

Control does not involve movement – Pretty clear evidence from German¹

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Abstract

German is particularly suitable for testing the movement conjecture of obligatory control relations since it provides pertinent properties that are less accessible in neighboring Germanic languages like English or Dutch. It will be shown that the syntactic properties of obligatory control contexts do not match properties of syntactic movement. Obligatory control applies in contexts which block movement or in which there is no target for movement available. The measures that would be necessary for overcoming these obstacles are bound to overgenerate. The movement conjecture does not solve any analytic problem that could not be solved within the standard theory of control, but it fails in numerous independent empirical areas that the standard theory covers successfully.

1. Introduction

The syntactic nature of the obligatory control relation (OCR) is standardly seen as a relation between a phonetically silent pronominal element in the infinitival clause and an antecedent in the matrix clause that is disambiguated semantically.² An ongoing debate has been initiated by O’Neil (1997) and sedulously continued by Hornstein (1999, 2001), Manzini & Roussou (2000), Hornstein and Polinsky (2010), and Boeckx & Hornstein & Nunes (2010), who prefer analyzing OCR as an instance of A-movement, with more than one argument relation (‘theta role’) assigned to a single movement chain, namely at least the argument relation of the controller and that of the controlee.³

This prerequisite has far-reaching implications, most of which have not been investigated. For instance, movement would become a substitute for argumental reflexives.⁴ Since the aim of this paper is the empirical check of the predictions of the movement conjecture, the theoretical ingredients will not be questioned separately. If the empirical check fails, and it fails indeed, the theory is wrong, and therefore, some theoretical assumptions must be wrong anyway.

¹ I gratefully acknowledge the numerous useful comments from the audience in the discussion period of my guest lecture at the University of Stuttgart on Jan. 13th 2015, not all of which I have been able to personalize.

² The control property (subject vs. object control) is neither lexically specified (i,ii), as emphasized already by Bech (1955; 1983²: 39; 315), nor is control into adverbial clauses restricted to subject control (iii,iv).

i. Erⁱ bat mich/flehte mich an [PROⁱ bleiben zu dürfen] – He asked/besought me [to be allowed to stay]

ii. Er bat michⁱ/flehte mich an [PROⁱ zu bleiben] – He asked/besought me [to stay]

iii. Ein Lichtⁱ genügt (mir), um das Zimmer zu erleuchten – a-single lightⁱ suffices me for PROⁱ to light the room

iv. Ein Licht genügt (ihmⁱ), um sich zurechtzufinden – a-single light suffices himⁱ for to PROⁱ orientate himself

³ “There is no upper bound on the number of θ -roles a chain can have” Hornstein (1999:78). This is unavoidable since control may apply stepwise, as e.g. in: “He^{i+j+k+p} ceasedⁱ to promise^j to try^k to solve^p the enigma of control by movement.”

⁴ Given that a chain may satisfy two independent theta relations, the active variant of the pseudo-passive *He_i is laughed at e_i* would be **He_i laughs at e_i* with the meaning *He^k laughs at himself^k*. Whatever manages case in the passive (viz. case by P^o and by agreement) can manage it in the active. So, *He shaves* would be the rule and *He shaves himself* the exception (triggered by focus, for instance). As a consequence, inherently reflexive verbs are predicted to be inexistent.

Given the sharp differences between the syntactic constraints on movement and those on con-
strual, an unequivocal decision ought to be easy to reach, one might anticipate. This paper
focuses on precisely this issue, namely explicit evidence from German that renders a move-
ment account of OCR highly implausible.

In the following sections several immediately relevant empirical aspects will be discussed and
assessed. First, the control-by-movement idea characterizes control and raising constructions
as instances of the same kind of syntactic derivation. Consequently, passivizing a control verb
should yield a raising construction, which is not the case. Second, obligatory control ought to
be blocked by contexts that are robustly opaque for movement. Third, the controller ought to
be accessible for movement, but there are cases for which it is not. Fourth, the movement ac-
count misses the mark at the syntax-semantics interface. Fifth, German DP-splitting accepts
chains but is excluded from OCRs. Sixth, the movement is motivated by, and depends on,
SVO particulars of English and would not generalize. Some of the evidence from German
replicates evidence from other languages that has already been adduced in the literature.⁵

2. Raising is movement, control is not

It is an essential point of the movement analysis of control that the controller is the head of an
A-movement chain that starts in the base position of the controlled element.

*“OC PRO is the residue of movement and has all the characteristics of NP-trace. The only
real distinction between raising and control structures is that the former involve raising a
D/NP to a non- θ position whereas the latter raises expressions to θ -positions. Both raising
and control chains (generally) terminate in Case positions.”* (Hornstein 1999: 93); see also
Hornstein (2001:58).

In a control construction, the moved phrase is assumed to be associated with at least two theta
roles, namely with the theta role of its base position as well as with the theta-role of its de-
rived position. In a raising construction, the derived position is a position without a theta rela-
tion. For raising verbs such as ‘*seem*’, this is a lexically determined property. For (1b), the
passivized ECM-variant of (1a), the theta relation for the subject is ‘cancelled’ by the passive:

- | | |
|--|---------|
| (1) a. He _i expected [he _i to win the prize] | control |
| b. He _i was expected [he _i to win the prize] | raising |

As Landau (2004: 318f.) has already objected – unsatisfactorily replied by Boeckx & Horn-
stein (2004) – the movement account wrongly predicts that passivizing a subject control verb
turns the control construction into a raising construction, which of course is not the case. This
is true only of passivized ECM-verbs, as in (1b), derived from (2a), but it is clearly not true for
control verbs that unlike ‘*expect*’ do not have an ECM-variant as an alternative; see Van
Gelderen (2004) on ‘*regret*’.

- | |
|--|
| (2) a. We expected [him to win the prize] |
| b. *We regretted [(<i>*ourselves</i> / <i>*him</i>) to have won the prize] |
| c. *He _i was regretted [e _i to have won the prize] |

⁵ Substantive counterevidence has been put forth by Culicover & Jackendoff (2001), Landau (2004, 2007),
Bobaljik & Landau (2009), Ndayiragije (2012), Wood (2012), and others.

