

Remarks and Replies

Icelandic Control Is Not A-Movement: The Case from Case

*Jonathan David Bobaljik
Idan Landau*

A rich literature on Icelandic syntax has established that infinitival complements of obligatory control verbs constitute a case assignment domain independent from the matrix clause, and in this differ systematically from all types of A-movement, which manifest case dependence/preservation. As Landau (2003) has observed, these facts provide significant counterevidence to the movement theory of control (Hornstein 1999 and subsequent work). Boeckx and Hornstein (2006a) attempt to defend this theory in light of data from Icelandic. We offer here a review of the relevant literature, and we show that Boeckx and Hornstein's reply fails on several counts. We further argue that contrary to their claims, PRO in Icelandic receives structural rather than default (nominative) case, leaving the movement theory with no account for the distinction between PRO and lexical subjects.

Keywords: case transmission, case concord, control, raising, Icelandic, PRO

1 Introduction

The relevance of case in Icelandic for theories of control and raising was first noted by Andrews (1976, 1982) and Thráinsson (1979) and explored in depth by Andrews (1990) and Sigurðsson (1989, 1991). As Landau (2003) has observed, the facts of case in Icelandic provide significant counterevidence to the movement theory of control (MTC), as presented in Hornstein 1999, 2003 and Boeckx and Hornstein 2004, 2006a,b. The core fact is this: infinitival complements of obligatory control (OC) verbs generally constitute an independent case assignment domain from the matrix clause, and in this property, differ systematically from all types of A-movement (passive, raising, exceptional case marking (ECM)/raising to object). These data provide some of the most compelling evidence that the subject of OC infinitives is a null category distinct in kind from trace. This is one result whose implications are recognized across frameworks (Government-

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Binding (GB) Theory, Lexical-Functional Grammar), but which is directly at odds with the core thesis of the MTC. In their 2006a article, Boeckx and Hornstein (hereafter B&H in the context of 2006a) provide the first attempt to defend the MTC in light of Icelandic data. They contend that “the argument does not undermine the movement approach when the facts are considered in their entirety” (p. 591; see also p. 604 and Boeckx and Hornstein 2004:448).

Despite B&H’s claim to have considered “the facts . . . in their entirety,” key data discussed in the literature that they cite are not mentioned in their article (including examples of the type given in Landau 2003 to motivate the counterargument). The result is a misleading characterization of the established results in this area, and theoretical proposals that are at odds with the known facts.

In the service of permitting a fairer evaluation of future debates, we offer here a careful review of the relevant literature. Rather than advancing new data or theoretical proposals, we restrict ourselves to discussing the empirical facts presented in the literature prior to 2003 and the conclusions to be drawn from them. We compare these with the claims (factual and theoretical) in B&H 2006a and show that this article fails to explain the classic raising/control contrast in case agreement patterns. In addition, the considerations that lead to this conclusion expose an important lacuna in the MTC, namely, its failure to explain the fundamental fact of OC: that controlled subjects are unpronounced.¹

In section 2, we review the classic contrast in Icelandic between A-chains, in which quirky case is preserved, and OC dependencies, in which it is not. We show that B&H’s core theoretical proposal for OC (“case overwriting”) both fails to capture this contrast and generates false predictions elsewhere. In section 3, we address B&H’s claim that the nominative case seen on embedded secondary predicates (SPs) and floating quantifiers (FQs) is a marked, default case. We show that all the available evidence points to the opposite conclusions: embedded nominative is neither marked nor default, but standard structural case. In section 4, we discuss the detrimental implications of this conclusion for the MTC; essentially, lexical subjects are overgenerated in OC infinitives, a result unchanged even when their case is inherited from the controller or locally determined to be quirky. In section 5, we show that inherent/quirky case *can* be transmitted to PRO, contra B&H’s claims; this undermines their implied account of why embedded nominative is not marked under a controller marked with inherent/quirky case. Finally, in section 6 we address some broader issues of methodology and linguistic ontology underlying this debate.

2 The Central Issue: Case in Control versus A-Movement

The primary challenge to the MTC from Icelandic case facts is that control is systematically unlike all forms of A-movement. For expository reasons, we consider environments where the embedded predicate is a quirky case assigner (sections 2.1–2.2) separately from those where it

¹ As we were writing this article, we learned of Sigurðsson, to appear, an independent, convergent reply to B&H 2006a. We thank Halldór Sigurðsson for making available to us a draft of his reply. We have not incorporated the new data from Sigurðsson, to appear, as our main argument is that B&H’s proposal cannot adequately deal with the data that were already available when B&H 2006a was written.

is not (section 2.3). However, the point is the same: it is only in control configurations that case independence between the matrix and embedded environments obtains.

2.1 Case Preservation: The Classic Paradigms

As Andrews (1990:189) comments, one of “the two most striking peculiarities of [quirky] case-marked NPs [is] the phenomen[on] of case preservation.” In GB terms, quirky case-marked DPs behave for all manner of case-driven movements as if they were moving for case reasons. However, they systematically retain the quirky case associated with their θ -assigning predicate.² We reproduce here Andrews’s (1990:189–190) illustration of case preservation under passive (in (1)), ECM/raising to object (in (2)), and passive of ECM (in (3)); all examples are paired with garden-variety structural case examples.³

- (1) a. Strákarnir voru kitlaðir.
the.boys.M.PL.NOM were tickled.M.PL.NOM
‘The boys were tickled.’
b. Strákunum var bjargað.
the.boys.M.PL.DAT was rescued.DFLT
‘The boys were rescued.’
- (2) a. Ég tel strákana (hafa verið) kitlaða.
I believe the.boys.M.PL.ACC to.have been tickled.M.PL.ACC
‘I believe the boys to have been tickled.’
b. Ég tel strákunum (hafa verið) bjargað.
I believe the.boys.M.PL.DAT to.have been rescued.DFLT
‘I believe the boys to have been rescued.’
- (3) a. Strákarnir eru taldir (hafa verið) kitlaðir.
the.boys.M.PL.NOM are.PL believed.M.PL.NOM to.have been tickled.M.PL.NOM
‘The boys are believed to have been tickled.’
b. Strákunum er talið (hafa verið) bjargað.
the.boys.M.PL.DAT is.SG believed.DFLT to.have been rescued.DFLT
‘The boys are believed to have been rescued.’

