a. **Exhaustive control (EC)**
John$_1$ tries PRO$_1$ to win.
b. **Partial control (PC)** (Landau 2000: 5)
The chair$_1$ preferred PRO$_{1+}$ to gather at 6.

[18] Following Landau (2000 et seq.; 2015), whether we end up with PC or EC depends on the matrix predicate, which were thus called PC vs. EC predicates in Landau (2000). By contrast, Boeckx, Hornstein & Nunes (2010), Sheehan (2014), Pitteroff et al. (2017a; b) and others have argued that the type of embedded predicate also plays a role; see the German example below, which allows a PC reading and involves an EC matrix predicate plus an embedded predicate which licenses a comitative (grammaticality judgements are based on an experimental investigation of PC in German; see Pitteroff et al. 2017a; b).

(i) *German* (Pitteroff et al. 2017a: 158; 167)
Karl$_1$ versucht, PRO$_{1+}$ sich bis Weihnachten wieder zu versöhnen.
Karl tries REFL until Christmas again to make.up
'Karl tries to become reconciled again until Christmas.'

Note that, in the recent literature, the terms PC/EC predicate have typically been replaced by the terms attitudinal vs. non-attitudinal predicate, which also suggests that this split among predicates is not exclusively responsible for a PC/EC reading, but has other impacts as well. In any case, the fact that I follow a semantic treatment of PC does not mean that I dismiss the observed split between attitudinal vs. non-attitudinal predicates; see also section 5.4 and 7.2.

[19] Note that an early version of the HTC has already been presented in 2011 at the University of Tübingen.

movement indicated in (32-a) is only compatible with the PIC if it proceeds via the edge of the CP phase, as indicated in (32-b).

(32) a. John tries [$_{\text{CP}}$ <John> to win].
b. [$_{\text{vP}}$ John tries [$_{\text{CP}}$ <John> ~~[$_{\text{TP}}$ <John> to [$_{\text{vP}}$ <John> win]~~]]].

A movement-based approach to control is therefore compatible in principle with phase theory as long as it is assumed that the non-local movement relation between controller and controllee is broken up into smaller movement steps which proceed from phase edge to phase edge. So far, so good; up to this point the MTC seems to be ideally suited to a local derivational approach to control. However, as Drummond & Hornstein (2014) have pointed out, successive-cyclic movement from phase edge to phase edge undermines the MTC-based account of why control into adjuncts is possible in examples like (33-a), whereas wh-extraction out of adjuncts is not (see (33-b)).

(33) Drummond & Hornstein (2014: 450)
a. John laughed at Mary [without <John> falling over]. (=(14-a))
b. *Who did John laugh at Bill [before Mary spoke to <who>]? (=(14-b))

The MTC accounts for this contrast in grammaticality as follows: (32-a) can be derived via sideward movement, as the adjunction site (adjunction to vP) is above the target of sideward movement (=Specv). When deriving (32-b), however, the target position of wh-movement is SpecC, i.e. the adjunction site (=adjunction to vP) is below this position. Therefore, the only available order of operations is (i) concatenating adjunct and main clause and then (ii) extracting *who* out of the adjunct. This follows automatically from the Extension Condition (see Chomsky 1993; 1995), according to which syntactic operations have to extend the root. However, this implies at the same time that (32-b) violates the CED and is therefore ungrammatical.

Note that in order to derive the ungrammaticality of (32-b), it is absolutely essential that wh-movement targets a position above the adjunction site. As regards the site of adjunction, Drummond & Hornstein (2014) point out that "the relevant class of adjuncts must adjoin below C" (Drummond & Hornstein 2014: 451); so if wh-movement directly targets SpecC, the ungrammaticality of (32-b) follows. However, any intermediate landing site for wh-phrases below SpecC would undermine the finding of (32-b)'s ungrammaticality. Therefore, the assumption that wh-phrases move successive-cyclically via the phase edge Specv (as required by the PIC) cannot be maintained by the MTC: if the wh-phrase stopped in Specv (a position below the adjunction site), sideward movement could apply before adjunction takes place, and the ungrammatical sentence in (32-b) could ultimately be derived. Hence, Drummond & Hornstein's movement-based account of control into adjuncts is, after all, incompatible with a strict interpretation of phase theory. So if we want to explore the possibility of modeling control relations in a local way restricted by the PIC, we have to come up with an alternative.

5 A hybrid theory of control (HTC)

5.1 Basic assumptions

In this section, we want to take a look at such an alternative approach, the so-called hybrid theory of control. It illustrates what a theory of control could look like that is compatible with both a strict interpretation of phase theory and all three control scenarios discussed in section 3.1. In this section, the basic underlying assumptions of the HTC will be introduced, followed by the data considered before. Basically, the idea is the following: the controllee has to move closer to the controller position to be able to establish the control relation in a local configuration (in accordance with the PIC); however, the controllee is not forced to move out of islands to license control into islands – just being at their edge suffices.

Technically, this is implemented as follows: the controllee is merged in the derivation as an empty argument (= EA) which is referentially defective. This is encoded in syntax in terms of the feature specification {D, β:_}. The β-feature can be viewed as a syntactically reified binding index feature, and that EA carries an unvalued β-feature indicates that EA needs to be referentially identified. This is achieved under Agree (which is assumed to involve upward probing) with another element bearing a valued β-feature. At the C-I interface, Agree involving β-feature checking is interpreted as binding.[20] Overt DPs bear valued β-features, which means that they typically function as goal for EA and end up as binders or controllers of EA.[21] Formally, we can adopt a version of Wurmbrand's definition of (Reverse) Agree (cf. Wurmbrand 2011: 3):[22]

(34) **Agree:**
A feature [F:_] on α is valued by a feature [F: *val*] on γ iff
(i) γ c-commands α,
(ii) γ is the closest goal, and
(iii) α is accessible to γ.

The derivation of obligatory control then proceeds as follows: the D-feature allows EA to be merged into an argument position; from here it probes upwards to find a goal/licensor (as to upward probing, cf. also Schäfer 2008; Hicks 2009; Zeijlstra 2012; Wurmbrand 2011; 2013; Bjorkman & Zeijlstra 2014). If there is no potential antecedent present in the phase containing EA (as is the case in OC due to the non-local dependency), the need to establish an Agree configuration forces it to move to the phase edge, from which it probes further (see section 5.2 for details).[23] When a DP is merged, EA finds a goal and can be licensed under Agree; i.e., the β-feature of EA is valued, which means that EA is interpreted as being bound by the controller.[24]

Comparing the HTC to its predecessors, we can conclude that, as in the MTC, the controllee has to move to be licensed, the licensing conditions are not control-specific (i.e., no independent control module is needed), and non-obligatory control might involve last resort if no syntactic licensor can be found (see section 7 for details). As in PRO-based

[20] See also Fischer (2004; 2006), where such a β-feature has already been introduced in the context of a derivational analysis of anaphoric/pronominal binding. Note that this feature does not really display a specific syntactic property; it just signals whether a DP is referentially identified or not (if yes, the corresponding β-feature is valued, if not, it is unvalued, if an unvalued feature is valued under Agree, this relation is interpreted as a binding relation). For similar assumptions, see also Hicks (2009), who suggests that anaphors enter the derivation with an unvalued VAR-feature that must be valued in the course of the derivation by a valued feature on the antecedent (which is also assumed to be restricted by the PIC).

[21] Note that this empty argument is not a control-specific formative but could in principle also surface as *pro* (see section 8); therefore, it is called EA instead of PRO (although, in control contexts, it can be equated with PRO).

[22] Following Pesetsky & Torrego (2007), Bošković (2009), Wurmbrand (2011), a.o., I assume that the driving force of Agree is the need to value an unvalued feature (and not the need of an uninterpretable feature to get checked, as assumed, for instance, by Zeijlstra 2012). Note that this does not necessarily mean that this succeeds immediately, since EA might be controlled by another EA, with only the latter ultimately being controlled by a non-defective formant, which would then be able to value the Agree chain in the sense of Pesetsky & Torrego's (2007) feature-sharing view of Agree.

[23] Cf. also Bošković (2007), Wurmbrand (2011), Zeijlstra (2012) as to the assumption that probes (or goals in the case of Bošković 2007, who does not assume upward probing) are forced to move to warrant a specific configuration for Agree/valuation to take place (though, in the case of Wurmbrand 2011, this happens immediately after remerging the probe).

[24] As regards the potential occurrence of EA in finite contexts, see section 8.

theories, however, it is assumed that the controllee is an independent argument receiving its own θ-role (i.e., the Theta Criterion is not dispensed with). In addition, as in Landau (2000; 2004), Agree is a basic licensing mechanism of control. The hybrid nature of the approach thus follows from the fact that the licensing of control involves first movement and then Agree.[25]

5.2 Successive-cyclic movement of EA

Before we turn to concrete examples that demonstrate how the HTC works in practice, let us briefly address the following questions: how is movement of EA triggered, why does it stop at the edge of islands, and is it ensured that it stops in time to prevent overgeneration?

The question of what triggers successive-cyclic movement is presumably as old as the idea that movement stops in intermediate positions. One possible implementation has been proposed by Chomsky (2000; 2001; 2008) in terms of EPP or edge features, an approach that has been taken up and advanced by Müller (2010; 2011). Sticking to the underlying assumption that all instances of movement are feature-driven, one way to trigger intermediate movement steps is the insertion of so-called edge features on the head of the target phase. The insertion of these features is regulated by the so-called Edge Feature Condition.[26]

(35) **Edge Feature Condition – Chomsky's version**
(Müller 2010: 37, based on Chomsky 2000: 109; 2001: 34; 2008: 149)
The head X of phase XP may be assigned an edge feature after the phase XP is otherwise complete, but only if the assignment has an effect on outcome.

As Müller (2010: 37) explains, "[g]iven [(35)], phase heads can be assigned additional (i.e., noninherent) edge features in the course of the derivation "if the assignment has an effect on outcome" – that is, if it serves to implement intermediate movement steps required by the PIC". In the case at hand, this means the following: if the β-feature of EA cannot be valued within the current phase, the only way to maintain the possibility of valuing it later in the derivation involves movement of EA to the phase edge to ensure that it remains accessible. Hence, edge feature insertion takes place and triggers movement of EA to the edge of the current phase.[27]

Successive-cyclic movement of EA either stops if a potential goal enters the derivation or if EA occurs at the edge of an island and any further step involved movement out of this island. Let us have a closer look at the second scenario. What is crucial for the HTC is that the availability of Agree and movement are dissociated since extraction out of islands must be prohibited, whereas licensing of control into (certain) islands under Agree must be possible. Therefore it is important to keep in mind that although accessibility (i.e. being at the very least at the phase edge of the previous phase) is a precondition for

[25] Note that van Urk's (2010) analysis of obligatory control can also be considered to be hybrid, but for different reasons. Van Urk proposes two structurally different types of OC: one of the movement type and the other PRO-based. Similarly, Sheehan (to appear A; B) advances a similar strategy to capture OC in European Portuguese, Russian, and Icelandic. What she suggests is that control into non-phasal non-finite complements involves movement, whereas control into phasal non-finite complements involves Agree (with the pronominal being located in SpecC, the phase edge). As for the idea that some licensing under Agree requires previous successive-cyclic movement of the licensee to the edge of the previous phase, cf. also Grewendorf & Groat's (2013) analysis of free relatives, in which the head D_{FR} of a null-headed DP probes into its CP complement to find a suitable goal (= the wh-phrase), or Fischer (2004; 2006) on anaphoric and pronominal binding.

[26] As noted in the literature before, this presumably means that a minimal violation of the Inclusiveness Condition must be taken into account in order to satisfy the requirement that also intermediate movement steps are feature-driven (see Müller 2010: 37).