The evidence from German is particularly unequivocal in this respect. First, in German, sentential ECM-infinitivals do not distract since they do not exist (3a). The counterparts of (2a) are ungrammatical in German. Second, control verbs may be passivized freely (3d):

- (3) a. *Wir erwarteten [*ihn* sich dort niederzulassen]
 we expected [him REFLEXIVE there to-settle] (n.b. *sich*_{Ref.} niederlassen = settle)
 b. Wirⁱ haben nicht erwartet/versucht [*e*ⁱ uns dort niederzulassen]
 we have not expected/tried [ourselves there to-settle]
 c. *Wir_i wurden nicht erwartet/versucht [*e*_i uns dort niederzulassen]
 d. Es wurde nicht erwartet/versucht [PRO^{arb} sich dort niederzulassen]
 it was not expected/tried [oneself there to-settle]

If in (3b), the controlling matrix subject were the head of a movement chain, the same would have to be true of (3c), which is the counterpart construction of English (2c). Passive is available for these verbs, as (3d) shows.

That the prediction ‘passivized control yields raising’ is not fulfilled should not come as a surprise. After all, the required movement would be a case of long distance A-movement that has to skip the CP-region of the complement clause (4):

- (4) * He_i was regretted [_{CP} [_C [_{TP} e_i to win the prize]

If the movement out of the embedded CP passes through spec-C, the chain becomes an A'-chain and cannot target an A-position any longer. If, on the other hand, the moved item skips the CP region, the chain is ill-formed since it violates locality requirements and the edge condition. So, the only alternative is that control constructions do not involve full CP complements. But in this case, a control construction would become a free variant of an ECM-construction. In fact, many control verbs allow an ECM-construction as alternative (5a,b), but clearly not all (5c,d).

- (5) a. Norbert expects/likes/wants [to achieve this]
 b. Norbert expects/likes/wants [us to achieve this]
 c. Norbert deserves/forgets/tries [to achieve this]
 d. Norbert deserves/forgets/tries [(**us*) to achieve this]

German provides the clear case. It does not allow ECM-constructions (6d) of the kind illustrated by (5b) and passivizing a control verb does not convert it into a raising verb. Nevertheless it shows the same kind of obligatory control relation as English (6b).

- (6) a. Er hofft, dass er/man eine Lösung finden werde
 b. Erⁱ hofft, PROⁱ/**arb* eine Lösung zu finden
 c. Er_i hofft, [[PRO^{i/arb} eine Lösung zu finden]_j; sei e_j noch möglich]
 d. *Er hofft [mich eine Lösung zu finden]

The finite version (6a) shows that ‚hoffen‘ (hope) is pragmatically compatible with a coreferent or a non-coreferent complement subject. (6b) however is compatible only with the coreferent construal, that is, the controlled interpretation. This restriction is the restriction known as the ‘obligatory control’ relation.

The domain of obligatory control is restricted to local environments, as (6c) illustrates. In (6c), the infinitival clause is not a complement of the matrix verb. Its complement is the embedded finite clause, which contains a topicalized infinitival clause. Here, a controlled as well as an uncontrolled interpretation is admissible.⁶

In sum, the movement analysis crashes. It either wrongly predicts that control involves a type of A-movement that freely crosses CP-boundaries or incorrectly predicts that all control verbs are ECM-verbs. In the former case, apart from the theoretical inconsistencies of A-movements skipping the CP-region, German (and in fact English, too) would be predicted to be a language with long-distance scrambling, which is not true. In the latter case, there should not occur verbs such as ‘believe’ in English, which do not admit control (7a), but select only an ECM-construction (7b), and there should not exist control verbs that do not admit an ECM-construction (7c).

- (7) a. *He_i believes [~~he~~_i to have solved the problem]
 b. Heⁱ believes [himselfⁱ to have solved the problem]
 c. *He regrets [himselfⁱ to have not solved the problem adequately]

In sum, the attempt of subsuming raising and control under the same derivational scenario creates more problems than it is able to solve. The standard analysis satisfactorily captures the differences between raising and control constructions and should not be sacrificed for trading in an analysis that patently is empirically inferior and inadequate.

3. Controlee in a movement-opaque context

The movement conjecture entails that the controlee in an OC context cannot be in a domain that is opaque for movement. Back in the eighties, more than a decade of research on constraints on movement has produced a clear result, filed under the heading *Conditions on Extraction Domains*. Although these results from the G&B period are not covered by the Minimalist Program, they stand. One result concerns movement out of non-argument clauses. They are opaque for movement. This is true for adverbial clauses as well as clauses that are non-argumental because they are predicated over an argument. The third type of opaque construction to be discussed in this section is Ross’ ‘complex-NP-constraint’ context.

In German, there are obligatorily controlled adverbial infinitival clauses. Two prepositions are able to embed an infinitival clause (8a) as alternative to a finite clause (8b,c), namely *ohne* (without) and *anstatt* (instead). The PPs headed by these prepositions are adverbial phrases and the clauses are opaque for any movement, as expected. Nevertheless, an infinitival clause inside these PPs is a domain of obligatory control.

- (8) a. Sie gingen vorbei ohne/anstatt [etwas zu bemerken]
 they passed by without/instead-of [something to note]

⁶ A similar situation is characteristic for adverbial infinitivals, as exemplified by i. and ii.

- i. Sieⁱ ist zu klug, um PRO^{arb} erwarten zu können, dass sieⁱ das glaubt würde
 she is too clever to expect that she this believe would
 ii. Sieⁱ ist zu klug, um PROⁱ zu erwarten, dass wir das glauben würden
 she is too clever to expect that we this believe would

- b. Sieⁱ gingen vorbei ohne/anstatt [dass sieⁱ etwas bemerkten]
they passed by without/instead-of [that they anything noted]
- c. Sieⁱ gingen vorbei ohne/anstatt [dass man etwas bemerkte]
they passed by without/instead-of [that one_{Arb} anything noted]

The infinitival clause in (8a) can only receive a control construal. It means ‘they passed by without/instead-of noticing anything’ (cf. 8b), and crucially and in analogy to (8c), it cannot mean ‘they passed by without/instead-of *anyone* noticing anything’ (cf. 8c). In other words, control is obligatory.

It is easy to demonstrate that these adverbial PPs (8a, 9a) are strict islands. Neither topicalization (9b) nor question movement (9c) is able to move an item out of these domains.

- (9) a. Sie gingen vorbei [ohne [diesen Mann zu bemerken]]
they passed-by [without this man to notice]
- b. *Diesen Mann_i gingen sie vorbei [ohne/anstatt [e_i zu bemerken]]
this man passed they by without/instead-of to notice
- c. *Welchen Mann_i gingen sie vorbei [ohne/anstatt [e_i zu bemerken]]?
which man passed they by without/instead-of to notice

English does not provide counterparts of these constructions with an embedded infinitival clause, except for ‘*in order to*’ adverbial clauses. These are islands for movement, too, and cases of obligatory control as well. It is unclear why Hornstein (1999, 2001) remains completely silent on this frequent construction although purpose clauses are addressed in section 8.3 of the monograph.

