

What it means to Agree: The behavior of case and phi features in Icelandic control

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1. Introduction

Goals of this Presentation

- Investigate the nature of the control relationship and argue that there is an obligatory agreement relationship between two phrasal elements, the controller and PRO.
- Build on previous accounts of control as an Agree relationship.
- Divorce the relationship that establishes control and phi feature sharing from the relationship that assigns case.
- Illustrate a structural asymmetry between ‘promise’ and other control predicates and show how this asymmetry affects case assignment.

2. Overview of the Phenomenon

The Data

- In Icelandic, predicate adjectives agree in case, gender, and number with the subjects they modify.¹

(1) a. þeir (**Nom.masc.pl.**) eru ríkir (**Nom.masc.pl.**)
they (masc) are rich
‘They are rich.’

b. hún (**Nom.fem.sg.**) verður rík (**Nom.fem.sg.**)
she will-be rich
‘She will be rich.’

(Andrews 1982:22)

- This pattern of agreement also appears in control contexts.
- The features of PRO are visible on items that it ostensibly agrees with.

(2) a. hana_i (**Acc.fem.sg.**) langar til að PRO_i vera vinsæla (**Acc.fem.sg.**)
she longs toward to to-be popular
‘She longs to be popular.’

(Andrews 1982:26)

b. hún (Nom) skipaði honum_i (**Dat.masc.sg.**) að PRO_i vera góðum (**Dat.masc.sg.**)
she ordered him to to-be good
‘She ordered him to be good.’

(Andrews 1981:453)

c. ég tel hana_i (**Acc.fem.sg.**) vonast til að PRO_i vera vinsæla (**Acc.fem.sg.**)
I believe her to-hope toward to to-be popular
‘I believe her to hope to be popular.’

(Andrews 1981:26)

- Given the agreement pattern in (1), we can conclude that the adjective overtly reflects the features of PRO.
- PRO bears standard case – i.e., the case of overt lexical DPs (see Andrews 1981, 1982; Sigurðsson 1989, 1991; and Landau 2004, 2006).
- Things aren't so simple. There is optionality in (2). The adjective bears the case of the controller or bears Nominative.

- (3)ⁱⁱ
- a. hana_i(**Acc.fem.sg.**) langar til að PRO_i vera vinsael(**Nom.fem.sg.**)/vinsaela(**Acc.fem.sg.**)
 she longs towards to to-be popular
 'She longs to be popular.' (Andrews 1982:26)
- b. hún (Nom) skipaði honum_i(**Dat.masc.sg.**) að PRO_i vera góður(**Nom.masc.sg.**)/góðum(**Dat.masc.sg.**)
 she ordered him to to-be good
 'She ordered him to be good.' (Andrews 1981:453)
- c. ég tel hana_i(**Acc.fem.sg.**) vonast til að PRO_i vera vinsaela(**Acc.fem.sg.**)/vonsael(**Nom.fem.sg.**)
 I believe her to-hope toward to to-be popular
 'I believe her to hope to be popular.' (Andrews 1982:26)

- (4)ⁱⁱⁱ Jón bað Bjarna(**Acc.masc.sg.**) að koma einan(**Acc.masc.sg.**)/??einn (**Nom.masc.sg.**)
 Jon asked Bjarni to come alone
 'Jon asked Bjarni to come alone.' (Boeckx and Hornstein 2006:595)

- What we can conclude from (3) and (4):
 - **Obligatory** agreement in phi features between the controller and PRO.
 - **Optional** agreement in case feature between the controller and PRO.
- There is a third option for the case marking on the lower clause adjective. It can be quirky case marked (with a quirky case that is distinct from the controller). The phi features still agree.

- (5) Bjarna langaði ekki til að leiðast einum/*einan/*einn
 Bjarni.**Acc(masc.sg.)** wanted not to to be.bored alone.**Dat(masc.sg.)/*Acc/*Nom**
 'Bjarni wanted not to be bored alone' (Boeckx and Hornstein 2006:596)

- 'Bored requires a Dative subject. In (5) there is quirky Accusative in the matrix clause and quirky Dative in the lower clause.
- **Another complexity:** With 'promise', PRO and the adjective in the lower clause necessarily bear Nominative case.