[27] In contrast to the MTC, the trigger for movement is thus completely independent of Case considerations.

both Agree and movement, this is not yet a sufficient condition for the latter. In the case of islands, movement within the island (i.e. in particular to the edge of the highest phase contained in it) is not restricted; it is movement beyond which is forbidden.

In fact, for the HTC it is not really important what exactly this extra requirement for movement is which finally blocks extraction out of islands, but, to be concrete, let us follow Müller's (2010; 2011) proposal. What he suggests is that the Edge Feature Condition be slightly modified in such a way that edge feature insertion is only possible if the phase head in the targeted phase is still active, which means that it must still have some structure-building or probe feature on it.[28] In the context of islands, however, the typical configuration is this: the current phase head has already been rendered inactive when we try to extract something out of the island, because the insertion of islands is typically the last operation that takes place in a phase, and, as a result, all features on the phase head have already been used up. Thus, no edge feature can be assigned to the phase head anymore, which means that nothing can move out of the island to the current phase edge.

But what about direct movement out of the island into a higher phase (i.e. without intermediate stop at the current phase's edge)? This is also ruled out since material inside the island is no longer accessible after the completion of the current phase – so we would end up with a violation of the PIC. Hence, movement out of islands is predicted to be ungrammatical (even if the element we try to extract is located at the island's edge), while Agree into an island is possible (of course only as long as its edge is still accessible); we will return to the latter scenario in section 6.3.[29]

Since successive-cyclic movement of EA is apparently only stopped if the latter is trapped in an island or Agree can be established, the question arises of whether the theory overgenerates in the following sense: if there is no island involved, we expect EA to be able to move successive-cyclically from phase edge to phase edge until it finally finds a goal. In fact, examples involving long EA-movement are rare, because the standard scenario is this: the embedded clause containing EA is an internal argument of the control verb (unless the clause containing EA is a subject clause, which is an island and thus stops EA-movement anyway);[30] this implies that not only does the next higher clause host the control verb, but also the latter's external (and potentially second internal) argument, i.e. DPs which stop EA-movement because they can function as goal. The only structure one can try to come up with is a combination of control and raising (since raising predicates do not have an external argument that could function as goal for EA), see (36).

(36) John$_1$ hopes [$_{CP}$ EA$_1$ [$_{TP}$ t$_{EA}$ to seem [$_{TP}$ t$_{EA}$ to [$_{vP}$ t$_{EA}$ be smart]]]]

[28] That is, edge feature insertion must apply *before* XP is complete, in contrast to the original definition in (35) (see Müller 2010: 37).

[29] That subjects and adjuncts are islands for extraction is an old observation (see, for instance, Huang 1982), and one question that has been discussed ever since is what these two types of constituents have in common that distinguishes them from complements. One difference that can be observed is that the insertion of a subject as well as that of vP adjuncts happens at the very end of constructing the vP phase.

In Müller's approach, last-merged specifiers in a phase turn out to be islands for extraction, and this is exactly how subjects and adjuncts can be characterized: external merge of the subject in Specv is typically the last operation (in the relevant sense, see below) that takes place in the vP phase (only vP adjuncts might additionally be inserted afterwards). As far as adjuncts are concerned, I deviate from Müller's theory in that I do not assume that they are last-merged specifiers of further functional projections (as proposed, for instance, in Cinque 1999). Alternatively, I assume that adjuncts are not subcategorized by any head, and therefore the insertion of a vP adjunct does not involve a subcategorization feature on v; instead, I assume that vP adjuncts can be inserted freely as a last operation in the vP phase. As a result, vP adjuncts can be inserted when the subject has already been merged into the derivation and the phase head v is already bare of any features. Insertion of the subject thus takes place prior to vP adjunction and is therefore, in fact, the penultimate operation in the phase; however, it is the operation that renders the phase head inactive and thereby predicts extraction out of the subject to be impossible.

[30] See section 7 as regards examples involving subject clauses.

(36) is an example in which EA is base-generated in the most deeply embedded clause, raises (via SpecT) into the medial clause, moves to the phase edge SpecC, and finally finds a goal in the matrix clause. Hence, the HTC predicts that the sentence should be grammatical, which it is. Note, moreover, that (36) illustrates again the locality problem of the standard PRO-based theories alluded to in the beginning – if we do not assume EA-movement to SpecC, the controllee is no longer accessible when the controller *John* enters the derivation.[31,32]

However, what about examples like (37) or (38), which are ungrammatical? Since no island restricts movement, it should be possible for EA to move to SpecC, from where it could probe upwards and agree with *John* in the matrix clause.

(37) *John$_1$ hopes [$_{CP}$ EA$_1$ for [$_{TP}$ there to seem [$_{TP}$ t$_{EA}$ to [$_{vP}$ t$_{EA}$ be smart]]]
(intended: 'John hopes to seem to be smart.')

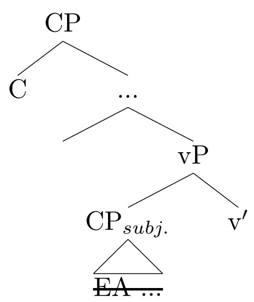
(38) *John$_1$ hopes [$_{CP}$ EA$_1$ that it seems [$_{TP}$ t$_{EA}$ to [$_{vP}$ t$_{EA}$ be smart]]].
(intended: 'John hopes that he seems to be smart.')

What distinguishes the grammatical example of long EA-movement in (36) from the ungrammatical ones in (37) and (38) is the occurrence of an expletive in the latter case. Why should an expletive block licensing of EA by the matrix subject? A potential explanation would be to assume that the expletive is, at first sight, a potential goal for EA. This would imply that expletives bear valued β-features and can thus agree with EA, which would prevent EA from moving beyond the expletive (note that it was suggested above that overt nominals generally bear valued β-features). But recall what β-features are about: checking relations involving β-features are interpreted as binding; i.e., a val-

[31] However, note also that movement of EA through the intermediate SpecT positions is required independently by the EPP, which shows once more that it is hardly possible to come up with an example that involves long EA-movement independently.

[32] In fact, one reviewer suggests that the information from the controllee might alternatively be transmitted via every phase head on the path to the controller, or via null categories in the specifier of every phase. The question (s)he raises is whether this could do away with the locality problem. The latter scenario (with null categories in every phase edge on the path) seems to me similar to the assumption that EA itself moves to these specifiers; however, it would mean that we would have to posit additional empty elements in these positions. If the phase heads on the path to the controller are taken as mediating elements, we would have to come up with some motivation and technical implementation for that; in any case, the outcome would not be different on the assumption that this kind of feature transmission is restricted by the PIC just like movement (for instance, we would expect it not to be blocked in the case of non-adjoined islands, but in the case of subject islands, where EA would no longer be in the accessible domain when the next phase head entered the derivation; see (i)).

(i)



A third option might be to assume massive mediation by every node on the path from controllee to controller. This would imply that control relations involve uniform rather than punctuated movement paths in the sense of Abels (2003), which would mean that all nodes along the path are affected. As a result, EA itself would not need to move to the phase edge to remain accessible. However, one would also expect that EA's features inside a subject clause could be passed on via CP$_{subj.}$ and vP out of the vP phase. But this would predict that we get OC in the case of subject clauses, contrary to the facts (see section 7.2). But, of course, alternative technical implementations are certainly possible.

ued β-feature of an R-expression, for instance, can be viewed as encoding its reference. Talking about expletives, they lack this semantics; so if they bear a β-feature, its value must be negatively defined, which could be represented as Ø-value.[33] As a consequence, the Agree relation between the expletive and EA can syntactically take place, but it cannot be interpreted at the C-I interface and the derivation crashes.

Moreover, I think that sentences like (37) (which involves the expletive *there*) face an additional problem since licensing of the existential construction also fails. Broadly speaking, EA would have to function as associate NP in the underlying expletive-associate relation, but since EA is defective at various levels, it cannot accomplish this task. In terms of Hazout's (2004; 2008) theory of existential constructions, this can be explained as follows. According to Hazout, the relation between *there* and its associate is an underlying subject-predicate relation that gives rise to an agreement relation. Crucially, this agreement relation comes about as a result of percolating up the φ-features of the predicate nominal.[34] However, EA is referentially defective; thus, it does not only bear an unvalued β-feature, but also unvalued φ-features, which renders it useless for the licensing of the existential construction. To sum up, as regards sentences involving expletive *there*, we can conclude that licensing fails in two directions: both *there* and EA try to get licensed by the other, but both attempts fail.

5.3 Subject control and the HTC

Although empirically, the main focus of the present paper is on control into (non-)adjoined islands, any control theory should be able to derive standard subject control configurations. Let us therefore briefly go back to our initial example (30-a), repeated in (39-a), to see how subject control is derived under the HTC. As for EA, it is assumed that this referentially defective argument is part of the lexicon, and inserting it into the numeration is in principle optional. However, if it is not inserted in (39-b), the derivation will crash later on because of a violation of the Theta Criterion. Hence, only the numeration in (39-b) can derive (39-a).[35]

(39) a. John tries to win.
b. **Underlying numeration:**
Num = {{John, tries}, {EA, to, win}}

The derivation then proceeds as follows. In Specv, EA is inserted as the external argument of *win* and is assigned the latter's external θ-role.[36] Then it moves to the embedded SpecT position to check the EPP on T,[37] and finally to the edge of the embedded CP in order to remain accessible, as it still needs to value its β-feature; so the last step simply takes place in order to prevent the derivation from crashing (see (40)).

[33] Note that this makes sense insofar as it is not the case that their reference is not (yet) determined as in the case of EA, which therefore bears an unvalued β-feature. Instead, their reference is determined from the very beginning, so-to-speak (which means that they bear a valued β-feature) – they are semantically empty (which means that the value is Ø).

[34] Following Hazout (2004), this requirement that *there* (in contrast to expletive *it*) needs an associate specified for φ-features is encoded in the subcategorization requirements: *there* selects for $\mathrm{Pr}'_{[+agr]}$, which means that the complement in the predication phrase (= the predicate nominal, i.e. the associate) must be specified for φ-features.

[35] The numeration involves two different lexical subarrays for the two clauses.

[36] In the following, this is illustrated with θ-features to show explicitly when θ-role assignment takes place (with θ-features on the predicate starred). However, whether θ-roles are implemented as features or not does not play a role for this theory. Recall, moreover, that material that is rendered inaccessible by the PIC is crossed out, and so are features that have been checked.

[37] Nothing hinges on this movement step; if a language does not have an EPP-feature on T (as has been argued for German by Haider 1993, and others), or if it is checked via V-raising (as assumed for Greek and Romance by Alexiadou & Anagnostopoulou 1998), EA can directly move from Specv to SpecC.

(40) a. [$_{vP}$ EA$_{[\cancel{\theta},\beta:__]}$ win$_{[\cancel{*\theta*}]}$ [$_{VP}$ t$_{win}$]]
b. [$_{TP}$ EA$_{[\beta:__]}$ to$_{[\cancel{EPP}]}$ [$_{vP}$ t$_{EA}$ win~~[$_{VP}$ t$_{win}$]~~]]
c. [$_{CP}$ EA$_{[\beta:__]}$ [$_{TP}$ t′$_{EA}$ to ~~[$_{vP}$ t$_{EA}$ win [$_{VP}$ t$_{win}$]]~~]]]

Now the matrix clause is derived. After merging the matrix verb *try*, the matrix subject *John* enters the derivation in Specv and is assigned the external θ-role by the matrix predicate. Note that, due to its movement to the edge of CP, EA is still accessible when *John* is merged into the structure (*John* is then in Specv of the matrix clause and EA in SpecC, the edge of the preceding phase; see (41)).

