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Control in Icelandic and Theories of Control

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This article examines a pervasive argument against a movement approach to control based on Icelandic concord facts. We show that the argument does not undermine the movement approach when the facts are considered in their entirety. The facts divide into two basic groups: instances of quirky Case assignment and instances of structural Case sharing. The former **require some theoretical adjustments regarding multiply Case-marked NPs** in order to be incorporated into a movement approach. We show that the adjustments needed may be independently required, and may be even more problematic for alternative views on control.

Keywords: Case, concord, control, Icelandic, movement, θ -role

1 Introduction

Recently the nature of control in Icelandic has animated debates in syntactic theory. In particular, Landau (2003:491–493) argues¹ that the control data discussed by Sigurðsson (1991) provide a strong argument against a movement theory of control of the type advocated in Hornstein 1999, 2001, 2003, and in Boeckx and Hornstein 2003, 2004.² We think that control in Icelandic is worth discussing at some length, because, as we show here, Sigurðsson's data appear to raise interesting issues and difficulties for all current approaches to control.

Icelandic exhibits agreement patterns in control structures which, under standard, PRO-based analyses of control, suggest that the antecedent and the controlled PRO carry distinct Case values

This article grew out of material discussed in a seminar on Icelandic syntax that we had the pleasure to co-teach with Kjartan Ottosson at the University of Maryland in the spring of 2003. We would like to thank Kjartan for his invaluable input and for checking the status of countless Icelandic sentences for us. We also would like to thank the other participants in the seminar, the audience at the LSA annual meeting (January 2005), Halldór Sigurðsson, and three very scrupulous *LI* reviewers.

¹ Although to our knowledge Landau 2003 is the first article to make the argument in print, the control facts in Icelandic were repeatedly brought up as problematic for a movement analysis of control when the latter was presented at conferences.

² The movement theory of control we have in mind denies the existence of PRO and claims that ‘control’ arises from movement from one thematic position to the other. We have nothing to say about approaches like those advocated by Kayne (2002) or Martin (1996) that assume the existence of PRO while adopting a movement relation between the controller and the controllee.

(see section 2 for data and discussion). The data all have the same form. In configurations like (1) **the controller, NP¹, has a Case distinct from that realized on a floating quantifier or secondary predicate in the embedded clause. The overt Case on the latter elements is taken to reveal the covert Case on the embedded PRO.** (We remain uncommitted at this point about what the internal structure of the complement clause is. For discussion, see section 3.)

- (1) ... NP¹_{αCase} ... [... PRO¹_{βCase} floating Q/secondary predicate_{βCase} ...]

It is tempting to conclude, on the basis of (1), that control cannot be movement, since under that view, PRO reduces to an unpronounced copy (“trace”) of its antecedent, whose Case value is expected to match that of the “antecedent” copy.³ Put more positively, configurations like (1) have been interpreted as supporting the classical theory of control, which relies on the existence of PRO, an element different in kind from movement-generated (A-)traces, to mediate the control relation manifested in obligatory control constructions.

The aim of this article is to argue that it pays to look before one leaps, even if it is merely to theoretical conclusions. More specifically, we argue that *no* currently entertained theory of control can accommodate the reported Icelandic data without alteration. Thus, these data cannot by themselves argue either *for* a PRO-based account of control or *against* a movement-based account, as is tacitly assumed and occasionally asserted.

Moreover, we believe that the Icelandic data, when properly considered, argue for a stronger conclusion. In section 2, we describe the Icelandic data and show that control structures require Case matching in configurations like (1) when structural Case is at issue. In other words, **the Case clash schematized in (1) is only really possible when at least one of the two relevant Cases is oblique.** This suggests that whatever story we tell for Icelandic must be able to account for the *lack* of Case clash in some instances of control, and we argue that this is very easy to do if one assumes a movement theory and less easy if one does not. (For a related argument, based on **Case concord in Latin and Italian, see Cecchetto and Oniga 2004.**)

In section 3, we focus on the theoretical implications of Icelandic control for a movement theory, and we provide a technical implementation of the movement account applied to Icelandic in the form of multiple Case assignment to chains in well-defined contexts. In section 4, we discuss some of the consequences of our analysis for nonmovement theories of control. Section 5 is the conclusion.

2 Control in Icelandic

Icelandic has a morphologically rich Case/agreement system, and some of that richness shows up in control structures. Consider some basic facts. (For a comprehensive review, see Sigurðsson 2003.) Overt morphological agreement on finite verbs (person, number) and passive past partici-

³ This is not how Landau formulates his argument. Landau takes the existence of Case-marked PRO to be lethal to Hornstein’s view of control. As we show below, it is important to focus the discussion on Case values in order to understand the way control works in Icelandic.