- (6) Þeir telja hana_i(**Acc.fem.sg.**) hafa lofað honum(Dat) að PRO_i vera góð(**Nom.fem.sg.**)/góða(**Acc**)
 they believe her to-have promised him to to-be good
 'They believe her to have promised him to be good.' (Andrews 1981:453)

- Obligatory agreement of phi features between the controller and PRO.
- Necessary non-agreement in case.

The Puzzle

<i>Phi Feature Agreement</i>	Necessary
<i>Case Agreement</i>	Optional
• Blocked with ‘promise’	
• Blocked when lower clause verb has quirky subject	

Why is this data interesting?

- There is a split between case and phi features.
 - **Why should PRO ever bear the case of the controller?** We do not have evidence of other chains sharing a case feature, e.g., reflexives.
- Case optionality only appears in control contexts. No optionality in ECM and raising.

(7) þeir segja hana(Acc) virðast (vera) ríðka(Acc)/*rik (Nom)
they say her to-seem (to-be) rich (Andrews 1982:25)

(8) Jón taldi Bjarna hafa hlaupið einan/*einn
Jon.Nom considered Bjarni.Acc have run alone.Acc/Nom
‘Jon considered Bjarni to have run alone.’ (Boeckx and Hornstein 2006:601)

- There is something special about the structure of ‘promise’ that forces it to behave differently.

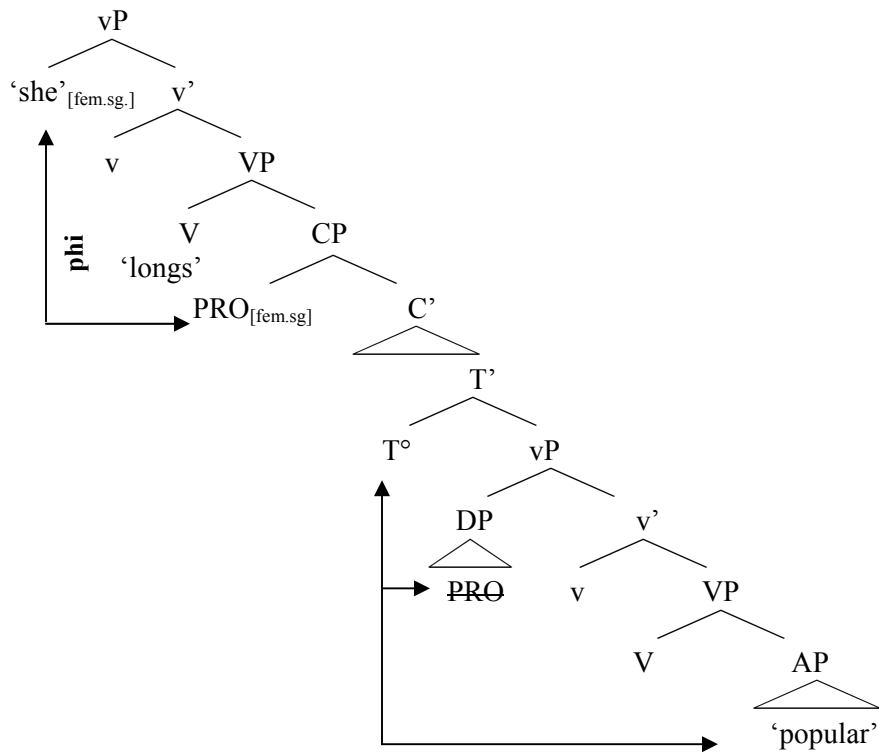
The Proposal in Brief

- Phi features are always transmitted from the controller to PRO via a direct Agree relationship.
- When PRO bears the case of the controller, the head that checks the controller’s case enters into a multiple Agree relationship with the controller and PRO and also checks the case of PRO.
- When PRO bears Nominative, the head that checks the controller’s case only Agrees with the controller.
- When PRO bears quirky case, the head that checks the controller’s case only Agrees with the controller. PRO is not visible for case-checking by a higher head because case has been checked in the lower clause.
- In control with ‘promise’, phi features are transmitted via a direct Agree relationship between the controller and PRO. However, the dative object blocks the case checking head from Agreeing with PRO.