The technical solution, viz. ‘sideward movement’ for adverbial gerunds, is praised as follows (Hornstein 1999:90): “*This is the desired result, for it deduces, correctly, that OC PROs inside adjuncts are necessarily controlled by subjects*”. This may be true for *without*-gerunds, but it is not true in general, as the following *um+zu*⁷ (for-to) construction exemplifies.⁸ Hornstein’s (2001:47) attempt to circumvent the islandhood of adjuncts by ‘sideward movement’ (Nunes 2007), which is “*not to a c-commanding position*”, would not cover (9a) or (10a). The chain between the subject position of the infinitival clause and the object position of the matrix verb is ill-formed because it would have to skip the Spc-C position of ‘*um*’ or the PP. The German data are unequivocal counterevidence. Movement is unable to cross the boundary of an adjunct clause (10c), or a PP-adjunct boundary (8), but obligatory control holds.

- (10) a. Sie^j haben jemandenⁱ ausgeschickt [um PROⁱ Getränke zu besorgen für sie^j]
they have somebody sent-out [for beverages to get for them]
- b. Sie^j haben michⁱ weggeschickt [um PRO^j sich^j inzwischen beraten zu können]
they have me sent-away [for with-each-other in-the-meantime confer to be-able]
- c. *Welche Getränke_i haben sie jemanden ausgeschickt [um e_i zu besorgen für sie^j]?
which beverages have they somebody sent-out [for to get for them]

⁷ ‘*Um*’ (for) is a complementizer for an adverbial clause. Unlike the prepositions *ohne* (without) and *anstatt* (instead), it cannot combine with a finite clause. See Greisinger (2013) for the diachronic development of ‘*um*’ from a preposition to a complementizer. The Dutch counterpart ‘*om*’ has developed even further and may be used as general infinitival complementizer.

⁸ Bech (1955; 1983:315-17) lists numerous examples with subject and object control, respectively.

Another domain of opacity for movement is a clause that is linked to on a pronominal correlate. In German there are minimal pair contexts for checking this source of opacity, as illustrated in (11). A clause may be the argument of a verb (11a) or it may be predicated over a pronominal argument (11b), viz. the pronominal ‘es’ (it), which is the argument. If there is a pronominal argument, the clause that relates to this argument must be in the extraposed position (11c). (11b) is the extraposed variant of (11a). Extraction is blocked if ,es‘ occurs (11d).

- (11) a. Sie könnte [das sofort zu überprüfen] verabsäumt haben
 she could [this instantly to check] neglected have
 b. Sie könnte (esⁱ) verabsäumt haben [das sofort zu überprüfen]ⁱ
 she could it neglected have [this instantly to check]
 c. Sie könnte (*esⁱ) [das sofort zu überprüfen]ⁱ verabsäumt haben
 d. Was_j könnte sie (*esⁱ) verabsäumt haben [e_i sofort zu überprüfen]ⁱ
 what could she (it) neglected have instantly to check

The following examples (12a,b) demonstrate once more that a clause that depends on the pronominal argument ‘es’ is opaque for movement. Nevertheless its subject is obligatorily controlled by a controller in the matrix clause, and there is no difference with respect to control between the variant with and without an ‘es’ (it) correlate. A constructional alternative to embedded infinitival object clauses (12a) is the clause union construction (s. Haider 2010, ch.7, optional verb clustering). In this construction (12c), the object of the embedded verb may surface as the nominative subject of the matrix verb when it is passivized. The presence of ‘es’ would block this option. Example (12c) is meant for those who follow Wurmbrand’s (2001) analysis, which employs A-movement for the accusative-to-nominative switch in (12c). ‘Es’ blocks A-movement, if there is any and it blocks A’-movement, but it does not block OCR.

- (12) a. dass sie (es) verabsäumt hat, [den Brief_{Acc} abzuschicken]
 that she (it) neglected has [the letter to mail]
 b. Welchen_i/den Brief_i hat sie (*es) verabsäumt [rechtzeitig e_i abzuschicken]
 which/the letter has she (it) neglected in-time to-post
 c. Abzuschicken verabsäumt wurde (*es) der Brief_{Nom}
 to-mail neglected was (it) the letter

If the embedded clause represents a prepositional object as in (13), the pronominal argument takes the form of ‘da’, pre-cliticized to the preposition, as in ‘davon’ (of it; lit. it-of) in the following example. The embedded clause that depends on the cliticized pronominal is as opaque as in the case of ‘es’ above.

- (13) a. Man hat ihn [(davon) [das Land zu verlassen]] abgehalten⁹
 on has him [it-from the country to leave prevented]
 b. Das Land_i hat man ihn [(*davon) [e_i zu verlassen]] abgehalten
 the country has one him [(it-from) to leave] prevented

⁹ This clause and its variants with extraction may sound somewhat clumsy to an informant because of their complexity, which can be easily reduced by extraposing the infinitival clause:

i. Man hat ihn davon abgehalten, das Land zu verlassen
 ii. Man hat ihn abgehalten davon, das Land zu verlassen

- c. Welches Land_i hat man ihn [_i(*davon) e_i zu verlassen] denn abgehalten?
 which country has one him [(it-from) to leave] prevented

The standard analysis of control in terms of an obligatorily dependent PRO is not affected by these alternations in the argument status of the clause. A movement analysis of control would have to make the following grand prediction. Obligatory control applies only in the absence of the correlate. In clauses that depend on a pronominal correlate control would be predicted to be non-obligatory since these clauses are opaque for movement, just like other kinds of movement are correctly predicted to fail. The prediction is evident and it is false.

The third context is illustrated in (14). The infinitival clause is a complement of a definite DP and is controlled by a phrase in the matrix clause. There is no shortage of these constructions, as the lengthy list of excerpts in Bech (1955; 1983² ch. 22) proves.

- (14) a. Er hat keinemⁱ [die Bitte [PROⁱ aus der Nähe zuschauen zu dürfen]] gewährt
 he has nobody [the plea [from the vicinity to watch to-be-allowed]] granted
 b. Erⁱ hatte [die Güte [PROⁱ sich von mir befragen zu lassen]]
 he had the kindness [himself by me interview to let]
 c. *Von wo_j hat er keinemⁱ [die Bitte [PROⁱ e_j zuschauen zu dürfen]] gewährt
 from where has he nobody Y(the plea [to watch to be allowed [granted

There is no doubt that these contexts are intransparent for movement, and there is no doubt that these contexts are transparent for obligatory control. This is an embarrassment for the movement conjecture of control. The standard model of control accounts for these cases.