(41) [$_{vP}$ **John**$_{[\cancel{\theta},\beta: val]}$ tries$_{[\cancel{*\theta*}]}$ [$_{VP}$ t$_{tries}$ [$_{CP}$ **EA**$_{[\beta:\underline{val}]}$ ~~[$_{TP}$ t′$_{EA}$ to [$_{vP}$ t$_{EA}$ win t$_{win}$]]~~]]]]

So EA's β-feature can finally be valued by the matrix subject under Agree, and EA is interpreted as being bound by *John*.[38]

5.4 *Object control, promise-verbs, and the HTC*

So far, we have only considered examples in which the control verb takes two arguments, the infinitival clause and an external argument; the controller was therefore always the external argument, i.e. the subject of the matrix clause. In this section, we will briefly turn to control verbs that select in addition a second internal argument.

Let us first turn to standard object control constructions and see how examples like (42) can be derived.

(42) John$_1$ forced Bill$_2$ [EA$_{*1/2}$ to surrender].

The derivation of (42) proceeds as follows: first, the embedded clause is built (which is identical to the derivation of the embedded clause in subject control structures). In Specv, EA is inserted as the external argument of *surrender* and is assigned the latter's external θ-role. Then it moves to the embedded SpecT position to check the EPP-feature on T, and finally to the edge of the embedded CP in order to remain accessible, as it still needs to value its β-feature; see (43).

(43) a. [$_{vP}$ EA$_{[\cancel{\theta},\beta:__]}$ surrender$_{[\cancel{*\theta*}]}$ [$_{VP}$ t$_{surrender}$]]
b. [$_{TP}$ EA$_{[\beta:__]}$ to$_{[\cancel{EPP}]}$ [$_{vP}$ t$_{EA}$ surrender ~~[$_{VP}$ t$_{surrender}$]~~]]
c. [$_{CP}$ EA$_{[\beta:__]}$ [$_{TP}$ t′$_{EA}$ to ~~[$_{vP}$ t$_{EA}$ surrender [$_{VP}$ t$_{surrender}$]]~~]]]

Next, *force* merges with the embedded CP and θ-marks the latter. Then, *Bill* enters the derivation in SpecV and is assigned the second internal θ-role of *force*. Since *Bill* and EA are now both accessible and the former c-commands EA, the control relation can be established – *Bill* can value EA's β-feature under Agree. As a result, we get object control; see (44).

[38] Note that there is a further locality restriction involved, as a DP cannot license EA if they are both at the edge of the same phase. That licensing in this configuration is blocked has been observed before; cf. McGinnis' (1998; 2004) notion of lethal ambiguity in the context of anaphoric dependencies. This restriction prevents other elements that move to the phase edge from controlling EA; cf, for instance, the German topicalization example in (i), where *Maria* is prevented from licensing EA at the edge of the embedded clause. (And not only is t'_1 no potential controller of EA, it must not count as an intervener either in terms of minimality.)

(i) *German*
Maria$_1$ habe ich$_2$ [t′$_1$ EA$_{*1/2}$ t$_1$ zu küssen] versucht.
Maria have I to kiss tried
'I tried to kiss Mary.'

(44) $[_{vP}$ **Bill**$_{[\cancel{\theta},\beta:val]}$ forced$_{[\cancel{*\theta*}]}$ $[_{CP}$ **EA**$_{[\beta:\underline{val}]}$ $\cancel{[_{TP}\ t'_{EA}\ \text{to}\ [_{vP}\ t_{EA}\ \text{surrender}\ [_{VP}\ t_{surrender}]]]}]]$

I do not have much to add to the discussion of *promise*-verbs or control shift (cf., for instance, Bresnan 1982; Farkas 1988; Sag & Pollard 1991; Petter 1998; Stiebels 2007; Polinsky 2011; Landau 2013); but for the sake of completeness, let us briefly have a look at examples like (45).

(45) John$_1$ promised Mary$_2$ [EA$_{1/*2}$ to call Anna].

What is unexpected at first sight is that EA apparently does not choose *Mary*, the matrix object, as controller, although it is merged into the derivation prior to the matrix subject. However, this can be explained if we have a closer look at the type of verb that is used in the matrix clause. Typically, control verbs used in this context are attitude verbs, i.e. verbs that are used to "report on a mental state or a communicative act of some individual" (Pearson 2015: 1).[39] Attitudinal contexts involve an attitude holder, "the bearer of the attitude or the agent of the reported speech act" (Pearson 2015: 1), and it has been proposed in the literature that this attitude holder is represented in the syntax.[40] This means that in sentences like (45), a logophoric center is projected in the left periphery of the embedded clause, which introduces the attitude holder in a specifier position; as a result, the underlying structure is as shown in (46).

(46) DP$_{subj.}$ … attitude verb … DP$_{obj.}$ $[_{CP}$ attitude holder … EA …]

Crucially, this structure reveals that the closest binder for EA is not an argument in the matrix clause, but rather the attitude holder inside the embedded CP (which bears a valued β-feature since it is referentially specified). For (45), this means that EA's β-feature can be checked under Agree at the point in the derivation shown in (47).[41]

(47) $[_{CP}$ **attitude holde**$_{[\beta:val]}$ C° $[_{TP}$ **EA**$_{[\beta:\underline{val}]}$ to $[_{vP}$ t_{EA} call $\cancel{[_{VP}\ t_{call}\ \text{Anna}]}]]]$

Whether the attitude holder is the referent of the matrix subject is determined by semantic/pragmatic factors. I will defer a more thorough discussion to future research since a full-fledged analysis of these data is beyond the scope of this paper.

6 Control into islands and the HTC

Let us now return to the focus of this paper: the three different scenarios from section 3 involving control into adjuncts and non-adjoined islands. The following three subsections address each of these three scenarios and their analysis under the HTC.

[39] One test that can be applied to distinguish attitude from non-attitude verbs refers to the observation that attitude complements are tensed, whereas complements of non-attitude verbs are not (cf. Landau 2015). Hence, (i-a) (which contains the attitude verb *promise*) is felicitous, whereas (i-b) and (i-c) are not.

(i) a. Yesterday, John promised Mary to call Anna tomorrow.
b. #Yesterday, John tried to call Anna tomorrow.
c. #Yesterday, John forced Bill to surrender tomorrow.

[40] As far as the idea is concerned that logophoric anchoring should be encoded in syntax in terms of a perspectival or logophoric center, cf., for instance, Speas (2004); Sundaresan (2012); Landau (2015); Fischer & Pitteroff (2016).

[41] Cf. also Landau's (2015) analysis of logophoric control, which assumes a similar underlying structure; however, the concrete licensing mechanism differs.

6.1 OC into adjuncts and the HTC

We start with control into adjuncts created by external merge. This is exemplified by example (48) (repeated from (16-a)).

(48) Hornstein (1999: 88)
John$_1$ heard Mary$_2$ [without PRO$_{1/*2}$ entering the room].

Again, we are free to choose between numeration (49-a) and (49-b); however, in (49-a), the derivation will crash because it will inevitably violate the Theta Criterion, since there is no external argument for *enter*.

(49) a. Num$_1$ = {{John, heard, Mary}, {without, entering, the, room}}
b. Num$_2$ = {{John, heard, Mary}, {**EA**, without, entering, the, room}}

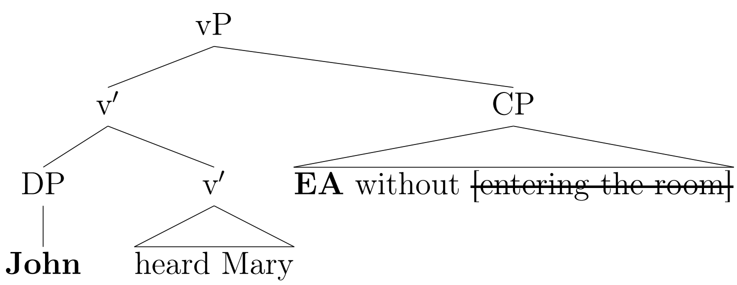
The adjunct is then derived as follows: EA is inserted in Specv, where it gets its θ-role from *enter*. Since its β-feature is still unvalued, it starts moving, first to SpecT, where it checks the EPP-feature on T, and then to SpecC, the edge of the phase and the edge of the adjunct.[42]

(50) **Deriving the adjunct:**
a. $[_{vP}\ \text{EA}_{[\cancel{\theta},\beta:\_\_]}\ \text{entering}_{\cancel{[*\theta*]}}\ [_{VP}\ t_{entering}\ \text{the room}]]$
b. $[_{TP}\ \text{EA}_{[\beta:\_\_]}\ \text{T}_{\cancel{[EPP]}}\ [_{vP}\ t_{EA}\ \text{entering}\ \cancel{[_{VP}\ t_{entering}\ \text{the room}]}]]$
c. $[_{CP}\ \text{EA}_{[\beta:\_\_]}\ \text{without}\ [_{TP}\ t'_{EA}\ \text{T}\ \cancel{[_{vP}\ t_{EA}\ \text{entering}\ [_{VP}\ t_{entering}\ \text{the room}]]}]]$

As for the main clause, *heard* first merges with *Mary* (building the VP) and assigns its internal θ-role to it. Next, *heard* moves to v, *Mary* checks Accusative Case, and *John* is merged into Specv, where it is assigned the external θ-role of *heard*. (51) illustrates this point in the derivation.

(51) $[_{vP}$ John heard $[_{VP}\ t_{heard}$ Mary]]

Now the adjunct is merged into the derivation, which is illustrated in (52).[43]

(52)


Here we have the following configuration: both *John* and the adjunct are at the edge of the vP phase, meaning that they c-command each other in the sense of the category-based definition of c-command by Kayne (1994), see (53).[44]

[42] Details concerning the structure of gerunds will not be covered here.
[43] Recall that, following Bare Phrase Structure, *John* is dominated by v′ in (52); see also footnote 11.
[44] In fact, category-based versions of c-command have often been proposed when licensing mechanisms under c-command involving adjoined structures have been investigated. It has been empirically important, for instance, in May's (1985) derivation of scopal relations after quantifier raising, or Kayne's (1994) approach to linearization based on the Linear Correspondence Axiom. Also from a theoretical point of view, category-based definitions have often been adopted in the literature when adjoined structures/multi-segment categories have been scrutinized; cf. Chomsky (1995: 338–340), or Sheehan (2013). I agree with Sheehan (2013: 15) in that "while it is true that category-based definitions of c-command appear complex when described verbally, they are more simple to represent graphically" – so (53) is not a complication of the notion of c-command but rather helps to clarify relationships in multi-segment structures.

(53) **Category-based definition of c-command** (Kayne 1994: 16; 18)
X c-commands Y iff X and Y are categories and X excludes Y and every category dominating X dominates Y.

(54) Chomsky (1986: 7; 9)
a. X excludes Y if no segment of X dominates Y.
b. X is dominated by Y only if it is dominated by every segment of Y.

For (52), this has the following effect: since only one segment of v′ dominates *John*, the category v′ (which all in all consists of two segments) does not dominate the latter. The first category dominating *John* is therefore vP, which also dominates the adjunct (consequently *John* c-commands the adjunct). Hence, *John* also c-commands EA at the adjunct's edge, which is still accessible at this point of the derivation.[45] As a result, *John* can function as licensor of EA – it can value EA's *β*-feature and thereby establish the control relation.[46]

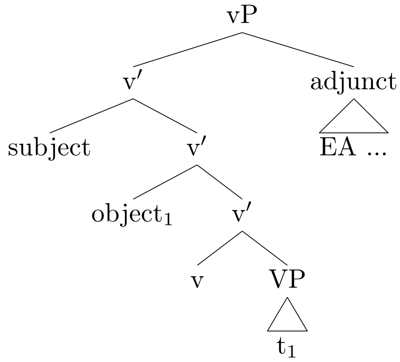
[45] Note that this is the last point in the derivation when EA is still accessible; when T merges with vP, EA is rendered inaccessible, which explains why EA cannot move out of the adjunct (= island) directly into a higher phase. On the other hand, intermediate movement to the edge of vP is not possible either, following Müller's (2010; 2011) Edge Feature Condition, since v has already become inactive in (52), and therefore edge feature insertion is blocked, which would have to trigger this intermediate movement step (recall section 5.2).