3. Theoretical Assumptions

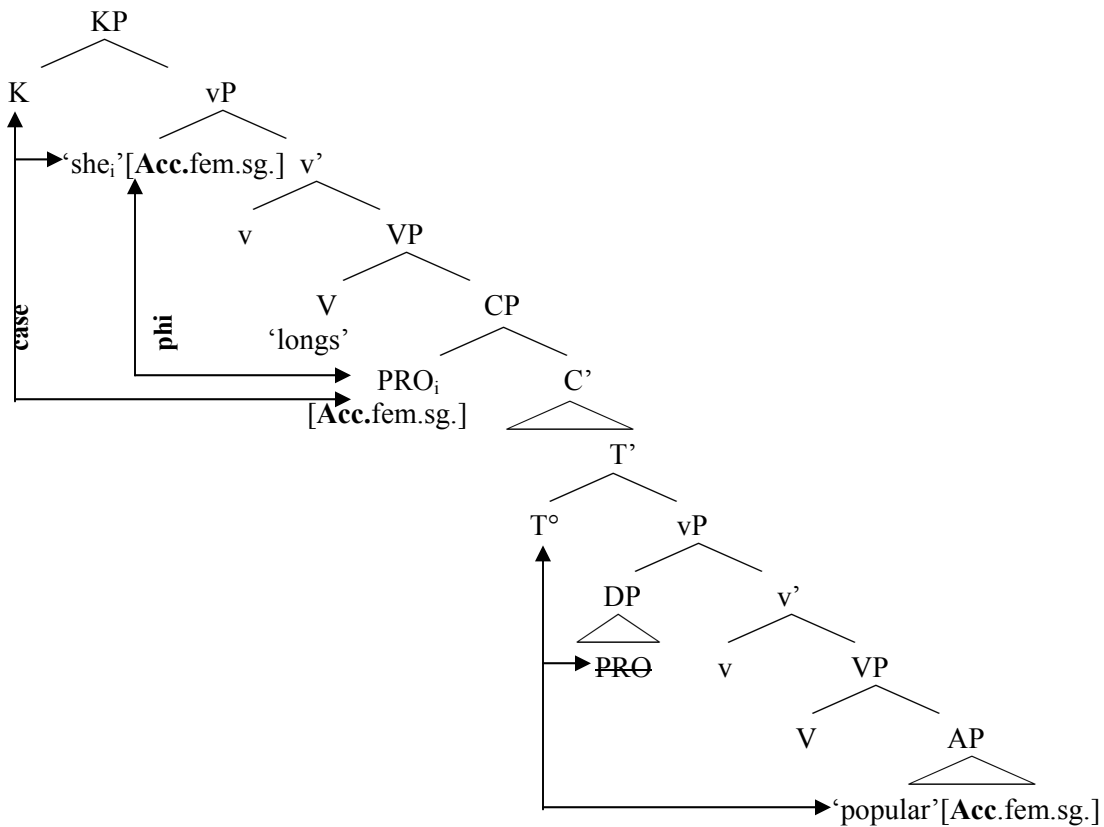
- (9) PRO has a [-R] feature: Lexical DPs and *pro* are [+R]. The [-R] feature forces PRO to enter into an agreement relationship with the controller. (Landau 2004, 2006)
- The result of this agreement relationship is that PRO and the controller necessarily bear the same phi features.

(14)^{iv}



- Controller is merged in Spec,vP of the higher clause.
- PRO moves to the edge of the phase – Spec, CP – and Agrees with the controller.
- PRO inherits the controller's phi features.

(15)

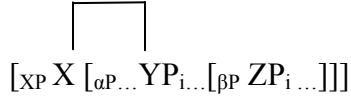


- K is any case-assigning functional head.
- In (15), K enters into two Agree relationships: K assigns quirky Accusative to the controller and to PRO.
- **Why can K assign case to PRO?** There is no source of case for PRO in the infinitival clause. PRO and the controller bear the same referential index.