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.

ples (Case, number, gender) can only take place with elements bearing structural Case (2). **Quirky subjects cannot participate in (overt) agreement** in those contexts (3).

- (2) Strákarnir voru aðstoðaðir/*aðstoðað.
the.boys.NOM were.3PL aided.NOM.PL.MASC/NOM.SG.NEUT(default)
'The boys were helped.'
- (3) Strákunum var hjálpað.
the.boys.DAT was.3SG helped.NOM.SG.NEUT(default)
'The boys were helped.'

By contrast, **all elements—both structurally Case-marked and quirkily Case-marked—are able to agree (in Case, number, gender) with secondary predicates and floating quantifiers** (4)–(5).⁴

- (4) a. Strákarnir komust allir í skóla.
the.boys.NOM.PL got all.NOM.PL.MASC in school
'The boys all got to school.'
- b. Strákarnir hittu kennarann drukknir.
the.boys.NOM.PL met the.teacher.ACC.SG.MASC drunk.NOM.PL
'The boys met the teacher drunk (i.e., the boys were drunk).'
- (5) a. Strákunum leiddist öllum/*allir í skóla.
the.boys.DAT bored.3SG all.DAT.PL.MASC/NOM.PL.MASC in school
'The boys were all bored in school.'
- b. Strákarnir sýndu kennaranum óvirðingu drukknium.
the.boys.NOM showed the.teacher.DAT.SG.MASC disrespect drunk.DAT.SG.MASC
'The boys showed the teacher disrespect (when he was) drunk.'

Because secondary predicates and floating quantifiers overtly display the Case of the NPs they relate to, Sigurðsson (1991) uses them to address the question of which Case, if any, the controlled element bears. (Sigurðsson assumes that the controlled element is PRO, and phrases the question in terms of PRO, but we want to formulate it in terms as neutral as possible.)

Sigurðsson's interpretation of the facts is that **the case morphology on the floating quantifier/secondary predicate suggests that the controlled element in Icelandic can bear either structural or quirky Case**, as sentences (6) and (7) show.⁵

⁴ This agreement is often called *concord*. We would like to avoid using this term, which is less theory-neutral than *Case matching*. At this point, we are agnostic about how Case matching is achieved (e.g., by direct agreement between controller (or PRO under some theories) and FQ/SP; by simultaneous assignment to controller/PRO and FQ/SP; etc.). In section 4, we commit ourselves to a specific implementation of Case matching. For now, we ask the reader to understand concord/agreement phenomena as simply denoting occurrences of identical/matching features on NPs and FQs/SPs.

⁵ An important caveat is in order here. Thráinsson (1979:chap. 5) notes that "Equi [control] constructions are frequently rather bad when the deleted subject [i.e., PRO] should have been an oblique (or non-nominative) one." Indeed, Kjartan Ottosson (pers. comm.) observes that there is a lot of uncertainty concerning the Case marking of FQs/SPs in control complements. This is confirmed by Sigurðsson (1991:332), who reports that "many speakers are reluctant to embed floated quantifiers into control infinitives, presumably for scope reasons." Sigurðsson's suggestion is puzzling since the corresponding English sentences with floating quantifiers are fine. This strongly suggests that something less

- (6) Jón bað Bjarna að koma einan.
Jon.NOM asked Bjarni.ACC to come alone.ACC
'Jon asked Bjarni to come alone.'
- (7) Jón bað Bjarna að leiðast ekki einum.
Jon.NOM asked Bjarni.ACC to be.bored not alone.DAT
'Jon asked Bjarni not to be bored alone.'

Closer examination reveals that Icelandic offers the whole range of logical possibilities when we look at the Case of the FQ/SP (floating quantifier/secondary predicate) in the embedded clause in conjunction with the Case of the controller. (In what follows, we restrict attention to the case morphology of elements that we can see on the surface, leaving the question of the existence and Case marking of PRO for subsequent sections.) Apart from "structural Case on the antecedent and structural Case on the FQ/SP" (6) and "structural Case on the antecedent and quirky Case on the FQ/SP" (7), Icelandic allows "quirky Case on the antecedent and structural Case on the FQ/SP" (8) and "quirky Case on the antecedent and quirky Case on the FQ/SP" (9).⁶

- (8) Bjarna langaði ekki til að hlaupa einn.
Bjarni.ACC wanted not to to run alone.NOM
'Bjarni wanted not to run alone.'
- (9) Bjarna langaði ekki til að leiðast einum.
Bjarni.ACC wanted not to to be.bored alone.DAT
'Bjarni wanted not to be bored alone.'