[46] Note that the object, by contrast, is not in a position where it could license EA; i.e., obligatory object control into adjuncts is ruled out. This does not imply, however, that the object cannot bind variables inside the adjunct – LF movement to Specv can derive these readings; cf., for instance, *John read every book$_1$ without reviewing it$_1$* (Hornstein 1999: 88). (However, at this point in the derivation, EA has already picked the subject as a goal.)

Moreover, one reviewer has raised an interesting question: what about Object Shift in languages like Scandinavian? If the object raises to Specv, can it control EA inside a vP adjunct? In Norwegian, this is not the case (see (i)): as in English, we only get subject control even if the object has undergone Object Shift.

(i) *Norwegian* (Inghild Flaate Høyem, p.c.)
Jon$_1$ hørte henne$_2$ aldri/ikke [uten EA$_{1/*2}$ å gå inn i rommet].
John$_1$ heard her$_2$ never/not without to go into room.the
'John did not hear her/has never heard her without entering the room.'

So how can it be excluded that the object is a potential goal for EA? First, it is far from clear whether Specv is the final landing site of Object Shift; following, for instance, Bošković (2012), Object Shift ultimately targets a position higher than vP. On this assumption, Specv is just an intermediate landing site (the object has to move via Specv, a phase edge, in order to satisfy the PIC). Following Müller's assumptions on successive-cyclic movement and edge feature insertion, this implies that the object targets a lower Specv position than the subject (see Müller 2010: 45). Although both, the object and the subject, now c-command EA inside the adjunct, the subject is the closer goal (since the path between probe and goal is shorter as fewer nodes intervene), and this is why we only get subject control; see (ii).

(ii)


6.2 Non-adjoined islands and the HTC

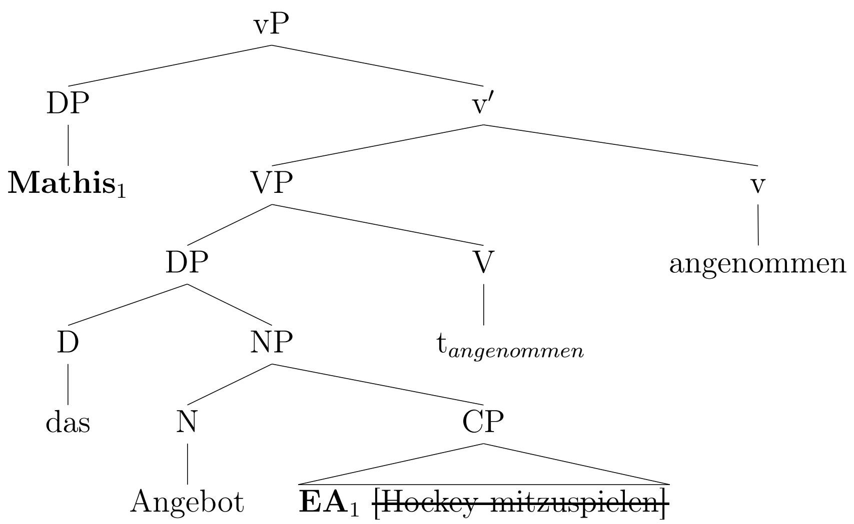
Let us now turn to control into a non-adjoined island (i.e. scenario 3 from section 3, which could not be derived by the MTC since sideward movement cannot circumvent such an island). As an example, consider (55) (repeated from (8-a)).

(55) *German*
Mathis$_1$ hat [$_{DP}$ das Angebot, [$_{CP}$ EA$_1$ Hockey mitzuspielen]], natürlich gerne
Mathis has the offer hockey with.to.play of course gladly
angenommen.
accepted
'Of course, Mathis accepted gladly the offer to join the hockey game.'

EA is inserted as the external argument of the embedded predicate, and since its β-feature is unvalued, it moves to the edge of CP. This suffices for the licensing of EA, since in the next phase (= vP) the controller is merged into the derivation (in Specv) and can license EA at the edge of the previous phase under Agree (see (56)).[47]

(56) [$_{vP}$ Mathis$_{[\beta:val]}$ das Angebot, [$_{CP}$ EA$_{[\beta:\underline{val}]}$ ~~[Hockey mitzuspielen]~~], angenommen]

(57) **Agree between controller *Mathis* and EA**



Note that the intervening DP *das Angebot* is not a potential licensor of EA since it does not c-command EA. Moreover, it can be excluded that there is an empty controller inside the island in form of a covert PP in the complement position of the noun: although *Angebot* ('offer') might take overt complements of this type (see (58)), this is not the case for other nouns that can occur inside such islands (see (59)).

(58) [$_{DP}$ das Angebot (?an ihn$_1$) [$_{CP}$ EA$_1$ Hockey mitzuspielen]]
the offer on him hocky with.to.play
'the offer to join the hockey game'

(59) [$_{DP}$ der Gedanke (*an ihn$_1$) [$_{CP}$ EA$_1$ sie zu besuchen]]
the thought on him her.ACC to visit
'the thought of visiting her'

[47] Recall that DP is not assumed to be a phase; only CP and vP are (see the definition in footnote 1).

But what about more deeply embedded infinitival clauses, i.e. scenarios in which more phases intervene between EA and the matrix subject? Consider the pair of sentences in (60). The verb inside the infinitival clause is chosen in such a way that it can be used reflexively (*sich weiterbilden* ('to educate oneself further')) or in a transitive way (*jemanden weiterbilden* ('to educate sb. further')). In this way, the underlying control relationships become more obvious, since the reflexive *sich* is only licensed if it is bound by EA (Binding Principle A) and a pronoun coindexed with EA is necessarily ruled out (Binding Principle B).

Let us first have a look at (60-a). It has the same structure as the examples discussed so far in this subsection: EA is inside a complex DP that functions as a direct object (*das Angebot, sich/ihn weiterzubilden* ('the offer to educate himself/him further')). In such a configuration, we can observe obligatory subject control. This is confirmed by the Principle B effect in (60-a), which indicates that EA must be bound by the matrix subject, as predicted by the HTC.[48]

(60) *German*

a. Peter$_{1}$ hat [$_{vP}$ t$_{1}$ das Angebot, [$_{CP}$ **EA**$_{1/*2}$ **sich**$_{1/*2}$/ **ihn**$_{*1/2}$ weiterzubilden]
Peter has the offer REFL/ him further.to.train
gerne angenommen].
gladly accepted
'Peter accepted gladly the offer to undergo further training.'

b. Peter$_{1}$ hat [$_{vP}$ t$_{1}$ die Frau$_{2}$, [$_{CP}$ die$_{2}$ das Angebot, [$_{CP}$ **EA**$_{*1/2}$ **sich**$_{*1/2}$/ **ihn**$_{1/*2}$
Peter has the woman who the offer REFL/ him
weiterzubilden] gemacht hat], neulich erst im Supermarkt getroffen].
further.to.train made has recently only in.the supermarket met
'Only recently, Peter has met the woman in the supermarket who offered to further educate him/herself.'

In (60-b), the infinitival clause is more deeply embedded since the complex DP in which it is located is part of a relative clause that modifies the matrix object. As a result, two phase boundaries intervene between the subject trace (t$_{1}$) and EA. Following the HTC, we thus expect that subject control by *Peter* should be blocked. This prediction is indeed borne out as the binding effects in (60-b) show. The fact that the sentence is grammatical if the pronoun *ihn* is coindexed with the matrix subject *Peter* indicates that EA must bear another index; otherwise, the configuration would give rise to a Principle B violation because the pronoun would be bound in its binding domain.

To sum up, (60-a) shows that obligatory control holds if EA and the controller are only separated by one phase boundary; if more phase boundaries intervene, as in (60-b), obligatory control by the matrix subject is blocked.[49] And this is exactly what the HTC predicts.

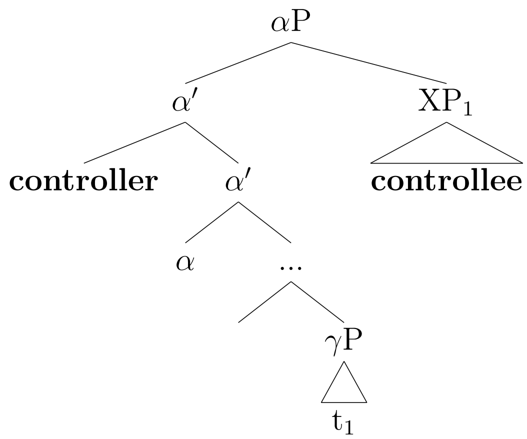
6.3 Extrapositon and the HTC

Finally, let us take a look at the second scenario introduced in section 3, namely control into adjuncts created by movement (see (61), repeated from (18)). I suggest that this is also the underlying structure for control configurations involving extraposition.

[48] To indicate the phase boundaries that intervene between EA and the matrix subject, these (plus matrix vP) are marked in (60) with labeled brackets.

[49] Note, however, that we get obligatory control by *die Frau* ('the woman'), which is expected, since there is only one phase boundary between the coindexed relative pronoun and EA.

(61) **scenario 2: XP adjunct created by movement (internal merge)**



In the literature, different ways to account for extraposition have been proposed. I will follow the movement-based approach (cf., among others, Bierwisch 1963; Reinhart 1980; Baltin 1982; Büring & Hartmann 1995; 1997; Müller 1995; 1997), which means that in examples like (62) and (63), the surface position of the extraposed CP is taken to be the result of rightward movement.[50]

(62) *German*
Er$_1$ hat [$_{DP}$ es t$_{CP}$] bedauert, [$_{CP}$ EA$_1$ Maria verletzt zu haben].
he has it regretted Maria hurt to have
'He regretted having hurt Maria.'

(63) Mathis$_1$ hat [$_{DP}$ das Angebot t$_{CP}$] natürlich gerne angenommen, [$_{CP}$ EA$_1$ mit den größeren Jungs Hockey zu spielen]].
Mathis has the offer of course gladly accepted with the older boys hockey to play
'Of course, Mathis accepted gladly the offer to play hockey with the older boys.'