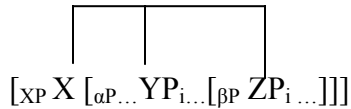
- (16) **Agree:** A higher head X° or phrase XP values the features of the closest Y°/YP that has unvalued features. X°/XP optionally values the features of a farther away Z°/ZP that bears the same index as Y°/YP if Z°/ZP is visible for feature valuation. Agree between X°/XP and Z°/ZP is licensed only if there is no intervening head or phrase that bears an index distinct from Z°/ZP .

• **What does (16) mean?**

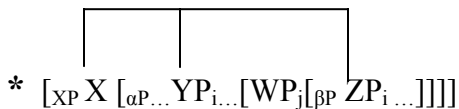
- A higher head or phrase necessarily values an unvalued feature on the closest head or phrase that has an unvalued feature.



- That same higher head or phrase optionally covalues unvalued features on additional heads or phrases that share an index with the first item that was valued.



- Features of additional items cannot be valued if there is a distinct index-bearing item which intervenes.

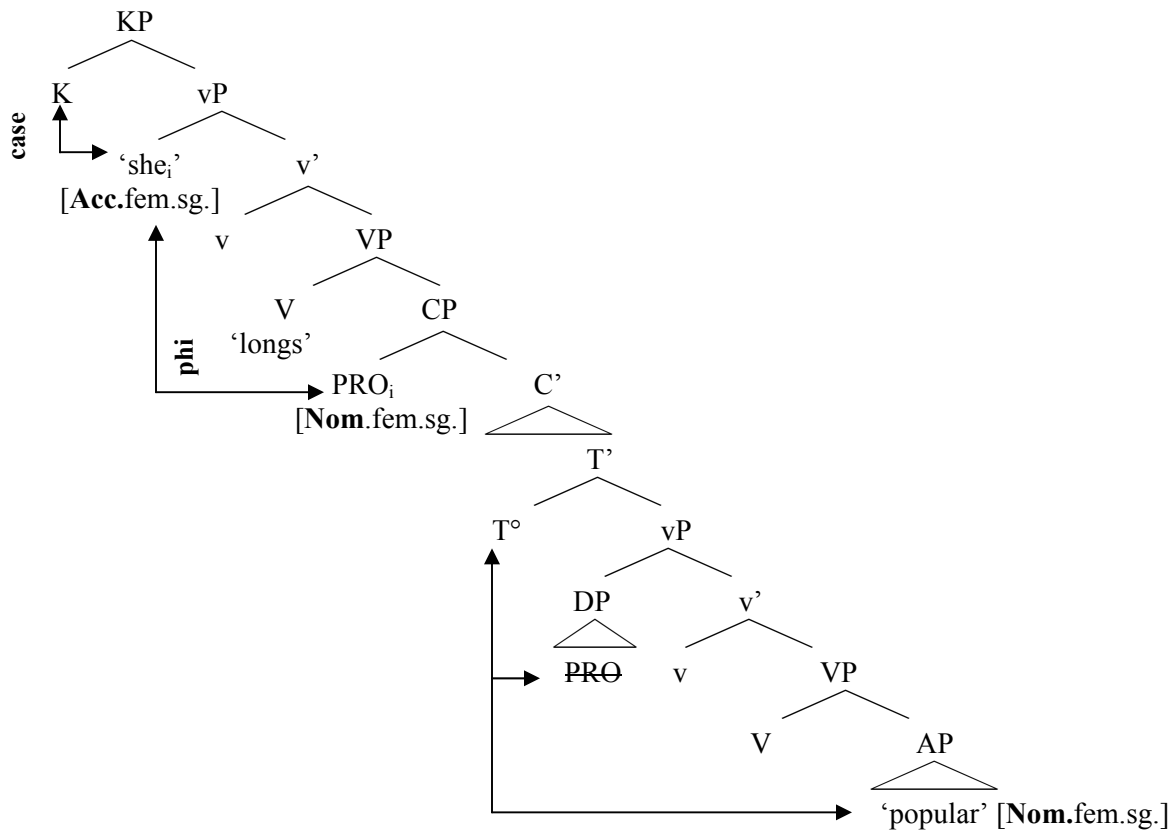


- In (15) K values the case of the controller. Since the controller and PRO are coindexed, K also values the case of PRO.
- (16) allows for K to assign case only to the controller and not to PRO.