² While we are not aware of any questions regarding the status of the examples discussed here (except where specifically mentioned below), we do note that Sigurðsson (1989:96n31) and Andrews (1990) report some variation in case preservation effects with certain other raising predicates. So far as we know, the claim that the judgments of interest systematically reflect a distinction between A-movement and control remains unchallenged.

³ All examples are taken from the literature, as noted. A few examples have been slightly modified—for instance, by substituting a DP of a different gender so that case is shown unambiguously, or by explicitly presenting ungrammatical forms that are implied but not given in the sources. In the few cases where we have made such changes, we have cited the example as “after” the source. We thank Höskuldur Thráinsson for his patient help in checking all modifications.

The following abbreviations are used in this article: *ACC* = accusative, *DAT* = dative, *DFLT* = default, *F* = feminine, *GEN* = genitive, *M* = masculine, *NOM* = nominative, *PL* = plural, *SG* = singular.

Andrews characterizes these examples quite succinctly: “As the structurally case-marked NPs of the (a) examples shift between subject and object positions, their case shifts between nominative and accusative, but the [quirky] case-marked NPs in the (b) examples remain dative” (p. 190).⁴ Thus, the distribution of DPs marked with quirky case precisely tracks that of DPs marked with structural case. However, the case value that surfaces on the moved DP is always the “lowest” case value, that is, the one determined by the θ -assigning predicate. Indeed, it was this mismatch between distribution (like structural case) and form (case preservation) that constituted the landmark challenge to GB case theory, as articulated in Zaenen, Maling, and Thráinsson 1985.

Control is strikingly different (see Andrews 1976, 1982, 1990, Thráinsson 1979, Sigurðsson 1989, 1991; hereafter labeled collectively as ATS). In control structures, the case of the controller is determined locally: the controller DP bears the locally appropriate structural case. Case preservation is ungrammatical, as shown here:

- (4) a. Honum var bjargað af fjallinu.
 him.DAT was rescued.DFLT of the.mountain
 ‘He was rescued from the mountain.’
 b. Hann/*Honum vonast til að verða bjargað af fjallinu.
 he.NOM/*DAT hopes for to be rescued.DFLT of the.mountain
 ‘He hopes to be rescued from the mountain.’
 (after Andrews 1990:198)

Under the standard analysis of control, case fails to be preserved because there are two distinct nominal elements involved. In GB, these are the controller DP and PRO, each with one case and one θ -role. This corresponds to “anaphoric control” in Lexical-Functional Grammar, whereby the PRO subject of the embedded clause (SCOMP) is a distinct F-structure object from the matrix controller (see Andrews 1990:197).

The failure of case preservation under (nonquirky) object control is arguably shown by examples such as (5).⁵

- (5) (#)Jón bað hann að leiðast ekki einum.
 Jon.NOM asked him.ACC to be.bored not alone.DAT
 ‘Jon asked him not to be bored alone.’
 (after B&H 2006a:594, (7))

⁴ That the quirky case-marked DPs are indeed subjects and objects is exceptionally well established in an extensive literature beginning with Andrews 1976 and Thráinsson 1979; see especially Zaenen, Maling, and Thráinsson 1985 and Sigurðsson 1989. The arguments do not depend on correlating surface position and grammatical function.

⁵ B&H indicate such examples to be acceptable, while Thráinsson (pers. comm.; see also Thráinsson 1979:301 and *passim*) finds them to be semantically anomalous (we indicate this with #) on the grounds that object control verbs select agentive complements, but quirky subjects are never agentive. The narrow point to be made here is that, to the extent that speakers accept object control of quirky-case-assigning infinitives, they manifest obligatory case independence. Besides adding the “#”, we have modified B&H’s example by using a controller DP that overtly manifests the accusative/dative distinction.

The challenge that these facts pose for the MTC should be obvious: if control is analyzed as a species of A-movement, then quirky case should be retained on the “moved” DP, just as it is in all other types of A-movement dependencies (raising, ECM, passive).⁶ However, this is patently impossible. As Landau (2003) notes, the challenge lies not merely in describing the control facts, but in describing them in a way consistent with the raising facts. Most specifically, the task is to explain why the mechanism that ensures case independence in OC dependencies does not apply in raising chains, which uniformly display case preservation. As we show in the next section, B&H do not meet this challenge.

2.2 Case Overwriting: A Nonanswer

B&H address the failure of case preservation in control constructions such as (4b) and (5). The derivation they propose for a control example in all relevant respects identical to (4b) is given here (their (26)–(27), p. 599):

- (6) a. nominative NP . . . [quirky FQ/SP . . .]
 b. Jón vonast til [að leiðast ekki einum].
 JON.NOM hopes for to be.bored not alone.DAT
 ‘Jon hopes not to be bored alone.’
- (7) NP_i T⁰ . . . t_i V⁰ . . . [T_{inf} . . . V⁰ [t_i FQ]]
 Step 1: embedded V⁰ assigns a θ-role/quirky Case to NP and quirky Case to FQ
 Step 2: matrix V⁰ attracts NP and assigns a θ-role to it
 Step 3: matrix T⁰ assigns structural Case to NP, which moves to check EPP

Note that under this analysis, the moved DP is assigned case twice, receiving quirky case in its base position and structural case in (what amounts to) its surface position. B&H’s core proposal is that quirky case on a moving DP is obligatorily overwritten by a structural case assigned at the landing site (or in the higher clause). They state, “As for the Case value that surfaces on the moving element . . . , it is always the highest Case value” and thus, “Case is morphologically realized only once . . . , according to the context in which the NP is pronounced” (pp. 600–601).