4. *Obligatory control without a unique controller*

It is a property of a semantically appropriate class of German verbs like those in (15b) that an obligatorily controlled infinitival subject of the complement may receive an interpretation that is provided by the set union of separately introduced discourse participants ('split antecedents'). This is completely parallel to pronominal coreference for a pronominal subject in a finite clausal complement (15a) with 'split' corefents. If the null subject of an infinitival clause is a pronominal, split control is expected; if it is the foot of a movement chain, it is underivable.

It is evident and this is acknowledged by Hornstein (1999:73) that control-by-movement is incompatible with 'split' control. There is no way for a movement analysis of control to capture this fact. Nevertheless there are clear cases of obligatory control and they parallel the antecedent relations of personal pronouns:

- (15) a. Erⁱ wird mit ihr^j {ausmachen/festlegen/verabreden/vereinbaren/...} dass sie^{i&j} einander nicht verklagen
 he shall with her {arrange, stipulate, prearrange, agree/...} that they will not sue each other
 b. Erⁱ wird mit ihr^j {ausmachen/festlegen/verabreden/vereinbaren/...} PRO^{i&j} einander nicht zu verklagen
 he shall with her {arrange, stipulate, prearrange, agree/...} not to sue each other
 c. Ichⁱ möchte dir^j vorschlagen, [PRO^{i&j} mich/dich/uns/*sich rechtzeitig zu erkundigen]
 I want (to) you_{Dat} propose [my-/yourself/our/*themselves timely to inquire]

Control construal in terms of the union set of the referents of syntactically distributed antecedents is an ultimately damaging situation for the movement conjecture of OCR but it is expected and typical for pronominal construal. If the null subject in (15b) is a null pronominal, the interpretation is completely parallel to the finite complement (15a), with an overt pronominal subject. Moreover, there are verbs such as ‘*vorschlagen*’ (propose) in (15c) or ‘*anbieten*’ (offer) that are compatible with alternative control relations, viz. subject control, object control, and split control, but control is obligatory, as shown by the unacceptability of the third person reflexive as a consequence of the generic interpretation.

In a movement account, the controlee in (15c) would have to be a quasi-coordinated constituent, namely [*ich dir*] (I you) from which each of the two pronouns get excorporated subsequently and merged at different argument positions. Of course, there is no derivational mechanism that could guarantee a well-formed derivation without massive collateral damage by overgenerating.¹⁰

The parallel between the pattern of pronominal interpretation and control holds also for split control in combination with a quantifier.¹¹ The interpretation of the plural pronominal in (16a) and the null subject in (16b,c) consists of a set of ordered pairs <x,she> and <she,x>, respectively, with x as the variable bound by the quantifier.

- (16) a. Jederⁱ hat ihr^j vorgeschlagen, [dass sie^{i&j} das Paper zusammen ausarbeiten]
 everyone has her suggested [that they the paper jointly elaborate]
 b. Jederⁱ hat ihr^j vorgeschlagen, [PRO^{i&j} das Paper zusammen auszuarbeiten]
 everyone has her suggested [the paper jointly to elaborate]
 c. Sie^j hat jedemⁱ vorgeschlagen, [PRO^{j&i} das Paper zusammen auszuarbeiten]
 she has everyone suggested [the paper jointly to elaborate]

Another piece of counter-evidence comes from NP-internal controllers. Possessive pronouns of phrases may function as controllers, and they may be part of a split-control ensemble (17b). It is evident, that the NP internal possessive (17a), with or without a controlling partner (17b) cannot be targets of movement that starts in the complement clause. Movement cannot target positions within NPs that are constituents of the matrix clause.

- (17) a. [Seineⁱ Aufgabe] bestand darin [PROⁱ die Maschinen zu betanken]
 his task consisted it-of [the engines to fuel]
 b. [Seinⁱ Übereinkommen mit ihr^j] lautete [PRO^{i&j} einander^{i&j} Vorteile zu verschaffen]
 his agreement with her stated [(for) each-other benefits to procure]

The interpretation devices needed for (15), (16), and (17) are not specific for control. They are needed independently for overt pronouns with multiple antecedents. The standard theory of control captures these facts immediately and in fact predicts them. The movement conjecture of control wrongly predicts that these contexts could not be contexts of obligatory control. It has no way of accounting for them.

¹⁰ Here is a simple example: Clauses like ‘*I admire her*’ are predicted to be systematically ambiguous, with the additional meaning ‘*I admire myself and her*’.

¹¹ Thanks to Daniel Hole (p.c.) for drawing my attention to the interaction of variable binding and split control.

5. Counterevidence for *equi*-NP deletion revived within the M.P.

The argumentation remembered from the debate around Rosenbaum's (1970) *Equi-NP-Deletion* proposal as a derivational account has an analogous grasp on a movement account of control within the MP framework because of the copy & re-merger layout. Rosenbaum invoked an *Identity Erasure Transformation*. The MP calls upon a PF feature deletion device for making the copy hide in the base position after movement. In each case, the subject position of the infinitival clause is not empty. In Rosenbaum's account the second occurrence of 'who' in (18) would be deleted. In Hornsteins's account, the controlee is a hiding copy whose PF features got deleted. In the standard account (18b), the infinitival subject is a pronominal null subject and gets bound by the question operator 'who' in the course of control.

- (18) a. Who_i hopes [~~wh~~_θ_i to win] copy
 b. Whoⁱ hopes [PROⁱ to win] empty pronoun

The movement account of control makes a stunning prediction for German. In order to see this, let us compare the sentences in (18) with their finite counterparts in (19a,b) and the German versions in (19c,d)

- (19) a. *Who hopes that who shall win?
 b. Who hopes that he shall win?
 c. Wer glaubt, dass wer gewinnen wird?
 who thinks that who win shall
 d. Wer glaubt dass er gewinnen wird?
 who thinks that he win shall
 e. Es ist möglich, dass *wer* gewonnen hat
 it is possible that *who* won has (,that *someone* has won')

In German, a clause like (19c) is ambiguous. The lower 'wer' can be interpreted either as interrogative or as indefinite with the meaning 'someone'. The interrogative interpretation is available since in German, unlike English (see Haider 2010: 105), a wh-subject in situ is acceptable. The indefinite pronoun interpretation is available for the in-situ wh-item in (19c) since German, unlike English, is a language with wh-indefinites (19e). Given this state of affairs, the prediction within the movement theory of control is this. (20a) will receive the interpretation 'Who thinks that *someone* has won'. Here is the reason why.