Option 2: PRO bears the controller's phi features and default Nominative

- PRO merged in Spec,vP.
- Infinitival T° establishes a relationship between PRO and AP.
- Controller merged in higher clause.
- PRO moves to Spec,CP to Agree with the controller and inherit phi features.
- K assigns case to the controller, but not to PRO.

(17)



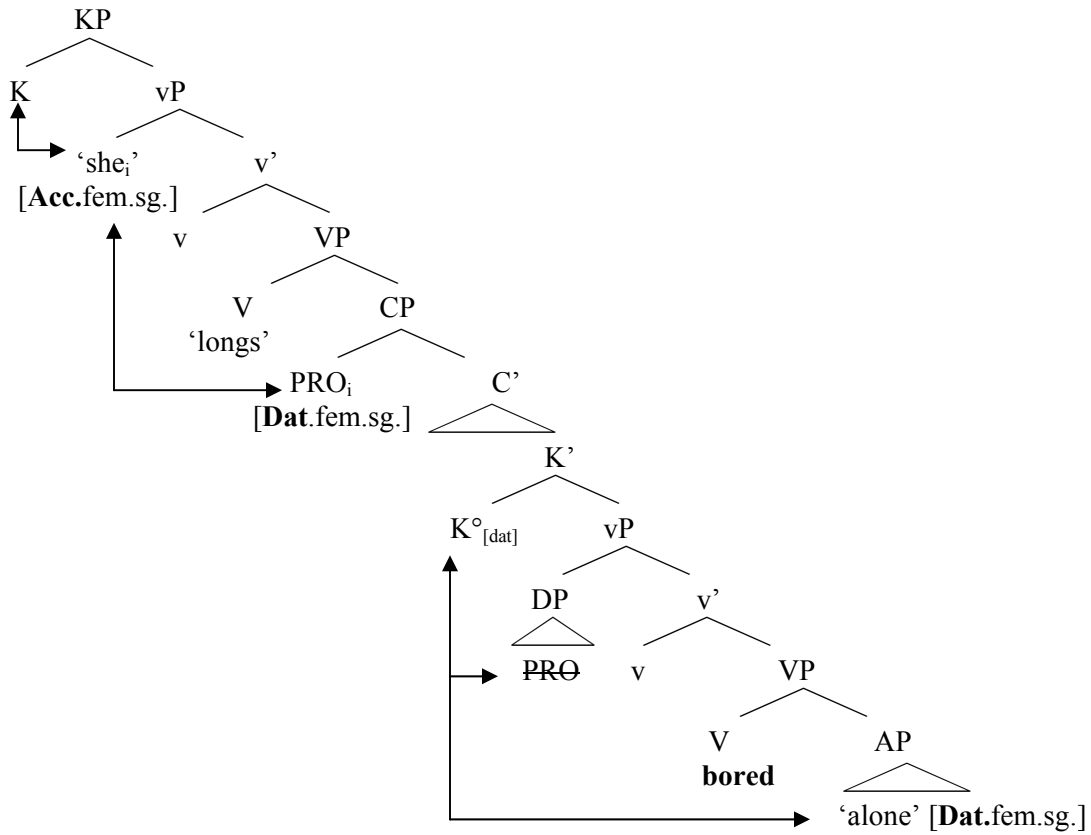
- PRO bears default Nominative.
 - PRO does not get case assigned in the syntax.
- Consistent with Schütze (2001): “The default case forms of a language are those that are used to spell out nominal expressions (e.g., DPs) that are not associated with any case feature assigned or otherwise determined by syntactic mechanisms.” (Schütze 2001:206)

Option 3: PRO bears quirky case (that is distinct from the controller)

(18) Bjarna langaði ekki til að leiðast einum/*einan/*einn
Bjarni.**Acc(masc.sg.)** wanted not to to be.bored alone.**Dat(masc.sg.)/*Acc/*Nom**
‘Bjarni wanted not to be bored alone’ (Boeckx and Hornstein 2006:596)

- PRO is assigned quirky case in the infinitival clause.
- Since PRO already has its case assigned, it is not visible to the higher clause K.