This position flatly contradicts the standard analysis of quirky case, as discussed in section 2.1. Indeed, on that view, quirky case is *defined* by its systematic resistance to overwriting. B&H do not mention the case preservation effect. Consequently, it remains unclear how their theory would avoid falsely predicting case overwriting whenever a quirky case-marked DP under-

⁶ Nothing hinges on analyzing this class of dependencies as instances of literal movement, as opposed to Agree. There is evidence that Icelandic lacks the classic Extended Projection Principle (construed as obligatory filling of Spec,TP; see Wurmbrand 2006), but the issues here do not distinguish between quirky and structural case-marked DPs. Note that Landau (2000) analyzes OC as an Agree dependency, but crucially, one involving two distinct A-chains. A matrix v/T forms an Agree relation both with the controller DP and with PRO (or the infinitival C). Since the controller DP is never part of the embedded infinitive, it is never c-commanded by the embedded predicate and cannot receive case from it. Thus, case preservation in OC is ruled out on principled grounds in this theory.

goes movement, thereby failing to account for the standard examples that motivate the concept of quirky case.⁷

Within B&H's framework, there are only two possible analyses of quirky case-marked DPs: either they bear a hidden structural case feature that must be checked or they do not.⁸ If they do, the structural case feature is valued in the matrix clause, correctly predicting case overwriting in control, but crucially *incorrectly* predicting overwriting in all standard A-movement contexts (as discussed above). If, on the other hand, quirky DPs do not bear any additional (structural) case feature—perhaps because structural case is a Last Resort option—then their quirky case should be preserved through all derivational stages. This is the correct result for A-movement, but not for control, where the lower quirky case never surfaces on the controller. Could B&H then assume that quirky case-marked DPs bear an *optional* structural case feature? No, because such optionality would allow case preservation in control and case overwriting in A-movement—two scenarios that never arise.

As far as we can determine, except by brute stipulation (i.e., presupposing the raising/control distinction to be explained), the MTC has no means of predicting the systematic correlation of case preservation effects with raising (and other A-movement) and their absence from control, precisely as Landau (2003:493) notes.

2.3 Case Matching and Independence: Structural Case

When quirky case is not at issue, object control and ECM look similar, with accusative case on the DP corresponding to the (understood) subject of the infinitival clause. However, as noted by ATS (e.g., Thráinsson 1979:361), the two constructions differ markedly in the case properties of elements in the infinitival clause that agree in number, gender, and, crucially, case with their antecedents (SPs, FQs, participles, and adjectival main predicates). The pair in (8) illustrates with an agreeing SP *einn* 'alone'.

- (8) a. Jón taldi Bjarna_i hafa hlaupið einan/*einn_i.
 Jon.NOM believed Bjarni.ACC to.have run alone.ACC/*NOM
 'Jon believed Bjarni to have run alone.'
 (B&H 2006a:601)

⁷ B&H state (their fn. 3), "Landau also observes that in contrast to control, raising disallows situations where a single NP appears to receive two Cases. We return to this difference between raising and control in section 3." In fact, however, they do not discuss any of the raising examples presented by Landau (2003:492), culled from the earlier literature, nor any other examples that show the case preservation effects discussed above. The sole example of a raising versus control contrast they discuss in their section 3 concerns a different point, namely, the distribution of structural (nominative) case in the infinitival. We return to these example types below.

⁸ As B&H do not address this point, we must cover both options. Note that B&H's derivations (29) and (33) and associated text (pp. 599, 600) are suggestive of a Last Resort view, whereby quirky case is sufficient to satisfy the Case Filter. This would be an unsignaled, but important, departure from assumptions they make in work that they rely on in B&H 2006a, notably, the Inverse Case Filter and the assumption that ECM verbs like *believe* obligatorily assign accusative (see Boeckx 2003:170, Boeckx and Hornstein 2004:436). Assuming that quirky case satisfies the Case Filter will create an even more serious problem regarding the lexicalization of PRO, to which we return in section 4.

- b. *Ég bað hann_i að fara einn/einan_i þangað.*
 I.NOM asked him.ACC to go alone.NOM/ACC there
 ‘I asked him to go alone.’
 (Thráinsson 1979:301)

The agreement asymmetry is especially clear with predicate nouns and passive participles, as in (9) (see also (13)).

- (9) a. *Ég tel Maríu hafa verið tekna/*tekin af lögreglunni.*
 I.NOM believed Maria.ACC to.have been taken.F.SG.ACC/*NOM by the.police
 ‘I believed Maria to have been taken by the police.’
 b. *Ég bað Maríu að vera tekin/*tekna af lögreglunni.*
 I.NOM asked Maria.ACC to be taken.F.SG.NOM/*ACC by the.police
 ‘I asked Maria to be taken by the police.’
 (Thráinsson 1979:362–363)

The question these examples raise for the MTC is why nominative is available in the lower clause in (8b) and (9b) (indeed, obligatory in (9b)), but impossible in (8a) and (9a). Note that both the nominative and accusative forms of the participle show number and gender agreement with *María*; namely, they are not default forms, a fact that will be relevant in section 3.

2.4 Case Dependence: The Clausemate Speculation

B&H address a contrast like (8), but they do not note the sharper contrast with participles and nouns. Their derivation of an ECM structure like (8a) is given in (10a) (their (35)) and should be contrasted with object control in (10b) (their (37)).

- (10) a. *ECM*
 $NP_i v^0 \dots V^0 \dots [T_{inf} \dots V^0 [t_i FQ]]$
 Step 1: embedded V^0 assigns a θ -role to NP
 Step 2: matrix v^0 assigns structural accusative Case to NP and FQ by multiple Agree
 Step 3: NP raises to matrix Spec,vP (to check EPP)
- b. *Object control*
 $NP_i v^0 \dots t'_i V^0 \dots [T_{inf} \dots V^0 [t_i FQ]]$
 Step 1: embedded V^0 assigns a θ -role to NP
 Step 2: matrix V^0 attracts NP and assigns a θ -role to it
 Step 3: matrix v^0 assigns structural accusative Case to NP and FQ by multiple Agree

The key difference lies in step 2 of (10b). Thus, B&H “speculate that the marked default [*sic*] nominative Case on the floating quantifier in [structures corresponding to (10b)] is a distance effect” (p. 602). Where the two targets of multiple Agree are in the same clause at the point of case assignment (as in (10a)), case sharing is strictly obligatory.

There are at least two significant problems with this approach. The first one is factual. B&H assume, incorrectly, that accusative is always available on agreeing elements in the infinitive

and that only the “marked” nominative in examples like (8b) is in need of explanation. In fact, however, nominative has a wider distribution than accusative and it is strongly, perhaps exclusively, preferred in examples like (9b) (we return to the status of the nominative in the next section).