As already mentioned in section 2.2, extraposition of the infinitival clause is sometimes obligatory (as in (62)) and sometimes optional (as in (63)).[51]

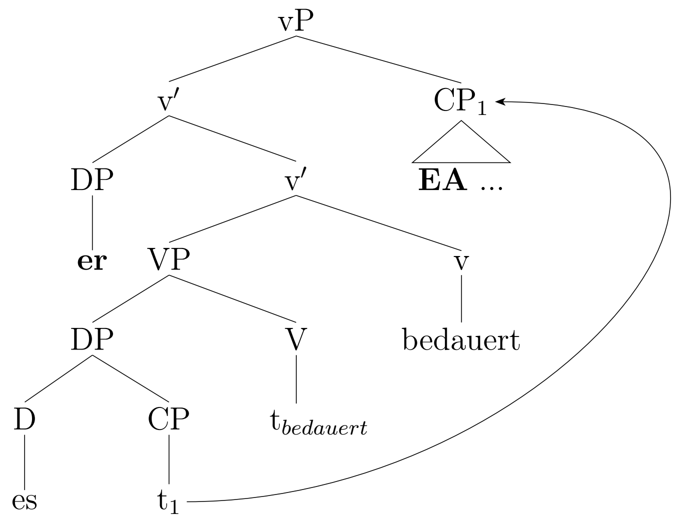
[50] Alternatively, two other strategies have been suggested in the literature: (i) the base-generation approach, according to which the extraposed XP is considered to be base-generated in its surface position (cf., for instance, Koster 1978; Culicover & Rochemont 1990; Webelhuth 1992; Haider 1997), and (ii) the PF approach, according to which extraposition is not a syntactic phenomenon; i.e., syntactically, the extraposed XP never occurs in the extraposed position. Instead, it is simply spelled out there (cf., for instance, Truckenbrodt 1995; Göbbel 2007). Moreover, combinations of the above-mentioned strategies have also been proposed, the underlying assumption being that there are different types of extraposition which should be analyzed differently. A common distinction that has been argued to be relevant is the argument-adjunct distinction (cf., for instance, Fox & Nissenbaum 1999; Kiss 2005; Inaba 2007; Hunter & Frank 2014).
In fact, the base-generation approach does not seem to be an option for data like (62), since it has been argued in the literature that the sentential pronoun and the embedded CP underlyingly form a constituent (see Thráinsson 1979; Wood 2014); if CP were base-generated in the extraposed position, it would not even be adjacent to the sentential pronoun at any point in the derivation. Note, however, that the base generation approach as such would be fully compatible with the HTC; in this case, control into the extraposed CP would boil down to control into an adjunct created by external merge, which has been discussed in detail in section 6.1.

[51] Recall that in the latter case, different additional factors have an impact on the naturalness of the sentence. In (63) (which is basically the extraposed variant of (55) from section 6.2), I have therefore added the phrase *mit den größeren Jungs* ('with the older boys') to make it sound more natural. Note that the non-extraposed variant is equally grammatical:

However, this does not play any role in the derivation of the control pattern, which means that (62) and (63) are eventually derived in the same way. In the following, I will first focus on (62), since the occurrence of the sentential pronoun requires some additional remarks.[52]

As far as the underlying structure of examples with a sentential pronoun is concerned (as in (62)), I assume (following Bennis 1986; Müller 1995; Vikner 1995; and others) that the sentential pronoun is referential and occupies the complement position of the verb. As regards the underlying position of the embedded CP, different proposals have been made in the literature, and I follow Thráinsson (1979), Ross (1986), Müller (1995), Wood (2014), a.o., in assuming that the sentential pronoun and the CP are base-generated as one constituent before the latter is extraposed, i.e. right-adjoined to vP.[53] (64) illustrates the point in the derivation when extraposition has just taken place and vP has been completed.

(64) **Extraposition of the infinitival clause**



And how is the control relation in examples like (62) and (63) derived? In fact, the analysis of control into extraposed adjuncts does not differ from the analysis of control into non-adjoined islands, since the control relation can already be established before extraposition takes place. Inside the infinitival clause, the empty argument EA is inserted as external argument of the predicate *verletzen* ('hurt') in (62) and *spielen* ('play') in (63). EA then moves to the edge of CP, since it still needs to value its *β*-feature. Note that it cannot move any further since the DP that embeds this CP is an island.[54] However, when the

(i) *German*
Mathis$_1$ hat [$_{DP}$ das Angebot, [$_{CP}$ EA$_1$ mit den größeren Jungs Hockey zu spielen]] natürlich
Mathis has the offer with the older boys hockey to play of course
gerne angenommen.
gladly accepted
'Of course, Mathis accepted gladly the offer to play hockey with the older boys.'

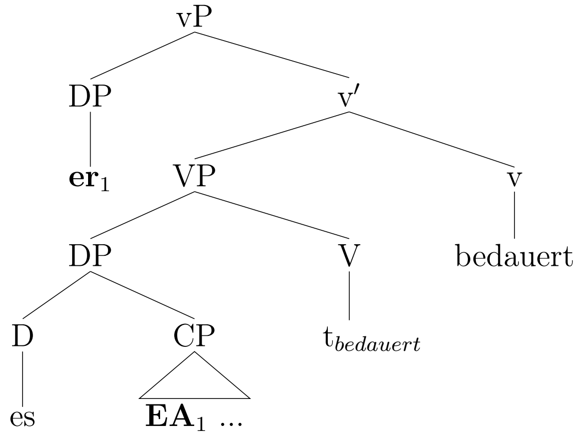
52 Underlyingly, (63) has the same structure as (55); see tree (57) in section 6.2.

53 Note that, following Bare Phrase Structure, it makes no difference whether the CP is considered to be an argument of the pronoun or adjoined to DP; the underlying structure would look the same. In fact, the structure outlined in (64) has also been proposed by Ross (1986) and Müller (1995) and suggests that these examples are generated "in complete analogy to other instances of complex noun phrases" (Müller 1995: 231), i.e. like (63).

54 Recall that in (62), the sentential pronoun blocks leftward movement and turns the DP into an island; in (63), the infinitival clause is part of a complex DP, which is also an island.

controller enters the derivation in Specv, EA is still accessible, and the control relation can thus be established under Agree in exactly the same way as outlined in the previous section. For sentence (62), this is illustrated in (65). (The relevant structure for (63) looks as indicated in tree (57) above.)[55]

(65) **Agree between controller *er* and EA before extraposition takes place**



Finally, it is worth mentioning that, in contrast to scenario 1, both scenario 2 and 3 might also involve object control (depending on the control predicate involved). This is illustrated by the German data in (66): (66-a) involves object control into a non-extraposed CP, while (66-b) involves object control into an extraposed CP.

(66) *German*

a. Er$_1$ wollte ihr$_2$ [$_{DP}$ die Chance [$_{CP}$ EA$_{*1/2}$ sich$_2$ zu verbessern]] auf
he wanted her.DAT the chance REFL to improve on
keinen Fall geben].
no case give
'By no means did he want to give her the chance to improve.'

b. Er$_1$ wollte ihr$_2$ [$_{DP}$ die Chance t$_{CP}$] auf keinen Fall geben, [$_{CP}$ EA$_{*1/2}$
he wanted her.DAT the chance on no case give
sich$_2$ zu verbessern].
REFL to improve
'By no means did he want to give her the chance to improve.'

In (66-a), EA moves to the highest phase edge inside the complex DP (i.e. to SpecC) in search of a suitable goal. In this position it is still accessible when the indirect object DP *ihr* ('her.DAT') is merged into the derivation in SpecV, so the latter functions as a goal and licenses EA under Agree. (Note that, again, the intervening DP *die Chance* cannot agree with EA because it does not c-command it.) As far as (66-b) is concerned, it has the same underlying structure as (66-a) if we follow the movement-based approach to extraposition; so the control relation can be derived in the same way as in (66-a) (i.e. before extraposition takes place). It can be concluded that the data in (66) also pattern as expected under the HTC.

[55] Note that in principle, there are two points in the derivation when control into an extraposed adjunct could be licensed: either before adjunction (i.e. extraposition) has occurred (as outlined explicitly in this section), or after adjunction has taken place (which would then correspond to the scenario discussed in section 6.1 and would mean that it takes place at the point in the derivation illustrated in tree (64)). However, on the assumption that syntactic licensing takes place as soon as possible (i.e. as soon as the appropriate licensing configuration holds in the course of the derivation), the more plausible analysis is the former one, which has therefore been presented in this section.

To sum up, the gist of the HTC analysis is that EA does not have to move all the way up to the controller position; instead, it is enough to move to the edge of the preceding phase, which means, with respect to the island examples discussed above, that extraction out of the island is not required to establish the control relation. An MTC account, by contrast, would, by definition, have to assume that EA moves out of the island, which is impossible if the sideward movement strategy cannot be applied (as in the case of non-adjoined islands).

7 On non-obligatory control

So far it has been tacitly assumed that by probing EA finds a suitable goal to value its β-feature and determine its reference. In this section, we will be focusing on scenarios in which such a goal is not available – either due to the lack of a c-commanding DP in general or because potential controllers do not meet the relevant locality restrictions (because they are not in the same accessible domain as EA throughout the derivation).

7.1 Arbitrary control

A first case in point is the following example, which does not have a single DP argument that could function as a controller.

(67) [EA to shave oneself] is dangerous.

That EA must be part of the numeration follows from Theta Theory (a derivation without EA inevitably crashes since it violates the Theta Criterion), Binding Theory (EA helps to satisfy Principle A since it can be the local antecedent of an anaphor, see below), and the EPP (EA satisfies the EPP in the subject clause). As regards its interpretation, the non-overt subject refers to an arbitrary individual, so this is a case of arbitrary control.

How is this derived under the HTC? Following Preminger (2014), the underlying assumption is that arbitrary reference is the semantic interpretation afforded to an EA whose β-feature has gone unvalued in the course of the derivation in narrow syntax. Hence, arbitrary control can be seen as the result of a last resort strategy (cf. also McFadden & Sundaresan 2016 for similar assumptions).[56,57]

Under the HTC, the derivation of (67) is as follows: when the subject clause is derived, EA is inserted in Specv, where it is θ-marked by *shave* and binds the anaphor (see (68-a)).[58] Since its β-feature is still unvalued, EA then moves to SpecT in search of a potential goal, thereby satisfying the EPP on T (see (68-b)). Then, because there is still no controller available, it moves on to SpecC, the edge of the next phase; see (68-c).

[56] Alternatively, it could be assumed that there is a *syntactic* repair strategy according to which default valuation takes place if EA's β-feature cannot be locally valued, yielding arbitrary control. See also Schäfer (2012) on the passive of reflexive verbs, who suggests that in the absence of a "true" antecedent, the φ-features of reflexives can be valued via Default Agreement in some languages as a last resort operation.

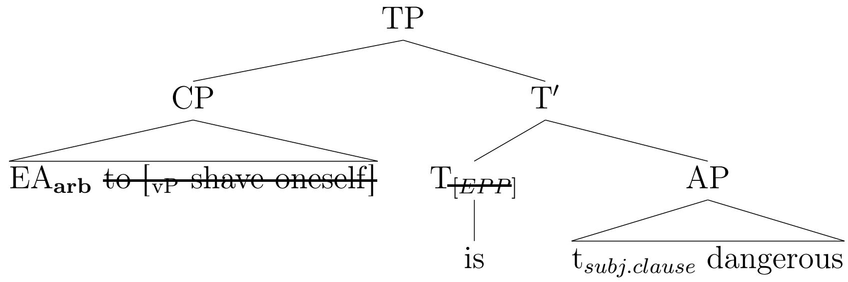
[57] Note that to construe NOC as a last resort means that the model makes clear-cut predictions regarding the distinction between OC and NOC. Although the technical definitions of OC and NOC vary in the literature (cf., for instance, Rosenbaum 1967; Williams 1980; Landau 2000; Stiebels 2015), the two types of control can be distinguished along the following lines: OC PRO involves only sloppy readings under vP ellipsis, it only yields a *de se* interpretation in attitude contexts, it obligatorily needs a local, c-commanding antecedent, and it can also be [-human]. This does not hold for NOC PRO.

[58] In (68), I ignore the fact that the concrete form of the anaphor is assumed to be determined later in the derivation, since this issue is orthogonal to the control debate. But let me briefly sketch out the underlying assumptions concerning anaphoric binding in this framework. Following Fischer (2004; 2006), I assume that the concrete morphological realization of the bound element is determined in the course of the derivation; depending on the size of the domain in which binding finally takes place, anaphoric or pronominal binding is licensed, and depending on the features of the antecedent, the concrete realization can finally be determined post-syntactically. This means that the morphological form of the bound element (i.e. *oneself* in (67)) is determined when EA has already been referentially identified, and the vocabulary item is introduced via late insertion (following basic assumptions of Distributed Morphology).