Summing up so far, we have observed the following situations:

- (10) structural NP ... [structural FQ/SP ...]
- (11) structural NP ... [quirky FQ/SP ...]

universal than scope is at issue. In fact, Sigurðsson's claim is only valid for instances of quirky-Case-marked floating quantifiers, as structurally Case-marked floating quantifiers inside control complement clauses do not give rise to marginality.

- (i) Strákarnir vonast til [að PRO koma allir].
the.boys.NOM hope to to come all.NOM
'The boys were hoping to all come.'

Despite these rather important reservations concerning the acceptability of the relevant Icelandic data, we will restrict attention to those speakers of Icelandic who have internalized the empirical picture described in Sigurðsson 1991. For other speakers, such as Thráinsson, Icelandic behaves exactly like English.

⁶ Instances of object control constructions where the object controller bears quirky Case are very limited (we suspect that this is due to the very narrow semantic range of verbs taking quirky objects (mostly experiencer predicates)). Kjartan Ottosson (pers. comm.) provides the following example:

- (i) María skipaði Jóni að vera þægur.
Maria ordered Jon.DAT to be well.behaved.NOM
'Maria ordered Jon to be well behaved.'

Examples like (i) can be readily accommodated under our analysis. They would be derived along the lines of (32)–(33), except that matrix T⁰ would not be involved; matrix V⁰ would be the final landing site of the controller.

(12) quirky NP ... [structural FQ/SP ...]

(13) quirky NP ... [quirky FQ/SP ...]

Note that when we say “{structural, quirky} Case on the antecedent and {structural, quirky} Case on the FQ/SP,” we do not necessarily mean that the Case values must be identical. For example, they differ in (9): quirky *accusative* NP controller and quirky *dative* FQ/SP. However, when the full range of Case values is taken into account, the picture becomes more complex and interesting. In particular, (10) splits into *two* possibilities, as illustrated in (14) and (15).

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

(15) Jón vonast til [að koma einn/*einan].
Jon.NOM hopes to to come alone.NOM/alone.ACC
‘Jon hopes to come alone.’

As (14) indicates, if the antecedent is accusative, the floating quantifier may be either accusative or (quite marginally, for many speakers⁷) nominative. But, as can be gathered from (15), **if the antecedent is nominative, then the floating quantifier can only be nominative.** This, to us, suggests some interdependence between the structural Case of the antecedent and the structural Case of the FQ/SP.

This interdependence is supported by (14): when the structural Case value of the antecedent is accusative, 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.⁸

The appearance of default nominative Case in nonfinite contexts is actually quite common in Icelandic. For example, it is attested in other nonfinite contexts such as (16), where the nominative element fails to trigger agreement on the finite verb, unlike true structural nominative. (See Boeckx 2000, 2003b, Sigurðsson 1996, 2000, 2003 for extensive discussion of such examples. On default nominative Case in Icelandic, see also Frampton and Gutmann 2006. On default Case, see Schütze 2001b.)

(16) a. Þeim hefur alltaf fundist [við gafud].
 them.DAT have.3SG always found we.NOM boring
 ‘They have always found us boring.’
 b. Mér fannst/*fundust [henni leiðast þeir].
 me.DAT seemed.3SG/3PL her.DAT be.bored they.NOM
 ‘I thought she was bored with them.’

⁷ Halldór Sigurðsson (pers. comm.) indicates that for him, the nominative form in (14), (17), (18), and (20) is fully acceptable. Our interpretation of his judgments is that he has generalized the use of default nominative Case in nonfinite contexts.

⁸ See Andrews 1982 and Hornstein 1990 for claims along those lines.

What is important for present purposes is that **once the rather marked availability of default nominative Case on floating quantifiers is factored out, (10) is just like English: the same structural Case must appear on the controller and an embedded FQ/SP in a control structure.**

(11) behaves as expected: structural Case on the antecedent may be either nominative (17) or accusative (18), and Case on the FQ/SP must be quirky (dative in the example at hand).⁹

- (17) Jón bað Bjarna að leiðast ekki einum/*einan/*einn.
 Jon.NOM asked Bjarni.ACC to be.bored not alone.DAT/ACC/NOM
 ‘Jon asked Bjarni not to be bored alone.’

- (18) Jón vonast til [að leiðast ekki einum/*einan/*einn].
 Jon.NOM hopes to to be.bored not alone.DAT/ACC/NOM
 ‘Jon hopes not to be bored alone.’