The second problem is that even for agreeing adjectives, distance (at the point of case assignment) does not appear to be the relevant factor. In particular, Andrews (1982), in discussing the obligatory agreement in ECM and raising configurations, provides examples in which the ECM DP and the agreeing element are in different clauses, as in (11).

- (11) Þeir telja hana (vera) sagða (vera) vinsæla/*vinsæl.
 they believe her.ACC to.be said.ACC to.be popular.ACC/*NOM
 ‘They believe her to be said to be popular.’
 (after Andrews 1982:445)

On B&H’s assumptions, the *v* associated with ECM verbs such as *segja* ‘say’ has an EPP feature (step 3 of (10a)). If this feature is retained under passive (e.g., if passive *vP* is a phase; see Boeckx and Hornstein 2004:437), movement of the DP into the intermediate clause will be forced prior to case assignment by the matrix *v* under multiple Agree. Such long-distance constructions should then pattern with control—but they do not. In fact, whether or not intermediate movement is assumed, there are two elements in (11) agreeing in case with the ECM DP, namely, the passive participle in the intermediate clause and the predicate adjective in the lowest clause. Wherever B&H take the DP to be at the point of case assignment, it is a clausemate with one agreeing element and not the other. Hence, the clausemate condition does not appear to be the relevant determinant for case agreement. Nominative is licensed under object control but not under ECM, even when the ECM DP and the agreeing element are not clausemates. Once again, the MTC fails to distinguish raising from control in well-known examples.

3 Nominative PRO: Structural or Default Case?

One aspect of the Icelandic control facts that has received especially prominent attention since Sigurðsson 1991 is the nature of the nominative case that surfaces on (elements agreeing with) PRO. As B&H recognize, identifying this nominative as structural will conclusively establish that the controller and the controllee each bear one structural case and one θ -role, and will undermine the MTC. B&H thus repeatedly stress that they treat the nominative in question as “default” rather than structural case. We focus on this question here, noting that B&H do not provide evidence for their position, and reviewing the compelling evidence in the literature for the structural nature of this case.⁹

⁹ To avoid potential terminological confusion, we keep to the term *structural* nominative for the nominative that is associated with the subject of a finite clause. B&H’s key claim is that the nominative in infinitives (what they term *default* nominative) is distinct from that nominative. Our point is that this dichotomy is false: the two are not distinct by any criteria. A separate question is whether “structural nominative” is itself (always) a form of default or unmarked case (as in Marantz 1991, McFadden 2007). This latter use of the term *default* is not the one used by B&H, and not the one we dispute.

3.1 The “Case” for Default Case

When the embedded predicate is not a quirky case assigner, PRO may take on nominative case (diagnosed by agreement on the SP). According to B&H, this option is marginal. Example (12) is their (14), with their judgments.

- (12) Jón bað Bjarna að koma einan/??einn.
 Jon.NOM asked Bjarni.ACC to come alone.ACC/??NOM
 ‘Jon asked Bjarni to come alone.’

B&H write, “Though nominative is marginally possible on the floating quantifier, accusative is strongly preferred. We take this to indicate that in such situations, nominative is really a marked default Case realization” (p. 595). Within their framework, this is significant, since they make it clear that default case can be “factored out” of the picture, being entirely distinct from structural case, which is unavailable to the embedded subject: “we take this nominative on the secondary predicate to be a default Case, as there is no source for structural nominative in the embedded clause” (p. 596).

Once out of the picture, nominative PRO no longer bears on multiple case assignment. Suppose the controller bears case α and the embedded SP case β . If either α or β is inherent/quirky, it simply reflects a θ -role, not abstract case. If β = nominative, again it is not abstract/structural case, but default case. B&H conclude, “Since we have shown that there is no evidence that multiple structural Cases are assigned to a chain, the argument against a movement theory of control dissolves” (p. 598).

We note that the claim that nominative in Icelandic OC infinitives is a default case rests *entirely* on the alleged markedness of nominative in (12). B&H do not offer any independent support for this claim, which plays a key role in their analysis (see section 4). Indeed, the first quotation above suggests that B&H simply equate markedness and “defaultness.”

3.2 The Icelandic Facts

Neither the claim that embedded nominative in OC is a marked option, nor the claim that it is default case, finds support in the extensive literature on Icelandic. There is much evidence against both claims, which we review below. We note in passing, though, that even if the assumption of markedness were granted, the link to the assumption of defaultness would at best be unclear. Default values of morphological features are simply unmarked values that are inserted in the absence of more specific spell-out instructions. To our knowledge, even within B&H’s approach, no markedness in judgment is attached to such choices. It is thus unclear why nominative PRO in (12) should be any more marked than, say, 3rd singular default agreement on the main predicate when no nominative DP occurs (as in B&H’s example (3)).¹⁰

¹⁰ Embedded “default nominative” case is apparently not marked when the controller bears inherent/quirky case (see B&H’s fn. 6 and (19b)). B&H do not offer any explicit account of this contrast. In section 5, we return to this question and show that the most natural account available under B&H’s assumptions is empirically untenable.

In any event, there is ample evidence that nominative PRO is not marked/marginal in Icelandic; in fact, it is often the preferred option, sometimes the only one. B&H have apparently erred in this respect in using only the SP *einn* ‘alone’ as a case detector in the embedded infinitive. It is well established in the literature, however, that main predicates (MPs) and SPs display different agreement patterns. Importantly, predicate nominals and passive participles *qua* MPs obviously falsify the “markedness” claim, while SPs are simply uninformative with regard to the “defaultness” claim.

Regarding the markedness claim, Andrews (1976:176) noted early on that “a predicate adjective modifying a nominative zero subject can appear either in the nominative or in the case of the controller” (see also Andrews 1982:450). He was also explicit about the preference: “Why is the nominative always possible, rather than some other case, such as the accusative?” (Andrews 1982:451). Indeed, although B&H (fn. 8) cite Andrews 1982 as a precursor to their default nominative proposal, they fail to mention that Andrews raised this idea to account for the *predominance* of nominative in OC infinitives, not its marginality. Indeed, what seemed to Andrews to be a variable, “squishy” phenomenon (which he ultimately relegated to “performance”) was case matching with the controller, not case mismatch.