(68) **Deriving the subject clause:**
$[_{\text{vP}}\ \text{EA}_{\cancel{[\theta},\beta:\_\_]}\ \text{shave}_{\cancel{[*\theta*]}}\ [_{\text{VP}}\ \text{t}_{\textit{shave}}\ \text{oneself}]]$
$[_{\text{TP}}\ \text{EA}_{[\beta:\_\_]}\ \text{to}_{\cancel{[EPP]}}\ [_{\text{vP}}\ \text{t}_{\text{EA}}\ \text{shave}\ \cancel{[_{\text{VP}}\ \text{t}_{\textit{shave}}\ \text{oneself}]}]]$
$[_{\text{CP}}\ \text{EA}_{[\beta:\_\_]}\ [_{\text{TP}}\ \text{t}'_{\textit{EA}}\ \text{to}\ [_{\text{vP}}\ \text{t}_{\textit{EA}}\ \text{shave}\ \cancel{[_{\text{VP}}\ \text{t}_{\textit{shave}}\ \text{oneself}]}]]]$

The subject clause is then merged into the external argument position of the predicate *dangerous*, ending up in SpecT (where it checks the EPP on T). However, since there is definitely no goal available that could value EA's β-feature, EA is ultimately interpreted as arbitrary PRO; see (69).

(69)



7.2 NOC and the impact of discourse

Apart from arbitrary control, NOC also comprises examples like (70)–(72), in which the interpretation of EA seems to depend on discourse factors. In (70), the controller of EA, *Amy*, is part of the sentence; however, it is an example of long-distance control since it "involves discourse or speech act participants or controllers in a clause higher than the respective clause-embedding predicate" (see Stiebels 2015: 428). In (71), the controller (*Ohio State*) is also part of the discourse, but it is not contained in the same sentence as EA; and in (72), the controller is not realized overtly at all but corresponds to the speaker.

(70) *German* (see Culicover & Jackendoff 2006 for similar examples from English)
Amy$_1$ sagte, dass es Spaß machte, [EA$_1$ mit Dan zu tanzen].
Amy said that it fun made with Dan to dance
'Amy said that dancing with Dan had been fun.'

(71) Culicover & Jackendoff (2006: 137)
Ohio State$_1$ is in a lot of trouble, according to today's newspaper. Apparently, [EA$_1$ firing the football coach] has turned off a lot of potential donors.

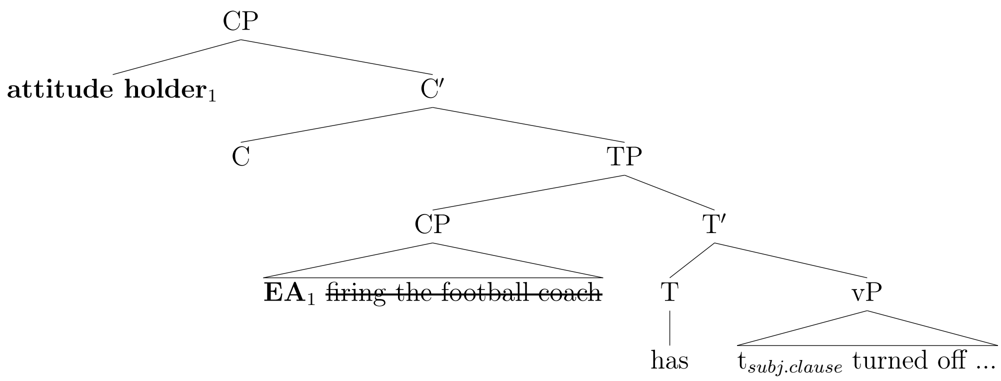
(72) *German* (Pittner 1999: 338)
Er$_1$ ist, [ohne EA$_{\textit{speaker}/*1}$ zu übertreiben], weit und breit der beste Billiard-Spieler. (= (4))
he is without to exaggerate widely and broadly the best billiard-player
'He is, without exaggeration, the best billiard player in the world.'

What all of these examples have in common is that they involve a salient entity in the discourse (which can be the speaker or a non-local antecedent) whose attitude is being reflected; in other words, we are dealing with attitudinal contexts. As outlined already in section 5.4, I assume that in such contexts, a logophoric center is projected in the left periphery which introduces this attitude holder syntactically in a specifier position (see also the references cited in section 5.4). As a result, this attitude holder can function as a goal for EA and the latter can be licensed under Agree. So strictly speaking, this is

OC involving the attitude holder as controller; but since the attitude holder is not realized overtly, it gives the impression that there is no local, obligatory controller around (see also Fischer & Flaate Høyem 2017). In any case, this basically means that licensing of EA in examples like (70)–(72) boils down to standard logophoric licensing (see also Zribi-Hertz 1989), which is not surprising since NOC PRO has long been shown to behave like a logophor (see, for instance, Kuno 1975; Landau 2013; 2015).[59]

So if we compare the derivation of arbitrary control in (69) with that of example (71), which also involves a subject clause containing EA, the difference is simply that the latter involves an attitude holder which can license EA under Agree (see (73)).

(73)



Note, moreover, that theories that take NOC to be logophoric in nature make the following prediction: if a sentence is changed in such a way that the attitude holder changes, it is predicted that EA must be interpreted differently as well. This is borne out in the following example, which contrasts with (70) (*Amy sagte, dass es Spaß machte, mit Dan zu tanzen*/'Amy said that dancing with Dan had been fun'). In (74), it is no longer Amy's point of view that is reported on; hence, EA cannot refer to *Amy* anymore.

(74) *German*
Amy$_1$ wurde erzählt, dass es Spaß machte, [EA$_{*1/2}$ mit Dan zu tanzen].
Amy was told that it fun made with Dan to dance
'Amy was told that dancing with Dan had been fun.'

8 Concluding remarks on distribution and realization of EA

Crucially, the main goal of this paper was to develop a theory of control which is compatible with a certain conceptual perspective (cf. its PIC-oriented nature) capturing a specific set of empirical observations (particularly control into (non-)adjoined islands). Following Chomsky (1981), this means that we have to answer the following question concerning PRO/EA: "how is its reference determined?" (Chomsky 1981: 74). This is what falls under control theory. And this is what this paper focuses on.

Still, there are related issues which concern the context in which EA occurs.[60] This paper will not provide an ultimate answer to the question of where EA must or must not occur; however, this section will sketch some basic ideas.

[59] As for discourse factors licensing logophoricity in general, see Kuno (1987); Fischer (2015); and others. As far as the relation between logophors and NOC is concerned, see also Sundaresan (2012); Nishigauchi (2014); Charnavel (2015).

[60] Chomsky (1981: 74) formulates two further questions related to PRO: "where may it appear" and "where must it appear"? He concludes that they do not fall under control theory; instead, "the first question falls under general principles of the theories of government and binding, the second under the projection principle and Case theory" (which summarizes the answers GB-theory has provided).

Returning to the underlying assumption that EA can be inserted freely into the numeration, the following question arises. What ensures that EA surfaces in the subject position of infinitivals and not in another argument position? In particular, why is OC into finite clauses, as illustrated in (75), ruled out?

(75) *John$_1$ said that EA$_1$ likes pizza.

In fact, what goes wrong in examples like these is not necessarily the licensing of EA; instead, the problem rather seems to be that finite T cannot be properly licensed if EA is the subject. It is standardly assumed that T bears φ-features that must be valued under Agree with the subject DP (see, for instance, Chomsky 2000; 2001).[61] However, in SpecT, EA itself is not yet licensed, which means that it is not yet referentially identified and can therefore not function as a goal for φ-Agree. But what is different in the case of non-finite T, where we typically find EA? Assume that finite T differs from non-finite T insofar as the latter does not bear φ-features. If this is the case, non-finite T does not depend on a subject that can value φ-features, and therefore referentially defective EA can occur in the subject position of non-finite T without causing any damage.

However, what if EA did not only correspond to PRO (hence also the more neutral term EA)? Could it also be the origin of other (empty) categories? After all, structures like (76) might not be completely out. The remaining section is devoted to some very tentative ideas concerning these questions.

(76) a. EA sings.
b. John hates EA.

Of course, languages like English or German do not allow these structures. On closer inspection, though, it is not at all that clear why we would want to rule out (76) completely. What (76-a) actually displays is a sentence with a non-overt argument in the subject position of a finite clause. This is exactly what is found in *pro*-drop languages, and although it has been standard to consider PRO and *pro* two distinct empty categories since the 1980s (see Chomsky 1982; Rizzi 1986), the idea that PRO and *pro* might have the same origin is not new (see Chomsky 1981; Borer 1989; Huang 1989; Manzini 2009; Duguine 2015; McFadden & Sundaresan 2016). As an illustration, let us briefly consider the Italian example in (77).

(77) *Italian*
Canto.
sing.1SG
'I sing.'

The standard analysis (following Rizzi 1986) is to assume that the syntactic derivation involves *pro* as external argument (for a different view, see, for instance, Borer 1986; Alexiadou & Anagnostopoulou 1998). According to the underlying assumptions of the HTC, EA can be inserted into the numeration, and so it is easy to see that EA could take over the role of what is standardly called *pro*. Since without EA the Theta Criterion would be violated, a successful derivation must include EA. Under the assumption that PRO and *pro* are underlyingly the same element,[62] what distinguishes EA in (77) from EA in OC would then

[61] For a different view, see Preminger (2014).
[62] As regards analyses along the same line and empirical arguments for this view, see Duguine (2015); McFadden & Sundaresan (2016).

be not an inherent property of EA itself, but would have to be derived from other structural distinctions. Of course, much more needs to be said about the concrete differences that turn EA into a PRO- or *pro*-like element, but this must be left for future research.

Turning briefly to (76-b), the situation is the following: the object position is occupied by a non-overt argument which ends up being bound by the subject *John*. Again, this might be a scenario we do not want to abandon completely. Although they are typically phonologically realized, this configuration is reminiscent of that of anaphors. So, in the end, EA might even end up being the source of anaphors, independent restrictions forcing us to spell out EA phonologically in this context (cf. also Hornstein 2001, who extends his movement approach to anaphors as well). However, a more elaborate analysis in this direction lies definitely beyond the scope of this paper.

In any case, the central insight is that EA need not be control-specific (unlike PRO), and therefore it could well be the case that it also appears in other constructions. So EA might be considered the source of OC PRO and NOC PRO as well as of *pro* (and arguably even of anaphors). Thus, these elements might not be inherently different in the lexicon, but could simply emerge because of differences in the syntactic environment. But these are issues left for future research.

9 Conclusion

This paper set out to develop a theory of control that (i) is compatible with phase theory and (ii) can straightforwardly account for control into adjoined and non-adjoined islands, two aspects which have proved to be problematic for the MTC.

It has been assumed that the lexicon hosts an empty argument (EA), which is referentially defective and therefore bears an unvalued *β*-feature (which basically corresponds to a syntactically reified binding index feature). In control structures, EA is part of the derivation since otherwise the Theta Criterion would be violated. In the course of the syntactic derivation, EA probes upwards to find a goal which can value its *β*-feature under Agree – hence, EA moves from phase edge to phase edge until a potential goal is merged into the next higher phase and licenses EA by valuing EA's *β*-feature, which is interpreted as binding at the C-I interface. Typically, the licensor is the controlling DP. In NOC structures, two different scenarios can arise: in attitudinal contexts, the attitude holder (which is syntactically represented in the left periphery) is accessible to EA, agrees with it and thus determines EA's interpretation. In non-attitudinal contexts, there is no controller in the accessible domain and arbitrary control thus arises as the result of failure to agree.

Since EA is not control-specific, the theory can presumably also be extended to include *pro* (and arguably even anaphors). Depending on underlying structural distinctions, these forms might simply emerge as different realizations of EA.