For the situation in (12), the range of quirky elements is not surprising. What may be unexpected is that structural Case is limited to nominative. Witness (19).

- (19) a. Bjarna langaði ekki til að hlaupa einn/*?einan.
 Bjarni.ACC wanted not to to run alone.NOM/ACC
 ‘Bjarni wanted not to run alone.’
 b. Bjarna leiddist að hlaupa einn/*?einum.
 Bjarni.DAT was.bored to run alone.NOM/DAT
 ‘Bjarni was bored to be running alone.’

Again, 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.

Finally, (13), illustrated in (20), shows the full range of quirky Case values for both the antecedent and the FQ/SP, and no interdependence between the two elements. Nominative Case (or accusative Case) on the floating quantifier is clearly ruled out. Quirky Case matching the Case of the antecedent on a floating quantifier is ruled out as well.

- (20) a. Bjarna langaði ekki til að leiðast einum/*einan/*einn.
 Bjarni.ACC wanted not to to be.bored alone.DAT/ACC/NOM
 ‘Bjarni wanted not to be bored alone.’
 b. Bjarna leiddist að vanta einan/*einum/*einn í veisluna.
 Bjarni.DAT was.bored to be.missing alone.ACC/DAT/NOM from.the.party
 ‘Bjarni was bored not to be alone at the party.’

Because structural Case values are those that reveal something about structure, and about derivations, let us rewrite (10)–(13) as (21)–(24) (glossing over the idiosyncrasies of quirky Case values).

⁹ Nominative Case on floating quantifiers in (18) is sometimes reported to be ?* as opposed to *. Accusative Case in the same context is clearly *.

- (21) a. nominative NP ... [nominative FQ/SP ...]
 b. accusative NP ... [accusative FQ/SP/(marginally) default nominative FQ/SP]
- (22) a. nominative NP ... [quirky FQ/SP ...]
 b. accusative NP ... [quirky FQ/SP ...]
- (23) quirky NP ... [default nominative FQ/SP ...]
- (24) quirky NP ... [quirky FQ/SP ...]

There are some noteworthy patterns in the structures summarized in (21)–(24).

What comes out of this is the following: (a) Icelandic speakers strongly prefer to *match* the Cases on the antecedent and on the FQ/SP when structural Case is involved and (b) they require the local quirky Case on FQs/SPs when available and strongly reject remote quirky Case matching. Thus, speakers clearly keep instances of quirky Case separate from structural Case configurations (see footnote 5).

As already noted, when it comes to structural Case values, Icelandic control is just like English control. The only genuine instances of multiple Case assignment arise where multiple quirky Case values are assigned. However, if quirky Case is a kind of inherent Case, as conventionally assumed (i.e., a Case that is tightly connected to θ -role assignment as opposed to agreement, as Chomsky (1986) argued),¹⁰ the Icelandic facts are once again not at all that different from facts of English. The controlled element in English ('PRO' under the standard view) bears a θ -role distinct from that of its antecedent, just as the controlled element in Icelandic (as reflected on the FQ/SP) bears a quirky Case value distinct from that of its antecedent. The only difference between English and Icelandic is that, unlike English, Icelandic morphologically reflects θ -marking in its Case system.

3 Control as Movement

Armed with the facts schematized in (21)–(24), we can now return to the main theoretical issue of this article: how does the movement theory of control fare in the face of the Icelandic facts?

Although Landau (2003) claims that the Icelandic control facts are incompatible with a movement theory, we would like to argue otherwise. The movement analysis assumes that a chain giving rise to a control structure bears one structural Case (just like in raising constructions) and two θ -roles (unlike in raising). For configurations in which only structural Case is at issue, this implies that the Case on the FQ/SP should match that on the controller. Modulo the rather marked option of default nominative Case on FQs/SPs, this is exactly what we find. Furthermore, since the essence of the movement theory of control is that it allows—in fact, requires—multiple θ -role assignment to a single chain, examples of multiple inherent/quirky Cases in control structures in Icelandic simply follow from the connection between θ -role and inherent Case.

This point bears emphasis. The argument against a movement theory of control based on Icelandic rests on the premise that the movement theory cannot be right because only one Case may

¹⁰ See, for example, Freidin and Sprouse 1991.

be assigned to a chain (Landau's argument). Call this the *chain uniformity argument*. Specifically, Icelandic shows that two Cases are assigned. Since two Cases are assigned, and since two copies of one and the same element cannot bear distinct Cases, two chains must be involved: one headed by PRO, and the other headed by PRO's antecedent. Granted the premise, this is a good *prima facie* argument for an independent PRO. However, the premise doesn't hold. The argument raised against the movement theory does not make allowance for the central theoretical claim of the movement theory of control, namely, that movement into θ -positions is licit in principle. Once that assumption is granted, it is not clear why we should keep to the assumption that only one inherent Case may be assigned per chain, given the thematic nature of inherent Case. And, 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.