More to the point, the preference for nominative over case transmission is especially clear with two types of embedded MPs: predicate nominals and passive participles (see Thráinsson 1979:362; also see Andrews 1982:453, citing Friðjónsson 1977). Sigurðsson (2002:712) too observes that “as a matter of fact, case-copying down into the infinitive is marked or questionable for many speakers and even out for some.” The following examples are reported to allow only nominative in the infinitive (Thráinsson 1979:327, 362):¹¹

- (13) a. Hann kenndi honum að vera góður skákmaður/*góðum skákmanni.
 he taught him.DAT to be good chessplayer.NOM/*DAT
 ‘He taught him to be a good chessplayer.’
 b. Ég bað Maríu að vera tekin/*tekna af lögreglunni. (= (9b))
 I asked Maria.ACC to be taken.F.SG.NOM/*ACC by the.police
 ‘I asked Maria to be taken by the police.’

As previous scholars have observed, the phenomenon of case transmission in Icelandic exhibits considerable interspeaker variation (similarly in Russian; see Landau, to appear, for extensive documentation). Nonetheless, the empirical picture is far from chaotic, and solid generalizations can be and have been formulated. One such generalization is the availability of nominative in all OC infinitives where quirky case is not assigned. Any analysis of the facts must account for this generalization; an analysis predicated on the false premise that nominative is a marginal option in OC contexts is bound to be off the mark.

¹¹ Presumably, B&H would not expect dative in (13a), given their claim that “Icelandic speakers . . . strongly reject remote quirky Case matching” (p. 597). This claim, however, is incorrect; in section 5, we show that transmission of inherent/quirky dative/accusative is not generally ruled out. Its failure in (13a) is due to the relative inherent resistance of predicate nominals to case transmission, as evidenced by the parallel failure of accusative transmission in (13b).

Although B&H are wrong in claiming that nominative is marked in OC infinitives, one may still wonder whether they could be right in claiming that it is a default case. After all, as we have noted above, the two claims are independent. The answer again is no: there is no reason to believe that the nominative on the null subject of infinitives—PRO, in our view—is anything other than standard structural case.

Example (13b) serves to illustrate the point. The embedded passive participle *tekin* in this example obligatorily shows agreement (in number, gender, and case) with the (null) subject of the infinitival. The default form *tekið* would be obligatory when the subject does not have structural case. In making this argument, Sigurðsson (1991:335–336) presents the following minimal pair:

- (14) a. Strákarnir vonast til að verða aðstoðaðir/*aðstoðað.
 the.boys.NOM hope for to be aided.PL.NOM/*DFLT
 ‘The boys hope to be aided.’
 b. Strákarnir vonast til að verða hjálpað/*hjálpaðir/*hjálpuðum.
 the.boys.NOM hope for to be helped.DFLT/*PL.NOM/*PL.DAT
 ‘The boys hope to be helped.’

In both sentences, the controller in the matrix clause is nominative. The difference lies in the embedded infinitives. Where the infinitive predicate is a quirky case assigner (‘be helped’ assigns dative), the participle is obligatorily in the default, nonagreeing form (14b). Where the infinitive is a predicate whose corresponding finite subject would be nominative, the agreeing, nominative participle is obligatory, and the default form is excluded (14a). As regards MP agreement, then, nominative on PRO patterns with structural case (obligatory agreement) and against quirky/inherent case (agreement impossible).

In fact, as Sigurðsson has repeatedly stressed, with respect to agreement on MPs, the nominative on PRO behaves unlike the other known instances of default nominative in Icelandic, namely, dislocated and vocative DPs. As (15) shows, true default nominative DPs fail to trigger agreement, even on participles.

- (15) Strákurinn, við hann var ekki dansað/*dansaður.
 the.boy.NOM with him.ACC was not danced.DFLT/*M.SG.NOM
 ‘The boy, nobody danced with him.’
 (Sigurðsson 1991:338, paraphrase added)

The participial agreement facts are particularly relevant, since, as B&H note, ‘overt morphological agreement on . . . passive past participles (Case, number, gender) *can only take place with elements bearing structural Case*’ (pp. 592–593, emphasis added). Since the passive participle in control complements obligatorily agrees with the null subject of the infinitive as in (13b), it follows—on B&H’s own assumptions—that this nominative is structural case, not default case.

The point here is neither subtle nor new. The facts are discussed by ATS, and this argument against default nominative in control complements is presented in detail by Sigurðsson (1991). Although they cite these works, B&H do not mention the behavior of MPs (adjectives, nouns, or past participles) in infinitives, and their characterization of Sigurðsson 1991 (on p. 593) men-

tions only the examples of agreement with FQs/SPs. A major theme in Sigurðsson 1991, however, as in later work (Sigurðsson 1992, 1996, 2002, 2003, 2004), is precisely this distinction: while primary agreement (on MPs) is triggered only by structurally case-marked subjects, secondary agreement (on FQs/SPs) is case-insensitive, applying also with inherent/quirky case-marked arguments.

Omitting this distinction in effect renders almost all of B&H's examples irrelevant to the question of whether nominative on PRO is structural or default case. The reason is that (as noted above) their examples use only FQs/SPs as case detectors, never MPs. Since FQs/SPs agree with *any* type of antecedent, they cannot be used to choose between the structural and default analyses of the embedded nominative. However, examples with embedded MPs, such as (13a–b) and (14a), can be used in this way; and the fact that they manifest full agreement, in contrast to (14b) and (15), vindicates the standard structural nominative analysis and refutes B&H's default nominative proposal.¹²

We note here that precisely the same argument (for structural case on PRO), using similar case concord paradigms, has been made for Russian (see Comrie 1974, Greenberg 1983, 1989, Neidle 1988, Babby 1998, Babby and Franks 1998, Franks 1998, Landau 2008). Interestingly, Russian provides straightforward evidence that the case of PRO is not default case: while the default case of DPs in Russian is nominative, the case on PRO is dative. Thus, a key idea in the MTC—that PRO may never bear a locally assigned structural case—is consistently disconfirmed in languages that provide the appropriate testing ground for it (see Landau 2008 for further data and discussion).