If the HTC is on the right track, the answer to the locality question is this: control is more local than traditional PRO-based theories would have us believe, but less local than suggested by the MTC. The conceptual advantage of the HTC is that it allows us to take the PIC seriously; thus, the HTC can be considered to be part of a bigger program which aims at reanalyzing all kinds of syntactic phenomena in a local-derivational way. At the same time, it allows us to take islandhood seriously – after all, control into islands does not involve extraction out of them, but only movement to the edge of the highest phase within them. As a consequence, under the HTC it does not matter whether an island is adjoined or non-adjoined.

Abbreviations

ACC = accusative, DAT = dative, M = masculine, NOM = nominative, REFL = reflexive, SG = singular, 1 = first person, CED = Condition on Extraction Domain, EA = empty argument, EC = exhaustive control, HTC = hybrid theory of control, MTC = movement theory of control, NOC = non-obligatory control, OC = obligatory control, PC = partial control, PIC = Phase Impenetrability Condition

Acknowledgements

Special thanks to my colleagues from the control project, Artemis Alexiadou, Patrick Lindert, and Marcel Pitteroff, and to Gereon Müller for careful reading and valuable discussions. For helpful comments, I would also like to thank Jeannique Darby, Hubert Haider, Jutta Hartmann, Inghild Flaate Høyem, Amanda Kahrsch, Terje Lohndal, Maria Polinsky, Michelle Sheehan, three anonymous reviewers, and audiences at Tübingen University (October 2011), Freiburg University (GGS 40, May 2012), Frankfurt/Main University (GGS 41, May 2013), Leipzig University (June 2012; Comparative Germanic Syntax Workshop 28, October 2013), and Stuttgart University, where earlier versions of this paper have been presented. All remaining errors are my own.

Funding Information

Research for this paper was supported by a DGF grant for the project "Modelling Control Theory" (AL 554/10-1; FI 1959/2-1).

Competing Interests

The author has no competing interests to declare.

References

Abels, Klaus. 2003. *Successive cyclicity, anti-locality, and adposition stranding*. Storrs, CT: University of Connecticut dissertation.

Alexiadou, Artemis & Elena Anagnostopoulou. 1998. Parametrizing AGR: Word order, V-movement and EPP checking. *Natural Language and Linguistic Theory* 16. 491–539. DOI: https://doi.org/10.1023/A:1006090432389

Baltin, Mark. 1982. A landing site theory of movement rules. *Linguistic Inquiry* 13. 1–38.

Bennis, Hans. 1986. *Gaps and dummies*. Dordrecht: Foris.

Bierwisch, Manfred. 1963. *Grammatik des deutschen Verbs*. Berlin: Akademie Verlag.

Bjorkman, Bronwyn & Hedde Zeijlstra. 2014. Upward Agree is superior. http://ling.auf.net/lingbuzz/002350. To appear in: *Linguistic Inquiry*.

Boeckx, Cedric, Norbert Hornstein & Jairo Nunes. 2010. *Control as movement*. Cambridge: Cambridge University Press. DOI: https://doi.org/10.1017/CBO9780511761997

Borer, Hagit. 1986. I-subjects. *Linguistic Inquiry* 17. 375–416.

Borer, Hagit. 1989. Anaphoric AGR. In Osvaldo Jaeggli & Ken Safir (eds.), *The null subject parameter*, 69–109. Dordrecht: Kluwer.

Bošković, Željko. 2007. On the locality and motivation of Move and Agree: An even more minimal theory. *Linguistic Inquiry* 38. 589–644. DOI: https://doi.org/10.1162/ling.2007.38.4.589

Bošković, Željko. 2009. Unifying first and last conjunct agreement. *Natural Language and Linguistic Theory* 27. 455–496. DOI: https://doi.org/10.1007/s11049-009-9072-6

Bošković, Željko. 2012. Don't feed your movements when you shift your objects. In Myriam Uribe-Etxebarria & Vidal Valmala (eds.), *Ways of structure building*, 245–252. Oxford: Oxford University Press. DOI: https://doi.org/10.1093/acprof:oso/9780199644933.003.0010

Bresnan, Joan. 1982. Complementation and control. *Linguistic Inquiry* 13. 343–434.

Brody, Michael. 2002. On the status of representations and derivations. In Samuel Epstein & T. Daniel Seely (eds.), *Derivation and explanation in the Minimalist Program*, 19–41. Oxford: Blackwell. DOI: https://doi.org/10.1002/9780470755662.ch2

Büring, Daniel & Katharina Hartmann. 1995. All right! In Uli Lutz & Jürgen Pafel (eds.), *On extraction and extraposition in German*, 179–211. Amsterdam: Benjamins.
Büring, Daniel & Katharina Hartmann. 1997. Doing the right thing. *The Linguistic Review* 14. 1–42. DOI: https://doi.org/10.1515/tlir.1997.14.1.1
Camacho, José. 2010. On case concord: The syntax of switch-reference clauses. *Natural Language and Linguistic Theory* 28. 239–274. DOI: https://doi.org/10.1007/s11049-010-9093-1
Charnavel, Isabelle. 2015. Apparent exemption from Condition A: A perspective-based theory. http://ling.auf.net/lingbuzz/002683.
Chomsky, Noam. 1981. *Lectures on government and binding.* Dordrecht: Foris.
Chomsky, Noam. 1982. *Some concepts and consequences of the theory of government and binding.* Cambridge, MA: MIT Press.
Chomsky, Noam. 1986. *Barriers.* Cambridge, MA: MIT Press.
Chomsky, Noam. 1993. A Minimalist Program for linguistic theory. In Kenneth Hale & Samuel Jay Keyser (eds.), *The view from building 20*, 1–52. Cambridge, MA: MIT Press.
Chomsky, Noam. 1995. *The Minimalist Program.* Cambridge, MA: MIT Press.
Chomsky, Noam. 2000. Minimalist inquiries: The framework. In Roger Martin, David Michaels & Juan Uriagereka (eds.), *Step by step*, 89–255. Cambridge, MA: MIT Press.
Chomsky, Noam. 2001. Derivation by phase. In Michael Kenstowicz (ed.), *Ken Hale: A life in language*, 1–52. Cambridge, MA: MIT Press.
Chomsky, Noam. 2008. On phases. In Robert Freidin, Carlos Otero & Maria Luisa Zubizarreta (eds.), *Foundational issues in linguistic theory*, 133–166. Cambridge, MA: MIT Press. DOI: https://doi.org/10.7551/mitpress/9780262062787.003.0007
Cinque, Guglielmo. 1999. *Adverbs and functional heads.* Oxford: Oxford University Press.
Cole, Peter, Gabriella Hermon & Li-May Sung. 1990. Principles and parameters of long-distance reflexives. *Linguistic Inquiry* 21. 1–22.
Culicover, Peter W. & Michael S. Rochemont. 1990. Extraposition and the complement principle. *Linguistic Inquiry* 21. 23–47.
Culicover, Peter W. & Ray Jackendoff. 2001. Control is not movement. *Linguistic Inquiry* 32. 493–512. DOI: https://doi.org/10.1162/002438901750372531
Culicover, Peter W. & Ray Jackendoff. 2006. Turn over control to the semantics! *Syntax* 9. 131–152. DOI: https://doi.org/10.1111/j.1467-9612.2006.00085.x
Drummond, Alex & Norbert Hornstein. 2014. Some purported problems for the movement theory of control. *Linguistic Inquiry* 45. 449–462. DOI: https://doi.org/10.1162/LING_a_00162
Duguine, Maia. 2015. Unifying null arguments on two levels. *Paper presented at CamCoS 4*. University of Cambridge.
Farkas, Donka. 1988. On obligatory control. *Linguistics and Philosophy* 11. 27–58. DOI: https://doi.org/10.1007/BF00635756
Fischer, Silke. 2004. *Towards an optimal theory of reflexivization*. Tübingen: University of Tübingen dissertation.
Fischer, Silke. 2006. Matrix unloaded: Binding in a local derivational approach. *Linguistics* 44. 913–935. DOI: https://doi.org/10.1515/LING.2006.030
Fischer, Silke. 2015. Pronominal anaphora. In Tibor Kiss & Artemis Alexiadou (eds.), *Syntax – Theory and analysis: An international handbook (volume 1)*, 446–477. Berlin: Mouton de Gruyter.
Fischer, Silke & Inghild Flaate Høyem. 2017. Adjunct control. *Paper presented at CGSW 32*. NTNU, Trondheim.

Fischer, Silke & Marcel Pitteroff. 2016. Psych verbs and control into subject clauses in German. *Paper presented at GGS 44*. University of Leipzig.
Fox, Danny & Jon Nissenbaum. 1999. Extraposition and scope: A case for overt QR. In Sonya Bird, Andrew Carnie, Jason D. Haugen & Peter Norquest (eds.), *Proceedings of WCCFL 18*, 132–144. Somerville, MA: Cascadilla Press.
Göbbel, Edward. 2007. Extraposition as PF movement. In Erin Bainbridge & Brian Agbayani (eds.), *Proceedings of WECOL 34*, 132–145. Fresno, CA: California State University.
Grewendorf, Günther & Erich Groat. 2013. Licensing null heads in free relatives. Handout from April 9, 2013, Siena.
Haider, Hubert. 1993. *Deutsche Syntax – Generativ*. Tübingen: Gunter Narr Verlag.
Haider, Hubert. 1997. Extraposition. In Dorothee Beerman, David LeBlanc & Henk van Riemsdijk (eds.), *Rightward movement*, 115–151. Amsterdam: Benjamins.
Haider, Hubert. 2015. Control does not involve movement: Pretty clear evidence from German. Ms., University of Salzburg.
Hartmann, Katharina. 2013. Prosodic constraints on extraposition in German. In Gert Webelhuth, Manfred Sailer & Heike Walker (eds.), *Rightward movement in a comparative perspective*, 439–472. Amsterdam: Benjamins. DOI: https://doi.org/10.1075/la.200.16har
Hazout, Ilan. 2004. The syntax of existential constructions. *Linguistic Inquiry* 35. 393–430. DOI: https://doi.org/10.1162/0024389041402616
Hazout, Ilan. 2008. On the relation between expletive *there* and its associate: A reply to Williams. *Linguistic Inquiry* 39. 117–128. DOI: https://doi.org/10.1162/ling.2008.39.1.117
Hicks, Glyn. 2009. *The derivation of anaphoric relations*. Amsterdam: Benjamins. DOI: https://doi.org/10.1075/la.139
Hornstein, Norbert. 1999. Movement and control. *Linguistic Inquiry* 30. 69–96. DOI: https://doi.org/10.1162/002438999553968
Hornstein, Norbert. 2001. *Move! A minimalist theory of construal*. Oxford: Blackwell.
Huang, Cheng-Teh James. 1982. *Logical relations in Chinese and the theory of grammar*. Cambridge, MA: MIT dissertation.
Huang, Cheng-Teh James. 1989. Pro-drop in Chinese: A generalized control theory. In Osvaldo Jaeggli & Ken Safir (eds.), *The null subject parameter*, 185–214. Dordrecht: Kluwer. DOI: https://doi.org/10.1007/978-94-009-2540-3_6
Hunter, Tim & Robert Frank. 2014. Eliminating rightward movement: Extraposition as flexible linearization of adjuncts. *Linguistic Inquiry* 45. 227–267. DOI: https://doi.org/10.1162/LING_a_00154
Inaba, Jiro. 2007. *Die Syntax der Satzkomplementierung*. Berlin: Akademie Verlag. DOI: https://doi.org/10.1524/9783050087290
Kayne, Richard. 1994. *The antisymmetry of syntax*. Cambridge, MA: MIT Press.
Kiss, Tibor. 2005. Semantic constraints on relative clause extraposition. *Natural Language and Linguistic Theory* 23. 281–334. DOI: https://doi.org/10.1007/s11049-003-1838-7
Koster, Jan. 1978. Why subject sentences don't exist. In Samuel Jay Keyser (ed.), *Recent transformational studies in European languages*, 53–64. Cambridge, MA: MIT Press.
Kuno, Susumu. 1975. Super Equi-NP deletion is a pseudo-transformation. In *Proceedings of NELS 5*, 29–44. Amherst, MA: GLSA Publications.
Kuno, Susumu. 1987. *Functional syntax*. Chicago: University of Chicago Press.
Landau, Idan. 2000. *Elements of control: Structure and meaning in infinitival constructions*. Dordrecht: Kluwer. DOI: https://doi.org/10.1007/978-94-011-3943-4