- (20) a. Wer glaubt gewonnen zu haben?
 who thinks won to have
 b. Wer glaubt [~~wer~~ gewonnen zu haben]?

In (20b), there are two copies of ,*wer*' (who). Each copy has its own theta role, but there is only a single wh-feature. This feature is checked by the higher copy in the appropriate spec position. So, the lower copy is a 'wer' without a wh-feature. This is exactly the kind of element that is interpreted as an indefinite pronoun at LF (cf. one of the readings of 19c).

An analogous problem arises for free relative clauses (21b), which are introduced by a wh-pronoun in German. Relative clauses with a noun as antecedent are introduced either with a d-pronoun (demonstrative pronoun) or a wh-pronoun (21a).

- (21) a. alle [die/welcheⁱ [e_i hoffen [~~die/welche~~/PROⁱ gewonnen zu haben]]]Relative Clause
 all [who/which hope [won to have]]
 b. [Werⁱ versucht [~~wer~~/PROⁱ zu schwindeln]]free relative clause wird disqualifiziert
 [who(ever) tries [to cheat]] is disqualified

In the derivational scenario of control, (21b) contains a *wh*-element in situ. This *wh*-item does neither have a *wh*- nor a relative-pronoun feature since this feature is available only once and is awaiting the re-merged copy in the matrix position. So, the subject of the infinitival clause (21b) is predicted to receive an interpretation as indefinite, like in (20b). This prediction is wrong, of course. The problems with operator-like pronouns as controllers culminate in the comparative constructions. Here, the controller may be an empty operator.

- (22) Mehr Kandidatenⁱ haben behauptet, [~~mehr Kandidaten~~/PROⁱ die Prüfung bestanden zu haben], [als O_i [e_i versucht haben, [e_i/PROⁱ die Prüfung abzulegen]
 more candidates have claimed [the exam passed to have] [than [tried have [the exam to take]]]

In (22), ‘*mehr Kandidaten*’ (more candidates) is on the one hand the antecedent of the controlled infinitival subject of the infinitival complement clause of ‘*behaupten*’ (claim). On the other hand, it is the antecedent of the comparative operator in the comparative clause which is the controller of the controlled subject of the infinitival complement of ‘*versuchen*’ (try). What is this subject under the movement scenario? In the standard analysis it is an empty pronominal subject and it gets bound by the quantifier. In the movement scenario it is a copy, but of what? The comparison is one between the number of candidates that *claim* something, and the number of candidates that *try* something, but not with the number of candidates that take the exam.

The variable bound by the comparative operator is not contained by the controlled clause; it is an element of the higher clause. The movement approach, however, makes an obligatorily controlled subject an indistinguishable copy of its controller.¹² The controller is a variable bound by the comparative operator. So, the controlled subject ends up as a bound variable, too. However, this is illicit, as the example of finite comparative clause shows (23c). The operator may bind a variable in the subject position of an embedded clause (23a) or in the comparative matrix clause (23b), but it cannot bind two variables simultaneously (23c).

- (23) a. Mehr Zuhörer haben geschlafen, als [O_i [sie behauptet, dass e_i zugehört haben]]
 more auditors have slept than [she claims that listened have]
 b. Mehr Zuhörer haben geschlafen, als [O_i [e_i behauptet haben, dass *sie*ⁱ zugehört haben]]
 more auditors have slept than [claimed that *they* listened have]
 c.*Mehr Zuhörer haben geschlafen, als [O_i [e_i behauptet haben, [dass e_i zugehört haben]]

The standard theory correctly handles these contexts, in full parallel to finite clauses; the movement conjecture is at a loss. It is not clear whether these problems can be handled at all, but surprisingly, proponents have not bothered dealing with them. All contexts in which the controller is an operator-like element create non-trivial and hitherto ignored problems for the

¹² “[...] grammar does not (and should not) distinguish copies from originals in any relevant sense.” Hornstein (1999:86).

movement conjecture, but not for the standard account.

6. Split DPs can be distributed along chains but not by control

If obligatory control constructions relate the controller and the controlee as members of a chain, then split DPs cannot be excluded from ‘control chains’. The standard theory, on the other hand, clearly rules out that a part of the controller NP of the matrix clause appears at the subject position of the embedded infinitival clause. (24a) exemplifies DP-split on an A'-chain. (24b) is the DP-split as a consequence of scrambling, which involves an A-chain. (24c) illustrates the construction to be tested. The empirical facts are clearly in favor of the standard theory.

- (24) a. *Infizierte Touristen* wurden bis jetzt nur *zwei männliche* behandelt
infected tourists were until now only *two male* (ones) treated
 ‘Only *two infected male tourists* were treated until now’
- b. dass *infizierte Touristen* bis jetzt nur *zwei männliche* behandelt wurden
 that *infected tourists* until now only *two male* (ones) treated were
- c. *Infizierte Touristen* haben erwartet (**zwei männliche*) sofort behandelt zu werden
infected tourists have expected (only *two male*) immediately treated to be
 ‘only *two male infected tourists* have expected to be treated immediately’
- d. Man hat sie gebeten [einer nach dem anderen]_{Nom} /[als letzte_{Nom}] hinauszugehen
 one has asked them [one after the other] / [as the-last-ones] to-leave

There can be no doubt that the split in (24c) is deviant. The split parts cannot be part of the matrix clause and the infinitival clause, respectively. They could, if there was a chain relating them. Case would not be a limiting factor since German clearly shows that nominative is available even within an infinitival clause (24d). Distributive predicates such as ‘one after the other’ or the complement of the case-transparent preposition ‘*als*’ (as) are marked nominative if they relate to the subject of the infinitival clause (see Haider 2010: 293ff.).

7. English invites misjudgments

From the perspective of English, OC relations appear to be more restricted than they are in a cross-linguistic perspective. The modelling of obligatory control on the basis of such a mainly monolingual database is prone to miss the target and to wrongly elevate findings to the level of universally valid claims.

Restrictions claimed to apply to obligatory control such as Rosenbaums’s Minimal Distance Principle, Visser’s Generalization, and Bach’s Generalization do not generalize to other languages. Hornstein (1999:73) highlights these allegedly universal properties of obligatory control in English as arguments for the movement nature of control. By the same token, however, the absence of these properties in obligatory control constructions in other languages amounts to immediate counterevidence for the movement conjecture.