4 The Lexicalization Problem

Why is it so important for the MTC to banish multiple structural cases in OC chains? Curiously, the question is not addressed in B&H's recent writings. A close reading of the original formulations of the MTC, however, reveals the tacit assumptions that are endangered once structural case is granted to PRO (or the controller's trace). These assumptions are needed to guarantee that controlled subjects are unpronounced; in other words, they bear on the fundamental problem of control theory—how to derive the distribution of PRO. In this section, we show that the irreducible existence of multiple cases in OC chains robs the MTC of its account of the null status of PRO. The result is that the MTC licenses and overgenerates lexical subjects in OC infinitives. We consider three environments where this happens: (a) PRO receives structural nominative, (b) PRO receives quirky case, (c) PRO receives structural accusative (via transmission from the controller).

Hornstein (1999:82) explains the fact that the understood subject of control infinitives is unpronounced as follows: ‘‘the null phonetic status of PRO is explained in whatever way we

¹² In fact, B&H do give two examples in which the embedded MP is an adjective (their (16), with an embedded small clause, and (i) in their fn. 6). In both, the adjective is unambiguously in an agreeing, nominative form and not in the default form that would be required under their analysis (B&H do not gloss agreement on the adjectives). The agreement patterns in these examples provide further evidence that there is a structural nominative DP in the infinitive, controlling agreement on the adjective, as noted in the source literature.

explain the null phonetic status of NP-trace. One natural assumption is that Case is required for phonetic ‘visibility.’ Both NP-trace and PRO will therefore fail to meet the requirements for having phonetic content.’ Hornstein (2003:fn. 29) reiterates this parallelism as the source of the ‘nullness’ of PRO, ultimately deriving it from Nunes’s (1995) theory of copy deletion. B&H express their continued reliance on Nunes’s proposals as well (p. 600). In fact, Nunes’s theory is really a sophisticated expansion of case theory. It predicts that a single copy will be spelled out in an A-chain, and this copy will occur in the case position (normally, the topmost copy).¹³

On these assumptions, the facts established in section 3 are lethal to the MTC, for they show quite clearly that PRO bears structural case in Icelandic. That is, in normal circumstances, where no quirky case is involved, the OC chain is structurally case-marked twice—both at the tail (PRO) and at the head (the controller DP). It is therefore expected that the tail position should be able to host a phonetically visible DP. This DP would receive its θ -role and structural nominative in the lower clause, while the matrix DP would receive its own θ -role and case in the matrix clause.

- (16) a. *Jón vonast til [hann/Eiríkur að verða ráðinn].
 JON.NOM hopes for he/Eric.NOM to be hired.M.SG.NOM
 ‘Jon hopes for him(self)/Eric to be hired.’
 (Jónsson 1996:162)
- b. Ég bað Maríu [að (*hún/*Ásta) fara ein þangað].
 I asked María.ACC to *she/*Asta.NOM go alone.F.SG.NOM there
 ‘I asked Maria (for her/Asta) to go there alone.’
 (after Thráinsson 1979:301)

Such sentences are ungrammatical in Icelandic or, for that matter, most languages that have been investigated (see Szabolcsi 2007 for apparent examples of overt infinitival subjects). Yet the MTC inevitably overgenerates them, particularly in Icelandic, given its commitment to the role of case in copy pronunciation and given the empirical finding that Icelandic PRO bears structural case. This is what we call the *lexicalization* problem: how to block the lexicalization of PRO?

It is important to understand that although the MTC can accommodate a lexical PRO (i.e., overt subject of an infinitive) as such, it cannot accommodate *both* a lexical PRO and a lexical ‘controller.’ Thus, the backward control construction has been taken as evidence that the MTC is consistent with lexicalization of PRO (Polinsky and Potsdam 2002, 2003). However, the problem of *double* lexicalization, of both controller and PRO, arises with equal force under the movement analysis of backward control (see Landau 2007 for relevant comments). The question for the

¹³ Nunes assumes that (a) Case must be checked locally (in a specifier-head relation), (b) each copy in a chain carries its own uninterpretable Case feature, and (c) PF deletion only eliminates the ‘offending’ Case features of the deleted copy. These assumptions conspire to ensure that PF deletion of low copies in an A-chain will always be more economical than PF deletion of the highest copy, since the latter’s Case is necessarily checked by the attracting head, whereas the former’s Case, if not deleted at PF, would require an extra deletion operation in the syntax. Thus, high pronunciation is the default option in A-chains.

MTC boils down to this: why must there be a single chain at all, as opposed to two independent chains? What rules out (16a–b)?¹⁴

It should be recognized how fundamental to the MTC the lexicalization problem is. For any theory of control, the distribution of PRO is the core problem. From its inception, the ostensibly elegant solution in terms of case and copy pronunciation has been alleged to be the core achievement of the MTC. But the “elegant” solution, it now transpires, rests on a false premise—that PRO is caseless. Robbed of that premise, the MTC can no longer explain the fundamental fact of OC.¹⁵

The lexicalization problem arises with equal force in the two other control environments treated by B&H: quirky PRO and accusative PRO (via transmission). Unsurprisingly, neither can be lexicalized.

- (17) a. Ég vonast til [að (*mér/*Jóni) verða hjálpað].
 I.NOM hope for to *me/*Jon.DAT be helped
 ‘I hoped (for myself/Jon) to be helped.’
 (after Zaenen, Maling, and Thráinsson 1985:457)
- b. Ég bað Maríu [að (*hana/*Bjarna) fara þangað].
 I asked Maria.ACC to *her/*Bjarni.ACC go there
 ‘I asked Maria (for her/Bjarni) to go there.’
 (after Thráinsson 1979:301)

Concerning (17a), the problem is that B&H apparently take quirky case to be sufficient for the purposes of licensing a lexical DP.¹⁶ Having both case and a θ -role, then, the DP in the lower clause in (17a) would have no intrinsic need to move further, and a second DP could undergo external Merge in the matrix clause, where it would certainly receive a θ -role and structural case. If, on the other hand, quirky case does not suffice for licensing an overt DP (as in classic GB), then the case preservation problem reappears in the A-movement contexts, as discussed in section 2.1. There are only two choices here. Both fail, for reasons that were well documented in the literature prior to B&H 2006a, and which B&H fail to address.