Two questions remain to be addressed by the movement analysis of control: (Q1) why only one Case value is reflected on the NP (the other Case value, if any, being realized only indirectly on FQs/SPs), and (Q2) why that Case has the value it does.

Before getting into technical details, we would like to observe that we take it as a theoretical strength of the movement theory that the *kind* of answer we must provide to questions like those just raised is very clear. For instance, for Q2, it seems sufficient to assume that whatever ensures that the highest copy of a moved element is pronounced will ensure that the Case assigned by the highest Case assigner will surface on the moved NP. The Case on an FQ/SP would be akin to pronouncing an element stranded under movement. Its morphology will be determined by its immediate environment (e.g., by the adjacent verb).¹¹

Let us now be a bit more specific about the technical implementations we would like to pursue. Regarding Q1, let us assume, along with much recent work, that Case assignment takes place strictly cyclically, as soon as the proper environment is formed—that is, as soon as the probe is introduced into the derivation.¹² For Icelandic, this means specifically that quirky Case is assigned under θ -role assignment (first Merge), whereas structural Case is assigned upon introduction of the relevant functional head (*v* for accusative, (finite) *T* for nominative).

Regarding the "Case-matching" facts discussed in section 2, we would like to take agreement on FQs/SPs to be similar in nature to past participle agreement as analyzed in Chomsky 2004, Hiraiwa 2001, 2004, and Boeckx 2003a,c, 2004. That is, we would like to analyze these facts as an instance of multiple Agree—not as a direct agreement relation between an NP and the FQ/SP, but as an indirect relation between the two, mediated by a Case-assigning head. In other words, Case matching arises as a result of simultaneous valuation of the NP and the FQ/SP by a functional head *F*, as schematized in (25).¹³ (For concreteness, we assume that the relevant NP

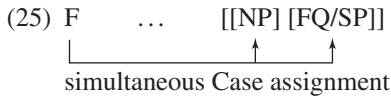
¹¹ The situation is reminiscent of theories of resumption that treat resumptive pronouns as overt copies of their antecedents. A *wh*-antecedent does not force *wh*-morphology on the resumptive pronoun.

¹² This is sometimes referred to as the "virus" theory of the cycle, following Uriagereka (1998).

¹³ We do not claim that all instances of the agreement configurations considered here are cases of multiple Agree. See Boeckx 2004:33n6 for empirical arguments that some such cases can be achieved directly (agreement between NP and predicate) or indirectly (multiple Agree).

It is in fact not implausible to think that different features may participate differently in such agreements: say, interpretable/valued features like ϕ on NP may agree directly with secondary predicates, while uninterpretable/unvalued

and the FQ/SP enter the derivation as a small clause, in a mutual c-command relation. An adjoined structure, where the FQ/SP is an XP adjoined to the NP it modifies, would also be compatible with our analysis.)



Once this assumption concerning the nature of Case matching is made, it follows that FQs/SPs will bear quirky Case if the relevant NP receives quirky Case upon first Merge; otherwise, they will have to wait until the probe assigning structural Case is introduced.¹⁴ The two possibilities are schematized in (26)–(31). (Relevant examples are repeated with their corresponding schemas; original example numbers are in brackets. (27) is the derivation we propose for (26), (29) is the derivation we propose for (28), and (31) is the derivation we propose for (30).)¹⁵

- (26) a. nominative NP ... [quirky FQ/SP ...] (= (22a))
 b. Jón vonast til [að leiðast ekki einum]. (= (18))
 Jon.NOM hopes to to be.bored not alone.DAT
 'Jon hopes not to be bored alone.'
- (27) $NP_i T^0 \dots t'_i V^0 \dots [T_{inf} \dots V^0 [t_i FQ]]$
 Step 1: embedded V^0 assigns a θ -role/quirky Case to NP and quirky Case to FQ
 Step 2: matrix V^0 attracts NP and assigns a θ -role to it
 Step 3: matrix T^0 assigns structural Case to NP, which moves to check EPP
- (28) a. quirky NP ... [quirky FQ/SP ...] (= (24))
 b. Bjarna langaði ekki til að leiðast einum. (= (20a))
 Bjarni.ACC wanted not to to be.bored alone.DAT
 'Bjarni wanted not to be bored alone.'
- (29) $NP_i T^0 \dots t'_i V^0 \dots [T_{inf} \dots V^0 [t_i FQ]]$
 Step 1: embedded V^0 assigns a θ -role/quirky Case to NP and quirky Case to FQ
 Step 2: matrix V^0 attracts NP and assigns a θ -role/quirky Case to it
 Step 3: NP raises to matrix T^0 to check EPP

features like Case—on which we focus here—may come to be shared via multiple Agree. We hope to return to these issues in future work.