Landau, Idan. 2003. Movement out of control. *Linguistic Inquiry* 34. 471–498. DOI: https://doi.org/10.1162/002438903322247560
Landau, Idan. 2004. The scale of finiteness and the calculus of control. *Natural Language and Linguistic Theory* 22. 811–877. DOI: https://doi.org/10.1007/s11049-004-4265-5
Landau, Idan. 2013. *Control in generative grammar: A research companion.* Cambridge: Cambridge University Press. DOI: https://doi.org/10.1017/CBO9781139061858
Landau, Idan. 2015. *A two-tiered theory of control.* Cambridge, MA: MIT Press. DOI: https://doi.org/10.7551/mitpress/9780262028851.001.0001
Legate, Julie Anne. 2005. Phases and cyclic agreement. *MIT Working Papers in Linguistics* 49. 147–156.
Manzini, Rita. 2009. PRO, pro and NP-trace (raising) are interpretations. In Kleanthes Grohmann (ed.), *Explorations of phase theory: Features and arguments*, 131–180. Berlin: Mouton de Gruyter.
May, Robert. 1985. *Logical form: Its structure and derivation.* Cambridge, MA: MIT Press.
McFadden, Thomas & Sandhya Sundaresan. 2016. Failure to control is not a failure: it's *pro*. Ms., ZAS Berlin/University of Leipzig.
McGinnis, Martha. 1998. *Locality in A-movement*. Cambridge, MA: MIT dissertation.
McGinnis, Martha. 2004. Lethal ambiguity. *Linguistic Inquiry* 35. 47–95. DOI: https://doi.org/10.1162/002438904322793347
Müller, Gereon. 1995. On extraposition & successive cyclicity. In Uli Lutz & Jürgen Pafel (eds.), *On extraction and extraposition in German*, 213–243. Amsterdam: Benjamins.
Müller, Gereon. 1997. Extraposition as remnant movement. In Dorothee Beerman, David LeBlanc & Henk van Riemsdijk (eds.), *Rightward movement*, 215–246. Amsterdam: Benjamins. DOI: https://doi.org/10.1075/la.17.10mul
Müller, Gereon. 2004. Phrase impenetrability and wh-intervention. In Arthur Stepanov, Gisbert Fanselow & Ralf Vogel (eds.), *Minimality effects in syntax*, 289–325. Berlin: Mouton de Gruyter. DOI: https://doi.org/10.1515/9783110197365.289
Müller, Gereon. 2010. On deriving CED effects from the PIC. *Linguistic Inquiry* 41. 35–82. DOI: https://doi.org/10.1162/ling.2010.41.1.35
Müller, Gereon. 2011. *Constraints on displacement: A phase-based approach.* Amsterdam: Benjamins. DOI: https://doi.org/10.1075/lfab.7
Nishigauchi, Taisuke. 2014. Reflexive binding: Awareness and empathy from a syntactic point of view. *Journal of East Asian Linguistics* 23. 157–206. DOI: https://doi.org/10.1007/s10831-013-9110-6
Pearson, Hazel. 2013. *The sense of self: Topics in the semantics of de se expressions.* Cambridge, MA: Harvard University dissertation.
Pearson, Hazel. 2015. Attitude verbs. Ms., ZAS Berlin. To appear in Lisa Matthewson, Cécile Meier, Hotze Rullmann & Thomas Ede Zimmermann (eds.), *The companion to semantics.* Oxford: Wiley.
Pearson, Hazel. 2016. The semantics of partial control. *Natural Language and Linguistic Theory* 34. 691–738. DOI: https://doi.org/10.1007/s11049-015-9313-9
Pesetsky, David & Esther Torrego. 2007. The syntax of valuation and the interpretability of features. In Simin Karimi, Vida Samiian & Wendy Wilkins (eds.), *Phrasal and clausal architecture*, 262–294. Amsterdam: Benjamins. DOI: https://doi.org/10.1075/la.101.14pes
Petter, Marga. 1998. *Getting PRO under control.* The Hague: Holland Academic Graphics.
Pica, Pierre. 1987. On the nature of the reflexivization cycle. In Joyce McDonough & Bernadette Plunkett (eds.), *Proceedings of NELS 17*, 483–499. Amherst, MA: GLSA Publications.

Pitteroff, Marcel, Artemis Alexiadou, Jeannique Darby & Silke Fischer. 2017a. On partial control in German. *Journal of Comparative Germanic Linguistics* 20. 139–185. DOI: https://doi.org/10.1007/s10828-017-9088-y

Pitteroff, Marcel, Artemis Alexiadou & Silke Fischer. 2017b. Two mechanisms to derive partial control: Evidence from German. *University of Pennsylvania Working Papers in Linguistics* 23. 201–210.

Pittner, Karin. 1999. *Adverbiale im Deutschen.* Tübingen: Stauffenburg.

Polinsky, Maria. 2011. Raising and control. Ms., Harvard University. Published in 2013 in Marcel den Dikken (ed.), *The Cambridge handbook of generative syntax*, 577–606. Cambridge: Cambridge University Press.

Polinsky, Maria & Eric Potsdam. 2001. Long-distance agreement and topic in Tsez. *Natural Language and Linguistic Theory* 19. 583–646. DOI: https://doi.org/10.1023/A:1010757806504

Preminger, Omer. 2014. *Agreement and its failures*. Cambridge, MA: MIT Press. DOI: https://doi.org/10.7551/mitpress/9780262027403.001.0001

Reinhart, Tanya. 1980. On the position of extraposed clauses. *Linguistic Inquiry* 11. 621–624.

Rizzi, Luigi. 1986. Null objects in Italian and the theory of *pro*. *Linguistic Inquiry* 17. 501–557.

Rosenbaum, Peter. 1967. *The grammar of English predicate complement constructions.* Cambridge, MA: MIT Press.

Ross, John R. 1986. *Infinite syntax!* Norwood, NJ: Ablex Publishing.

Sag, Ivan & Carl Pollard. 1991. An integrated theory of complement control. *Language* 67. 63–118. DOI: https://doi.org/10.2307/415539

Schäfer, Florian. 2008. *The syntax of (anti-)causatives: External arguments in change-of-state contexts.* Amsterdam: Benjamins. DOI: https://doi.org/10.1075/la.126

Schäfer, Florian. 2012. The passive of reflexive verbs and its implications for theories of binding and case. *Journal of Comparative Germanic Linguistics* 15. 213–268. DOI: https://doi.org/10.1007/s10828-013-9052-4

Sheehan, Michelle. 2013. Some implications of a copy theory of labeling. *Syntax* 16. 362–396. DOI: https://doi.org/10.1111/synt.12010

Sheehan, Michelle. 2014. Partial control in Romance languages: The covert comitative analysis. In Karen Lahousse & Stefania Marzo (eds.), *Romance languages and linguistic theory 2012: Selected papers from 'Going Romance' Leuven 2012*, 181–198. Amsterdam: Benjamins.

Sheehan, Michelle. To appear A. Control of inflected infinitives in European Portuguese. In Anabela Gonçalves & Ana Lúcia Santos (eds.), *Complement clauses in Portuguese: Syntax and acquisition.* Amsterdam: Benjamins.

Sheehan, Michelle. To appear B. On the difference between exhaustive and partial control. In Frederica Cognola & Jan Casalicchio (eds.), *Null subjects*. Oxford: Oxford University Press.

Sichel, Ivy. 2010. Towards a typology of control in DP. In Norbert Hornstein & Maria Polinsky (eds.), *Movement theory of control*, 245–266. Amsterdam: Benjamins. DOI: https://doi.org/10.1075/la.154.09sic

Speas, Margaret. 2004. Evidentiality, logophoricity and the syntactic representation of pragmatic features. *Lingua* 114. 255–276. DOI: https://doi.org/10.1016/S0024-3841(03)00030-5

Stiebels, Barbara. 2007. Towards a typology of complement control. In Barbara Stiebels (ed.), *ZAS papers in linguistics 47: Studies in complement control*, 1–59. Berlin: ZAS.

Stiebels, Barbara. 2015. Control. In Tibor Kiss & Artemis Alexiadou (eds.), *Syntax – Theory and analysis: An international handbook (volume 1)*, 412–445. Berlin: Mouton de Gruyter.

Sundaresan, Sandhya. 2012. *Context and (co)reference in the syntax and its interfaces.* Tromsø & Stuttgart: University of Tromsø & University of Stuttgart dissertation.

Thráinsson, Höskuldur. 1979. *On complementation in Icelandic*. Cambridge, MA: Harvard University dissertation.

Truckenbrodt, Hubert. 1995. Extraposition from NP and prosodic structure. In Jill Beckman (ed.), *Proceedings of NELS 25*, 503–517. Amherst, MA: GLSA Publications.

van Urk, Coppe. 2010. On obligatory control: A movement and PRO approach. Ms., Utrecht University.

Vikner, Sten. 1995. *Verb movement and expletive subjects in the Germanic languages.* Oxford: Oxford University Press.

Webelhuth, Gert. 1992. *Principles and parameters of syntactic saturation.* Oxford: Oxford University Press.

Williams, Edwin. 1980. Predication. *Linguistic Inquiry* 11. 203–238.

Wood, Jim. 2012. Against the movement theory of control: Another argument from Icelandic. *Linguistic Inquiry* 43. 322–330. DOI: https://doi.org/10.1162/LING_a_00089

Wood, Jim. 2014. On object extraposition in Icelandic: A reply to Drummond and Hornstein. Ms., Yale University. Published in 2017: Icelandic object extraposition is still a problem for the movement theory of control: A reply to Dummond and Hornstein. *Linguistic Inquiry* 48. 513–527. DOI: https://doi.org/10.1162/ling_a_00252

Wurmbrand, Susi. 2001. *Infinitives: Restructuring and clause structure* Berlin: Mouton de Gruyter.

Wurmbrand, Susi. 2011. On Agree and Merge. Lecture notes, University of Connecticut.

Wurmbrand, Susi. 2013. QR and selection: Covert evidence for phasehood. In Stefan Keine & Shayne Sloggett (eds.), *Proceedings of NELS 42*, 619–632. Amherst, MA: GLSA Publications.

Zeijlstra, Hedde. 2012. There is only one way to Agree. *The Linguistic Review* 29. 491–539. DOI: https://doi.org/10.1515/tlr-2012-0017

Zribi-Hertz, Anne. 1989. Anaphor binding and narrative point of view: English reflexive pronouns in sentence and discourse. *Language* 65. 695–727. DOI: https://doi.org/10.2307/414931

How to cite this article: Fischer, Silke. 2018. Locality, control, and non-adjoined islands. *Glossa: a journal of general linguistics* 3(1): 82.1–40, DOI: https://doi.org/10.5334/gjgl.182

Submitted: 22 June 2016 **Accepted:** 06 April 2018 **Published:** 26 July 2018