Bach’s and Visser’s generalization (Bresnan 1982; Haider 2010:295) concern overt versus implicit controllers. Bach’s (1979) generalization (BG) captures the fact that in English, control by a direct object as in (25a), contrary to PP objects (25b), apparently requires an overt rather than an implicit controller. Visser’s (1973) generalization (VG) states an analogous requirement for the passive of a subject control verb. Control by the (implicit) subject is

blocked (25c). The derived passive subject becomes the controller (Jenkins 1972). In German, such restrictions do not apply (25d,e). The controlling object argument may be implicit (25d), and the implicit subject argument of a passivized subject control verb is a possible controller (25e).

- (25) a. This leads *(peopleⁱ) [PROⁱ to accept the conclusion]
 b. They said/shouted (to the studentsⁱ) [PROⁱ to return later]
 c. They^j were promised (by himⁱ) [PRO^j to be interviewed]/*[PROⁱ to interview them^j]
 d. Ich ersuchte/bat (jemandenⁱ) [PROⁱ das Fenster zu schließen]
 I beseeched/asked (someoneⁱ) [PROⁱ the window to close]
 e. Es wurde mir (von ihrⁱ) versprochen [PROⁱ mich zu briefen]
 it was me_{Dat} (by her) promised [me to brief]

Hornstein (1999:73) overinterprets data from English in favor of the movement scenario: “*OC PRO must have an antecedent. [...] this antecedent must be local, and [...] must c-command the PRO.*” Indeed, this is what is predicted if control is an instance of a movement relation. But the predictions are not fulfilled, neither by German nor by English.

(26) lists examples from two representative corpora, viz. from the BNC¹³ (26a,b) and from the COCA (26c-e). In each case, the controller is implicit. Note that (26e) is the immediate counterpart of (25a), that is, the controller is the implicit direct object of the control verb.

- (26) a. And it's also not recommended to run in highly polluted areas
 b. It's not recommended to place the material directly on top of insulation
 c. The board has recommended not to screen newborns for galactosemia
 d. Each of the 11 states recommended not to change the constitution
 e. Karen, a life coach who asked not to use her real name in this article¹⁴

German (27) fully confirms this picture. The controlling object may be an implicit argument in various object relations. It may be the implicit accusative (27a), dative (27b), or prepositional object (27c), and it may be the implicit subject argument (27d,e).

- (27) a. Sie ersuchte/bat (jemandenⁱ) [PROⁱ das Fenster zu schließen]
 she requested/asked (someone) the window to close
 b. Sie erlaubte/untersagte (jemandemⁱ) [PROⁱ das Fenster zu schließen]
 she permitted/denied (someone) the window to close
 c. Sie appellierte/verlangte (an/von jemandenⁱ) [PROⁱ die Gefangenen frei zu lassen]
 she appealed/requested (to/from someone) the prisoners free to let
 d. Es wurde mir (von ihrⁱ) versprochen [PROⁱ mich zu briefen]
 it was promised me (by her) me to brief
 e. Es wurde (von ihrⁱ) versäumt [PROⁱ mir den Termin mitzuteilen]
 it was (by her) neglected me_{Dat} the target-date to-disclose

This contrasts with accusative object control verbs (28). Most verbs in this class do not allow omitting the direct object. It is this property that makes the situation of English misleading in a crucial respect.

¹³ BNC = British National Corpus; COCA = Corpus of Contemporary American English;

¹⁴ Another specimen allocated in COCA is: *If it was requested to review a file, that's what we would do.*

- (28) dass man *(ihn) anleitete/bewegte/hinderte/überredete/zwang/... zu gehen
that one (him) guided/moved/impeded/persuaded/forced/ ... to leave

English, due to its lack of case morphology, does not distinguish direct and indirect objects. In German, indirect objects are marked by dative while direct objects are marked by accusative. German shows that the percentage of verbs that, independently of control, allow leaving their object implicit is very low if the object is accusative and very high if the object is dative.¹⁵ For English this implies that there are hardly any control verbs with an optional object. BG is a misinterpretation of this constellation. The relevant property is not one of control but one of subcategorization of the control verb itself. For verbs that tolerate an implicit argument, control accepts the implicit argument as controlling (26). In German, the number of verbs of this kind is slightly greater because gerunds or ECM-infinitivals are absent in German and therefore proportionally more verbs are pooled for sentential infinitival complementation.

Second, German shows that no control verb with an accusative object is an exclusively subject controlling verb. Verbs with the latter property are all dative verbs. Since English has no dative arguments, English control verbs with a nominal object all belong to the class of verbs with a direct object. Only because of this coincidence could Rosenbaum (1970) feel entitled to postulate his MLP. Languages like German clearly show that MLP is not a valid principle of obligatory control constructions. First, there are numerous subject control verbs like (29a) with a nominal object. Second, even object control verbs with an accusative object switch to subject control when the semantics of the complement would be incompatible with subject control, as (29b) and (29c) illustrate.¹⁶

- (29) a. Erⁱ hat ihr^j *gedroht/gelobt/versichert* PROⁱ bei ihr^j zu bleiben
he has her threatened/pledged/assured with her to stay
b. Erⁱ hat sie^j *angefleht/ersucht/gebeten*, PROⁱ bei ihr^j bleiben zu dürfen
he has her entreated/pledged/assured with her to-stay be-allowed-to
c. Erⁱ hat sie^j *angefleht/ersucht/gebeten*, PRO^j bei ihmⁱ bleiben zu wollen
he has her entreated /pledged/assured with him to-stay to-want

English (30) matches these patterns.

- (30) a. Heⁱ asked her^j PRO^j to stay with himⁱ
b. Heⁱ asked her^j PROⁱ to be allowed to stay with her^j
c. Heⁱ petitioned them^j PRO^j to grant him this privilege
d. Heⁱ petitioned them^j PROⁱ to (be allowed to) write a reply to their^j editorial

If the MLP were really reducible to the MLC (minimal link condition), as Hornstein 2001:44f.) suggests, (30b,d) would have to be as unacceptable as for instance superiority violations in English. This prediction is clearly wrong and this kind of data is well-known for quite some time.

¹⁵ The percentage, based on counts of the verbs lists in Bech (1955) is this: For 91% of the verbs with a controlling Acc, the Acc object is obligatory. For the verbs with a Dat controller, the Dat is obligatory only for 9%.

¹⁶ This has been observed already by Bech in 1955 (2nd edition 1983:39).