¹⁴ It is plausible to assume that this delay makes room for a marked, default Case assignment option. See below.

¹⁵ In all the derivations that follow, we remain agnostic about whether the controller moves through the embedded Spec,TP (the position standardly assumed to be PRO's final landing site). The issue of movement through the specifier position of a nonfinite clause touches on the nature of the Extended Projection Principle (EPP), which is tangential to the questions raised in this article. As far as we can tell, our results are unaffected by movement of the controller through embedded Spec,TP or lack thereof.

(30) a. nominative NP ... [nominative FQ/SP ...] (= (21a))

b. Jón vonast til [að koma einn]. (= (15))

Jon.NOM hopes to to come alone.NOM

'Jon hopes to come alone.'

(31) NP_i T⁰ ... t'_i V⁰ ... [T_{inf} ... V⁰ [t_i FQ]]

Step 1: embedded V⁰ assigns a θ-role to NP

Step 2: matrix V⁰ attracts NP and assigns a θ-role to it

Step 3: matrix T⁰ assigns structural nominative Case to NP and FQ by multiple Agree

Now because quirky Case assignment cannot take place long-distance (a fact about inherent Case in general), an embedded FQ/SP will have to bear default (nominative) Case (a morphological requirement about Icelandic) if no quirky Case is assigned in the embedded clause and no structural Case is assigned in the matrix clause (32)–(33).

(32) a. quirky NP ... [nominative FQ/SP ...] (= (23))

b. Bjarna leiddist að hlaupa einn. (= (19b))

Bjarni.DAT was.bored to run alone.NOM

'Bjarni was bored to be running alone.'

(33) NP_i T⁰ ... t'_i V⁰ ... [T_{inf} ... V⁰ [t_i FQ]]

Step 1: embedded V⁰ assigns a θ-role to NP

Step 2: matrix V⁰ attracts NP and assigns a θ-role/quirky Case to it

Step 3: NP raises to matrix T⁰ to check EPP

Step 4: FQ receives default Case

(26)–(33) capture all the facts in (21)–(24).

As for the Case value that surfaces on the moving element (Q2 above), it is always the highest Case value. We claim that this follows from the same mechanism that ensures that the highest copy in a chain is pronounced (see especially Nunes 1999, 2004 for extensive discussion). A more subtle question (Q1) is this: why don't the two Case values surface in situations like (21)–(24)? We could stipulate this as a morphological fact.¹⁶ Alternatively, we could follow Marantz (1991) and Harley (1995) and argue that Case values are assigned in the morphological component. One way of formalizing this intuition is to say that Case is checked in narrow syntax (i.e., Case gets valued as [+Case-marked] as opposed to [–Case-marked], but it is morphologically fixed (as nominative, dative, etc.) upon Spell-Out (or Transfer, in Chomsky's (2004) terminology)). This would fit nicely with a Distributed Morphology view of things. Say that this is so. It is then plausible to assume that Case is morphologically realized only once (just as only

¹⁶ This has been done for exceptional Case marking (ECM) in Korean-style languages by those who offer a raising/Case-stacking analysis (see Yoon 1991).

one member of a chain is pronounced),¹⁷ according to the context in which the NP is pronounced (highest copy).¹⁸

Let us now turn to a question we have not yet addressed: why can nominative Case be assigned indirectly in control *as a rather marked option* (accusative Case on the moving element and nominative on secondary predicates as in (21b)), whereas raising cannot avail itself of this default nominative option (see (34))?¹⁹

- (34) Jón taldi Bjarna_j hafa hlaupið einan_j/*einn_j.
 Jon.NOM considered Bjarni.ACC have run alone.ACC/NOM
 ‘Jon considered Bjarni to have run alone.’

One way to make sense of the contrast is by looking at how the derivations proceed in (21b) and (34). For (34), we propose the following derivation:

- (35) NP_i v⁰ . . . V⁰ . . . [T_{inf} . . . V⁰ [_i FQ]]
 Step 1: embedded V⁰ assigns a θ -role to NP
 Step 2: matrix v⁰ assigns structural accusative Case to NP and FQ by multiple Agree
 Step 3: NP raises to matrix Spec,vP (to check EPP)

For (21b), repeated with the appropriate example, we propose the derivation in (37) (cf. (29)).