¹⁴ Incidentally, we note that even if nominative in the infinitive is default case, it is not clear that B&H’s assumptions suffice to prevent PRO from being lexicalized with that case. B&H assume that default nominative is assigned directly to the embedded SP (their derivations (33) and (37)) and not to the controller’s chain. The question is what prevents it from being assigned to the embedded subject.

¹⁵ A reviewer suggests that Nunes’s (1995) theory would exclude double lexicalization because of the requirement, based on the Linear Correspondence Axiom, that each chain be lexicalized exactly once. Our point here is that recognizing structural nominative in the lower position in fact obviates the need for an OC chain at all under B&H’s assumptions. The matrix and embedded DPs each have a θ -role and structural case, so nothing excludes two chains and thus two lexicalized positions, at best related by binding. Recall that the MTC purports to derive the obligatory coreference in OC from movement—the assumption that there is necessarily only one DP (itself reduced to case requirements). Thus, once structural nominative is recognized in the embedded clause (as it must be), the MTC loses both its account of the “nullness” of OC PRO and of its necessary anaphoricity, the two central problems for control theory.

¹⁶ For example, the quirky DP in their (33) undergoes no feature checking with the finite T, other than checking of an EPP feature.

Finally, (17b) is also overgenerated, given the mechanism of multiple Agree that B&H invoke to derive object control (see (10b)). Instead of moving the embedded DP to the matrix VP, one can externally merge a new DP to receive the matrix θ -role. Both DPs would check their case against the matrix light v (via multiple Agree). As far as we can see, nothing in B&H's system rules out this derivation.

To summarize, we have identified a fundamental problem for the MTC, arising when its case-based analysis of lexicalization encounters the facts of Icelandic. In three distinct environments (nominative, quirky, and accusative PRO), the MTC wrongly licenses lexical subjects in OC infinitives.¹⁷ One must conclude that the MTC has no satisfactory account of the basic issue in control theory—how to derive the distribution of PRO. Evidently, a viable theory of OC must dissociate the distribution of PRO from case. Theories with this property exist (Sigurðsson 1991, Carnie and Harley 1997, Tallerman 1998, Landau 2004, 2006, San-Martin 2004), but they are all fundamentally incompatible with the MTC's core assumptions.¹⁸

5 Case Transmission

So far, we have been concerned with instances where the controller bears structural (nominative or accusative) case and optionally transmits it to PRO. We have said nothing about the behavior of controllers with inherent/quirky (I/Q) case. There are three situations to consider: a quirky controller occurs (a) with a nominative PRO, (b) with a quirky PRO, which is assigned case locally, or (c) with a quirky PRO, case-marked by transmission. The first situation corresponds to B&H's "default nominative," a notion we argued against in section 3. The second situation, in which PRO receives a quirky case independent of the quirky case of the controller, is also mentioned by B&H (e.g., their (9), (20)). As B&H identify I/Q case with θ -role (they often use the expression *θ -role/quirky Case*), for them such configurations reflect nothing more than the simple fact that OC chains are assigned two θ -roles.

What about the last possibility, where the controller transmits its quirky case to PRO? According to B&H, this situation does not occur. They claim that "Icelandic speakers . . . strongly reject remote quirky Case matching" (p. 597), this being predicted by the MTC, as "inherent (in our case, quirky) Case cannot be assigned long-distance" (p. 602). They further cite two examples (their (19a–b)) where they report Q-case transmission to be ungrammatical.

¹⁷ We have no doubt that technical solutions can be devised. The issue is, and always has been with regard to the empirical problems facing the MTC, what insights are lost or gained by introducing such solutions. In the case at hand, it seems that the MTC has missed a crucial insight: the null status of PRO is not a side effect of certain parochial assumptions about case; rather, it is a fundamental, crosslinguistically valid property of OC.

¹⁸ B&H do seem to recognize the problem for a case-based account of PRO, as in a separate article they appear to retreat from their earlier position, invoking a notion of "maximal checking" in place of case (Boeckx and Hornstein 2006b:124). However, this appears to be a notational variant of the GB notion of abstract case. At any rate, B&H themselves reveal how heavily the MTC relies on PRO lacking structural case when they state, "Since we have shown that there is no evidence that multiple structural Cases are assigned to a chain, the argument against a movement theory of control dissolves" (p. 598). Thus, with respect to the Icelandic data in particular, the majority of B&H's discussion is about case—to the extent that their account is translatable into "maximal checking," the core problems remain.

In contrast, though, all major studies of case transmission in Icelandic, starting with the earliest, cite grammatical examples where an I/Q case assigned locally to the matrix controller is inherited in the infinitive (alternating with nominative). Such examples are found both with quirky subject controllers (18) and with dative object controllers (19), and the embedded case-bearing element may be either an adjectival MP or an SP (Andrews 1976:exx.(31)–(33), 1982:exx.(38), (40); Thráinsson 1979:299ex.(47), 301ex.(50), 363ex.(41); Sigurðsson 2002:exx.(83), (84), (86); the following is a sample from these sources).

- (18) a. Mig langar að fara í kaupstaðinn einn/einan.
 I.ACC long to go to town alone.NOM/ACC
 ‘I long to go to town alone.’
 b. Henni fannst gaman að verða fyrst/fyrstri.
 her.DAT found fun to be first.NOM/DAT
 ‘She found it fun to be number one.’
- (19) a. María leyfði þeim að vera óþægir/óþægum.
 Maria allowed them.DAT to be naughty.NOM/DAT
 ‘Maria allowed them to be naughty.’
 b. Ég skipaði henni að fara ekki þangað ein/einni.
 I ordered her.DAT to go not there alone.NOM/DAT
 ‘I ordered her not to go there alone.’

While authors do note that many speakers prefer nominative in these contexts, no study (prior to B&H 2006a) has indicated that I/Q case transmission is ungrammatical in Icelandic. Similar facts obtain in Ancient Greek and Latin (Andrews 1971, Quicoli 1982, Cecchetto and Oniga 2004). Yet B&H do not address this mass of evidence. Consider now the implications of I/Q case transmission for the MTC. At the very least, the phenomenon demonstrates that I/Q case cannot be *identical* (equivalent, reducible, etc.) to a θ -role. Whereas the matrix I/Q case can be transmitted to PRO, the matrix θ -role cannot. Presumably, B&H prohibit long-distance assignment of I/Q case since long-distance assignment of θ -roles is unattested. However, facts such as those in (18)–(19) break this alleged causal link.¹⁹

¹⁹ A deeper puzzle for the MTC lurks underneath: *why* can θ -roles not be assigned long-distance? Given (a) the MTC’s reduction of θ -assignment to feature checking, and (b) the operation Agree, which allows for long-distance feature checking, it is no longer clear what blocks this option. A language choosing this option would allow controller DPs to scopally reconstruct into the infinitive—so far an unattested phenomenon.