Another piece in the control puzzle struck Van Urk (2013:168), who notes a negative correlation between implicit control by the implicit argument in passive and the presence of a derived syntactic subject: “*Obligatory control by the thematic subject of a passive is sensitive to a purely syntactic restriction: it is only possible if T does not agree with an overt DP*”. A more accurate characterization seems to be this: Control by an implicit subject argument is only possible if there is no derived thematic subject. Van Urk’s formulation would exclude (31a,b) since T agrees with ‘it’. In (31c,d), the semantically void ‘it’ provides the number features.¹⁷

- (31) a. It was intended to protect suspects (BNC)
 b. It was intended to attract the more discerning buyer (COCA)
 c. It *is* two men (BNC) vs. There *are* two men
 d. It *is* two separate individuals (COCA) vs. There *are* two separate individuals

The correctly excluded control relation is illustrated in (32a). German is particularly interesting because of the contrast between (32c) and (d). Passive does not affect the case of a dative object (32c). In the German counterpart of the ‘*get*-passive’ (32d), however, the dative argument of the participle surfaces as a nominative argument. As in English, the presence of the nominative argument interacts with control. Control by the implicit argument is strongly downgraded in this case.

- (32) a. He was the man^j sheⁱ was promised PRO^{i/*j} to marry (COCA)
 b. He was the man who^j promised herⁱ PRO^j to marry her
 c. Dem Mann^j *wurde* angeboten/zugesagt, PRO^{i/j} seinen Anwalt zu verständigen
 the man_{Dat} was offered/assured his attorney to notify
 d. Der Mann^j *kriegte* angeboten/zugesagt PRO^{i/?i} seinen Anwalt zu verständigen
 the man_{Nom} got offered/assured his attorney to notify

Whatever grammatical factor is behind the contrast, it is not an effect of a movement process. Taken together, the grammatical conditions that govern the apparent requirement of overt controllers in English are not adequately captured by re-analyzing obligatory control in terms of a movement relation.

8. A contradiction within the MP framework

The gist of Hornstein’s (1999:93) proposal is this: “*PRO [...] has all the characteristics of NP-trace.*” If this were so,¹⁸ this would lead to a contradiction in the handling of raising versus control in the MP, given that the constraint responsible for the correct choice between internal or external merger, viz. the MoM condition (‘*merge over move*’) of Chomsky (1998:138) is maintained. In the study of raising constructions it turned out that *merge* must be given precedence over *move* in order to sort out (32a) as the correct derivation in compari-

¹⁷ In German, the number features come from the more marked item, and this may be the predicate:

i. dass *es* zwei Männer sind_{pl}/*ist ii. dass *ihr* zwei Halunken seid/*sind
 that *it* two men are/is that *you*_{pl} two rascals are_{2ndP}/are_{3rdP}.

¹⁸ Shared characteristics have been emphasized in G&B, too: “*While PRO and trace differ in important respects, they are alike in others. For example, PRO and NP-trace behave as anaphors with respect to the binding theory*” (Chomsky 1981:64). The essential point, however, is not the nature of the empty category itself but the nature of the relation between the *antecedent* and the empty category. It is this relation that makes the difference.

son with (33b). External merge of ‘*there*’ has priority over internal merge by movement of the copy of ‘*a conflict*’.

- (33) a. There seems [~~there~~ to arise *a conflict* with the derivation of this clause]
 b. *There seems [*a conflict* to arise ~~a conflict~~ with the derivation of this clause]

An analogous conflict for the movement approach can be located in the following pair.¹⁹

- (34) a. Heⁱ expects/hopes/*believes [PROⁱ to have won]
 b. Heⁱ expects/*hopes/believes [himselfⁱ to have won]

External merger of ‘*himself*’ would receive priority over copying & moving. MoM would choose (34b) and rule out (34a). But even if we followed Hornstein (2009:50), when he downplays the importance of MoM – “*the empirical evidence that MOM is a principle of grammar is not overwhelming*” – the following problem remains. If a reflexive is an alternative to movement for ‘*expect*’, why is this not a general alternative for any control verb whose complement clause is its direct object? The standard account has a clear answer; the movement account is at a loss. In the standard account of infinitival complementation ‘*expect*’ alternatively selects an infinitival ECM- or a control complement, that is, a TP or a CP, while ‘*hope*’ only selects a CP and ‘*believe*’ only selects a TP. TPs are transparent for case assignment and A-movement but CPs are not.

9. On methodology

Let me add an afterthought on methodology. In science, if one wishes to replace an established analysis by a new one, one first of all has to show that there are *empirical* facts that the old analysis cannot handle and second that they are handled straightforwardly by the new account, together with the facts covered by the old one. As far as I can see, the movement conjecture is not able to outmatch the standard account. A vital part of the exercise would be systematic modus tollens²⁰ checks of the old and the novel account and a clear balance in favor of the novel analysis. These checks have been carried out (here and elsewhere) and they turn out negative for the new proposal. Meta-theoretical considerations – the MP-internal difficulties with accommodating PRO – are clearly secondary.

Lakatos (1978:182) summarizes the major concern succinctly: “*The hallmark of empirical progress is not trivial verifications.*” *What really counts are [...] unexpected, stunning predictions: a few of them are enough to tilt the balance.*” Crucially, the movement conjecture does not predict novel facts that are confirmed and it does not cover crucial facts that the standard account would have been unable to cover. It predicts constraints on OCR incurred by movement that do not exist in the linguistic reality. Its record of success falls short of the mark that the standard account passes easily.

Given the facts as they are, an updated standard account seems to provide a far more promising explanation than a movement account. The cross-linguistically predictive power of the standard theory of pronominal control is successful. The score of the movement conjecture of

¹⁹ Excerpt from the Corpus of Contemporary American English:

- i. “as if it were the last thing *he'd expected himself to be doing*”
- ii. “This is not what *we expected to be doing*”

²⁰ Modus tollens: If [A entails B] and not-B, then not-A.

control is negative. The predictions fail and the coverage is insufficient. The reasons for these shortcomings are manifold:

The first thing to do would have been to watch out for clear cases rather than for fringe benefits. A crystal clear case for movement vs. non-movement is the well-known fact established in extensive discussions of English infinitival complementation structures in the past decades. Control is a relation that crosses full sentential boundaries while A-movement is blocked by CP- boundaries.

- (35) a. They_i are expected [IP e_i to pay attention to it]
 b. *They_i are neglected [CP e_i [IP e_i to pay attention to it]]
 c. Theyⁱ have neglected [CP [IP PROⁱ to pay attention to it]]

If the controller in (35c) is supposed to be the head of an A-movement chain, it is indispensable to justify why the chain could cross the CP boundary in (35c) at all, and why it cannot cross it in (35b). Next, one should ask oneself what has prevented others from arriving at the novel idea before. This implies that one is able to show beyond doubt that the old arguments for discriminating between CP vs. IP complementation and between CP-crossing A'-movement and CP-blocked A-movement are invalid in the given context and that a generation of syntactician was wrong without having noticed it. It must come as a complete surprise that the proponents of a movement analysis of control do not realize that they have to fulfil this duty.