- (36) a. accusative NP . . . [accusative FQ/SP/default nominative FQ/SP . . .] (= (21b))
 b. Jón bað Bjarna að koma einan/?einn. (= (14))
 Jon.NOM asked Bjarni.ACC to come alone.ACC/NOM
 ‘Jon asked Bjarni to come alone.’

¹⁷ Let us draw an analogy. In the *SPE* system (Chomsky and Halle 1968), a syllable may be marked for [+stress] multiply (on more than one cycle), but this does not mean that that syllable is more stressed than a syllable that receives stress only once (as in monosyllabic words, where there is only one cycle).

¹⁸ The present remarks may help to explain why morphological Case stacking is possible (as in Korean (i)).

(i) Na-eykey-ka paym-i mwusepta.
 I-DAT-NOM snake-NOM fearful
 ‘(Only) I am afraid of snakes.’

As discussed by Yoon (1996, 2004), Schütze (2001a), Jo (2002), and Hong (2002), Case stacking in Korean induces very special interpretive effects such as topic/focus reading. It is not implausible to think that multiple Case values may be overtly realized if each value is associated with a special output effect.

¹⁹ Such a disparity between control and raising is sometimes taken to be lethal to a movement theory of control. Consider for instance Culicover and Jackendoff’s (2001) argument that the movement theory of control is inadequate because control in nominals is licit (i), but raising is not (ii).

(i) John’s attempt to leave
 (ii) *John’s appearance to leave

As we point out in Boeckx and Hornstein 2003:sec. 4, any contrast between raising and control would be lethal if a *raising* theory of control were entertained. But no one (rightly) entertains such a theory. What is entertained is a *movement* theory of control. The fact that raising is the prototypical case of A-movement is a useful thing, as it can serve as a theoretical reference at various points, but because the framework we assume (the principles-and-parameters approach) dispenses with construction-specific rules, the parallelism between control and raising should be abandoned when the subtle differences between the two become crucial.

(37) $NP_i V^0 \dots t'_i V^0 \dots [T_{inf} \dots V^0 [t_i FQ]]$

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

Note that upon structural Case assignment, the two goals are in different clauses in (37) (because of remerger of NP into the matrix VP for thematic reasons). This is not the case in (35). We speculate that the marked default nominative Case on the floating quantifier in (14)/(36b) is a distance effect. That is, in contrast to what we find in the configurations of multiple Agree discussed above, where both the NP and the FQ/SP are in a small clause, mutual c-command relation, in (37) the NP and the floating quantifier are separated by an infinitival clause boundary. Although, as far as we can see, nothing in the existing formulations of multiple Agree inherently blocks multiple Agree across clauses, speakers who marginally accept nominative in (36) may relax the obligatoriness of multiple Agree in such cases. This is just a speculation, and clearly not a deep explanation. But it is important to bear in mind that nominative assignment in (36) is marginal. So we may not want to let this marked option emerge from a deep mechanism of the grammar. Treating nominative assignment in (36) as a relaxation of the obligatoriness of multiple Agree resulting from the distance between the two targets of Agree is one way of capturing marginal facts without deriving them in a deep way.

Let us take stock of what we have done in this section. We have proposed a possible implementation of Case stacking in control. We have addressed technical issues that arise once Case stacking is involved: how many Case values are allowed to surface, and, if not all of them can surface, which one does? In the course of answering those questions, we have made the following two assumptions: (a) Case is valued as soon as possible, and (b) Case values are fixed morphologically in the PF component. In addition, we have assumed, as is standard, that inherent (in our case, quirky) Case cannot be assigned long-distance, and that secondary predicates require some Case/ ϕ -feature marking (sometimes these are default markings) in Icelandic. It is important to note that such assumptions are not specific to control. In fact, all of them have been proposed independently.

These assumptions turned out to be sufficient once the core factual description was made in section 2: that multiple Case assignment is available only when quirky Case is.²⁰ In the absence of quirky Case, structural Case is shared by the controller and the FQs/SPs.