Notice that backward control (Polinsky and Potsdam 2002, 2003) is not an instance of θ -checking under Agree (without Merge), but an instance of θ -checking under movement plus low copy pronunciation (so-called LF movement). Thus, as Polinsky and Potsdam show, the covert controller may bind matrix anaphors. Genuine long-distance θ -checking, in contrast, should not endow an embedded DP with matrix scope (cf. the frozen scope of the associate in *there*-constructions).

It appears that natural languages always implement θ -assignment in strictly local configurations. Standard semantic theories provide a principled explanation for this design feature (argument saturation being accomplished via binary operations defined for sisters only—e.g., Function Application). Part of the obscurity surrounding the predictions and consequences of positing multiple θ -roles per chain in the MTC derives from the absence of an attendant compositional semantics.

A less apparent but more significant implication concerns the status of the embedded nominative. Recall that when the controller receives structural accusative, case transmission, if possible at all, alternates with embedded nominative (see (8b)). B&H take the latter to be a marked option (against all previous descriptions). Notably, under an I/Q case-marked controller, the embedded nominative is *not* marked, even on B&H's own description (see their (8), (19b), and (i) in fn. 6). Why this contrast? B&H do not offer any explicit explanation, but we can extrapolate the following from their assumptions: nominative is marked under an accusative controller precisely because accusative transmission is available as a first option for valuing the case feature of the embedded FQ/SP (via multiple Agree), while nominative is unmarked under an I/Q controller since it is the only option, transmission of I/Q case being excluded.

Unfortunately for this reasoning, the latter assumption is false, as (18)–(19) demonstrate. Thus, case transmission does not distinguish structural from nonstructural cases. Therefore, on B&H's assumptions, default nominative should be secondary to a transmitted dative, just as it is to a transmitted accusative. The fact that default nominative “wins out” in the first case but not in the second remains an unexplained asymmetry in the MTC.

At this point, on B&H's assumptions one could presumably concede that nominative on (nonquirky) PRO is not “marked.” This, we have argued, corresponds to the actual facts in Icelandic. The problem is that anyone acknowledging the facts would be forced to recognize that nominative is standardly available to nonfinite subjects, just as it is to finite subjects. Herein lies the lexicalization problem that haunts the MTC (see section 4.1).²⁰

6 Conclusion

In one sense, the case agreement facts of Icelandic (and Russian) constitute just one type of unanswered empirical challenge to the MTC. Many others, not discussed in this reply, still persist (e.g., overgeneration in sideward movement, lack of an account for partial control, violations of Visser's Generalization; see Landau 2007 for extensive discussion).

In another sense, though, the failures of the MTC discussed in this reply deserve a dedicated critique. The basic contrast between raising and control in Icelandic—case preservation in the former, case independence in the latter—has been understood, from the outset, as attesting to the fundamentally different nature of the two processes. Andrews, Thráinsson, and Sigurðsson—although adopting different frameworks—have clearly perceived and articulated this point. The argument has been a mainstay of the discussion for 30 years now and is to be counted among the important results of the field. We hope that by reviewing the literature and bringing together the relevant examples, we have helped to clarify just why this evidence is so compelling.

To be sure, challenges to established results are welcome. As we have demonstrated, though, B&H do not provide a challenge to these conclusions, inasmuch as they do not address the main empirical arguments for the existence of PRO. They offer a “case overwriting” mechanism that

²⁰ Although it is not our purpose here to provide a full account of case transmission, it is worth noting that such an account is readily available within nonmovement approaches to OC (see Landau 2008 for an analysis that extends to many languages beyond Icelandic).

appears to fail in raising (or any other A-movement) contexts. Likewise, their discussion of nominative case in control infinitives is inconsistent with the facts as reported in all previous studies of the topic. This nominative exhibits the hallmark of standard structural case: it triggers full agreement on MPs. Not only is it not marked (as B&H claim)—it is often the only option available. B&H's exclusive focus on the case marking of FQs/SPs, as opposed to MPs, is a crucial oversight; it renders their data irrelevant to their "defaultness" claim.

The classic literature on Icelandic drew one firm conclusion from the fact that PRO bears case: case cannot distinguish the distribution of lexical DPs from that of PRO. The same conclusion has been reached by scholars studying parallel phenomena in Russian. As far as we can see, this conclusion is inescapable. It is a striking feature of the MTC that for all its claims of breaking with unsubstantiated assumptions of the past, it is intimately predicated on the GB-style Case Filter (reformulated as a theory of the PF interface, but essentially nondistinct in predictions). Evidence that the subject of OC infinitives is case-marked like any other DP, therefore, is lethal to the MTC, as there is no longer any reason why this subject could not be an overt DP, and hence uncontrolled. B&H appear to acknowledge this when they state, "Since we have shown that there is no evidence that multiple structural Cases are assigned to a chain, the argument against a movement theory of control dissolves" (p. 598). Such a claim clearly implies that multiple structural cases—which we have shown to exist—constitute a solid argument against the MTC. Since the MTC's key offering is that it reduces the requirement that PRO be silent to the fact that traces are (typically) unpronounced, the lexicalization problem lies at the very heart of the MTC.

With reference to the Icelandic case facts, and their import for theories of control, B&H note that "it pays to look before one leaps" (p. 592). On this point, we fully concur.

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(Bobaljik)

Department of Linguistics
 University of Connecticut
 337 Mansfield Road, U-1145
 Storrs-Mansfield, CT 06269-1145
 jonathan.bobaljik@uconn.edu

(Landau)

Department of Foreign Literatures and Linguistics
 Ben Gurion University
 P. O. Box 653
 Beer Sheva 84105
 Israel
 idanl@bgu.ac.il