Second, even forty-five years after Rosenbaum's first attempt, the discussion is still heavily monolingual and centered on English as if in the meantime it had been established beyond reasonable doubt that English is the grammatical fruit fly (*drosophila grammatica*) for a universal theory of grammar and the representative model for any other language. Monograph-length expositions of the allegedly universal grammar of control (cf. Hornstein 2001) focus almost exclusively on English but claim universal validity without testing the novel claims on at least one other language that does syntactically not completely resemble English.

Third, even in English, the argumentation has been more biased than tolerable. Highly pertinent and easily accessible counter-evidence is disregarded or marginalized. The 'in-order-to' construction is frequent enough, it contradicts the movement analysis, and it is completely disregarded in Hornstein (1999, 2001). The well-known case of split-control is defeating evidence and it is marginalized by unacceptable means; see Hornstein (1999:73): "(4e) *John_i told Mary_j PRO_{i&j} to wash themselves/each other. [...] (4e) shows that OC PRO cannot have split antecedents." The only thing this example shows is that 'tell' is an object control verb when it selects an infinitival clause. That obligatory control is compatible with split antecedents is well-known, though, but it presupposes a semantically adequate choice of the matrix verb.²¹

The beauty of the movement conjecture of control is only in the eye of a Minimalist beholder. The theory apparently gains a little bit of elegance if control can be subsumed under copy & merge. Let us assume that this is so, then a scientific approach would require putting the hy-

²¹ i. Heⁱ persuaded her^j PRO^{i&j} to portray each other^{i&j}
 ii. Heⁱ agreed with her^j PRO^{i&j} to portray each other^{i&j}

pothesis to test as rigorously as possible rather than eagerly protecting it against counterevidence. Theory development does not benefit at all from ultimately empirically indefensible hypotheses, how welcome and desirable they may be in a theory internal perspective. The facts are what they are and grammar theories that do not honor them meticulously are nothing more than entertaining theories of fictitious grammars that must not be mistaken for explanatory models of reality, namely of the language ‘software’ embodied in human brains.

10. In sum, the diverse facts from German discussed here expands the substantive body of evidence against the movement conjecture of OCR (see fn. 5). At the same time, these facts strengthen the standard account since it satisfactorily covers the evidence that has been raised against the movement conjecture in this and in other papers. There is neither a compelling nor an attractive reason for giving up an updated standard account of modelling OCR relations in favor of an account that attempts to reduce control to a movement relation.

References

- Bach, Emmon. 1969. Control in Montague Grammar. *Linguistic Inquiry* 10: 533-581.
- Bobaljik, Jonathan D. and Idan Landau. 2009. Icelandic Control is not A-movement: The case from case. *Linguistic Inquiry* 40:113-132.
- Boeckx, Cedric, Norbert Hornstein, and Jairo Nunes. 2010. *Control as Movement*. Cambridge: Cambridge University Press.
- Boeckx, Cedric & Norbert Hornstein. 2004. Movement under control. *Linguistic Inquiry* 35: 431-452.
- Culicover, Peter W. and Ray Jackendoff. 2001. Control is not movement. *Linguistic Inquiry* 32(3): 493– 511.
- Chomsky, Noam. 1998. Minimalist inquiries: The framework. *MIT Occasional Papers in Linguistics* 15. Cambridge: MIT Press (MITWPL).
- Greisinger, Isabella. 2012. *Satzselegierende Präpositionen im Deutschen und anderen germanischen Sprachen*. Unpublished master thesis. Salzburg: University of Salzburg.
- Haider, Hubert. 2014. *Don't copy and paste in syntax*. Ms. Salzburg: University of Salzburg
- Haider, Hubert. 2010. *The Syntax of German*. Cambridge: Cambridge University Press.
- Hornstein, Norbert. 2001. *Move! A Minimalist Theory of Construal*. Malden, Mass.: Blackwell.
- Hornstein, Norbert. 1999. Movement and Control. *Linguistic Inquiry* 30: 69-96.
- Hornstein, Norbert and Maria Polinsky. 2010. Control as movement. In: Norbert Hornstein and Maria Polinsky (eds.) *Movement theory of control*. Amsterdam: John Benjamins. 1-41.
- Jenkins, Lyle. 1972. *Modality in English syntax*. Doctoral dissertation. Cambridge, Mass.: MIT.
- Lakatos, Imre 1978. *The methodology of scientific research programs: Philosophical papers*. Vol.1. Cambridge: Cambridge University Press.
- Landau, Idan. 2013. *Control in generative grammar: A research companion*. Cambridge: Cambridge University Press.
- Landau, Idan. 2007. Movement resistant aspects of Control. In W. Davies & S. Dubinsky (eds.) *New horizons in the analysis of control and raising*. Springer. p.293-325.
- Landau, Idan. 2004. The scale of finiteness and the calculus of Control. *Natural Language and Linguistic Theory* 22: 811-877.
- Manzini, Rita & Anna Roussou (2000). A minimalist theory of A-movement and control. *Lingua* 110(6): 409-447.
- Ndayiragije, Juvénal. 2012. On raising out of control. *Linguistic Inquiry* 43:275-299.
- Nunes, Jairo. 2001. Sideward Movement. *Linguistic Inquiry* 32(2): 303-344
- O'Neil, John H. 1997. *Means of control: deriving the properties of PRO in the Minimalist Program*. Unpublished Ph.D. Dissertation. Cambridge, Mass.: Harvard University.
- Rosenbaum, Peter. 1970. A principle governing deletion in English sentential complementation. In *Readings in English transformational grammar*, ed. Roderick Jacobs and Peter Rosenbaum, 20–29. Waltham, Mass.: Ginn.
- Van Gelderen, Elly. 2004. The CP and split CP cross-linguistically. *Word* 55(3): 369-403.
- Van Urk, Coppe. 2013, Visser's Generalization: The syntax of control and the passive full access. *Linguistic Inquiry* 44: 168–178.
- Visser, Fredericus Theodoricus. 1963-73. *A historical syntax of the English language*. Vol. III.2. Leiden: Brill.
- Wöllstein-Leisten, Angelika. 2001. *Die Syntax der dritten Konstruktion*, Tübingen: Stauffenburg Verlag.
- Wood, Jim. 2012. Against the Movement Theory of Control: Another argument from Icelandic. *Linguistic Inquiry* 43: 322-330.
- Wurmbrand, Susanne. 2001. *Infinitives: restructuring and clause structure*. Berlin: Mouton de Gruyter [Studies in Generative Grammar 55].