4 Nonmovement Alternatives

In the previous section, we developed an analysis of the control facts in Icelandic under a movement theory of control. In this section, we will briefly discuss some implications of the same

²⁰ The same holds true in Korean Case-stacking configurations. The only acceptable examples involve stacking a structural Case on top of a quirky one. As mentioned in footnote 18, Korean Case stacking has discourse effects such as introducing a focus or topic reading. However, which structural Case one finds on top of the quirky Case has been shown to fall under Case theory. See Hong 2002, Jo 2002, and Yoon 2004 for discussion. This overt order makes sense if quirky Case is lexical while structural Case is determined by an element outside the domain of a lexical head.

control facts for nonmovement alternatives. The alternatives we have in mind are the null Case approach (Chomsky and Lasnik 1993) and the classic account based on the PRO Theorem (Chomsky 1981). (We assume basic familiarity with these approaches and will not review them here.)

At first sight, the null Case approach to control appears adequate, because the essence of the theory is that it allows—in fact, requires—PRO to be Case-marked to be licensed. This is exactly what the Icelandic facts point to. However, upon closer scrutiny, the Icelandic facts under discussion pose a nontrivial problem for the null Case theory. This is because the null Case approach requires PRO to bear a specific Case value (dubbed “null”), and not just any Case. Otherwise, proponents of the null Case theory have no explanation for why PRO is null, a fact that any theory of control must address and answer. Of course, proponents of the null Case theory could claim, as we did above, that control in Icelandic requires multiple Case assignment to PRO: null Case (ensuring the phonetically null character of PRO), and some other Case (structural or inherent/quirky). But this supports our claim that no extant theory of control can capture the Icelandic facts without modifications.

The null Case approach faces one problem that is worth mentioning. In contrast to our proposal above, the proposal that null Case can stack leads to the following problem when structural Case occurs on FQs/SPs within control clauses. It is unclear how the structural Case assigner in the matrix clause would be allowed to see past a null-Case-bearing PRO to assign (nonnull) structural Case to the secondary predicate without violating Minimality. The problem is schematized in (38).

$$(38) \text{ antecedent NP}_{[\text{structural Case}]} \dots [\text{PRO}_{[\text{null Case}]} \dots \text{FQ}_{[\text{structural Case}]}]$$

In short, the fact that structural Case sharing occurs in control clauses follows neatly from a movement account but has no ready explanation in a PRO-based account.

What of a PRO Theorem–based approach? Sigurðsson (1991) argued that the Icelandic data that he reviewed required abandoning the PRO Theorem approach to control. This seems right if it is assumed that Case is assigned under government and that PRO appears only in ungoverned positions—for then the fact that PRO can bear structural Case requires that it be both governed and ungoverned, not a happy pair of requirements. However, given the discussion above concerning Case on a movement approach, another possibility arises.²¹ Suppose we couple a PRO Theorem approach with the assumption that Case assignment may take place not under government, but in some other way—say, under θ -role assignment for inherent Case, or long-distance agreement for structural Case as we proposed for the movement account. This would allow PRO to be Case-marked (for quirky Case), while still remaining ungoverned.

This suggestion faces a serious problem, however. It loses the explanation for the facts that PRO is null and that full lexical NPs cannot occupy positions occupied by PRO (unless we stipulate that PRO remains Caseless under long-distance structural Case assignment, which would

²¹ This suggestion was made by an anonymous reviewer.

then target the FQ/SP only). PRO Theorem accounts explained the null status of PRO by assuming that Case was a necessary condition for phonetic visibility. If Case is assigned under government, as was standardly assumed at the time, then PRO, being in an ungoverned position, could not get Case and so would be expected to be phonetically null. Similarly, phonetically full NPs need Case to be licensed but cannot get it in an ungoverned position and so could not appear where PRO did. However, if Case is divorced from government, as proposed here, then this tie between Case and phonetic visibility is broken and we can no longer explain either why PRO is null or why full lexical NPs cannot occupy these positions. That is, while Case-marked PRO is not inherently incompatible with the PRO Theorem approach, it is the phonetically null character of PRO and the fact that positions occupied by PRO cannot be occupied by full NPs that fit poorly with a PRO Theorem-based account that dispenses with the assumption that Case is assigned/checked under government.

In short, none of the current approaches to control account for the Icelandic Case facts as they stand. Thus, the control facts in Icelandic are, at the very least, no less problematic for nonmovement theories of control than they are for movement-based approaches.

5 Conclusion

In this article, we have reviewed a pervasive, influential, underground argument against a movement approach to control based on Icelandic concord facts. We have shown that this inchoate argument does not undermine the movement approach when the facts are considered in their entirety. The facts divide into two basic groups: instances of quirky Case assignment and instances of structural Case sharing. The former require some theoretical adjustments with regard to multiply Case-marked NPs in order to be incorporated into a movement approach. We have shown that the needed adjustments may be independently required. Furthermore, we have argued that no extant theory of control can accommodate the Icelandic facts without (similar) adjustments.

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