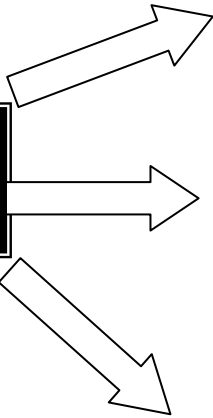
(19)



Summary of Analysis

(20)

PRO always inherits the phi features of the controller via Agree



PRO bears case of the controller
 Matrix K checks the case of the controller.
 Matrix K checks the case of PRO.
 • Multiple Agree is allowed because the controller and PRO bear the same index.

PRO bears default Nominative
 Matrix K checks the case of the controller.
 Matrix K does not check the case of PRO.

PRO bears quirky case
 Infinitival K checks the case of PRO.
 Matrix K does not check the case of PRO.

Previous Accounts

- Builds on Landau's (2000, 2004, 2006) proposal, in which the relationship between the controller and PRO is necessarily mediated by functional head.

(21) [F [controller] [CP...PRO]] Landau (2000, 2004, 2006)
|-----↑-----↑
Agree

- Boeckx and Hornstein (2006): Also employ multiple Agree. Argue that Nominative surfaces in the infinitival clause when multiple Agree fails.
- Neither of these accounts would predict that phi features could Agree even when case does not.
- The system proposed above divorces the Agree relation that establishes control from the Agree relation that values case.

5. The Special Case of 'Promise'

- PRO necessarily bears Nominative. No case optionality!
- Phi features necessarily agree.

(22) Þeir telja hana(**Acc.fem.sg.**) hafa lofað honum(Dat) að PRO vera góð(**Nom.fem.sg.**)/*góða(**Acc**)
they believe her to-have **promised** him to to be good
'They believe her to have promised him to be good.' (Andrews 1981:453)

- Not a property of ECM/control contexts.

(23) ég tel hana_i(**Acc.fem.sg.**) vonast til að PRO_i vera vinsæla(**Acc.fem.sg.**)/vonsael(**Nom.fem.sg.**)
I believe her to-hope toward to to-be popular
'I believe her to hope to be popular.' (Andrews 1982:26)

- 'Promise' is unique because it forces subject control across an object.

(24) John_i promised Mary [PRO_i to return home by 5:00 p.m.]. (Larson 1991:103)

- Other verbs that take an object and an infinitive force object control – e.g., 'persuade', 'force', 'order', 'request'

(25) a. John persuaded Mary_i [PRO_i to return home by 5:00 p.m.]. (Larson 1991:103)
b. John forced Mary_i [PRO_i to return home by 5:00 p.m.]. (Larson 1991:103)

(26) a. hún skipaði honum_i(**Dat.masc.sg.**) að PRO_i vera góður(**Nom.masc.sg.**)/góðum(**Dat.masc.sg.**)
she ordered him to to-be good
'She ordered him to be good.' (Andrews 1981:453)

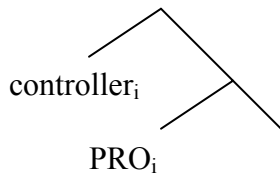
b. ég bað hann_i(**Acc.masc.sg.**) að PRO_i vera góðan(**Acc.masc.sg.**)/góður(**Nom.masc.sg.**)
I requested him to to-be good
'I requested him to be good.' (Andrews 1982:26)

- What makes ‘promise’ different from object control verbs?
- Why should K necessarily be blocked from Agreeing with PRO in (22)?

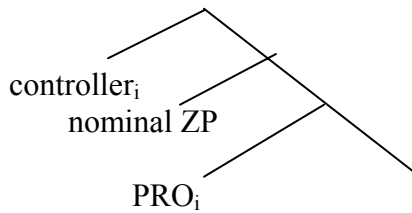
The Structure of ‘Promise’

- **Proposal:** Dative argument of ‘promise’ is an applicative and is late merged.
 - Not a real argument of the verb; doesn’t have to be expressed.
 - *John promised to be home by 5:00.*
- At the point when AGREE holds between the controller and PRO, the dative object is not present.

(27) a. Control established

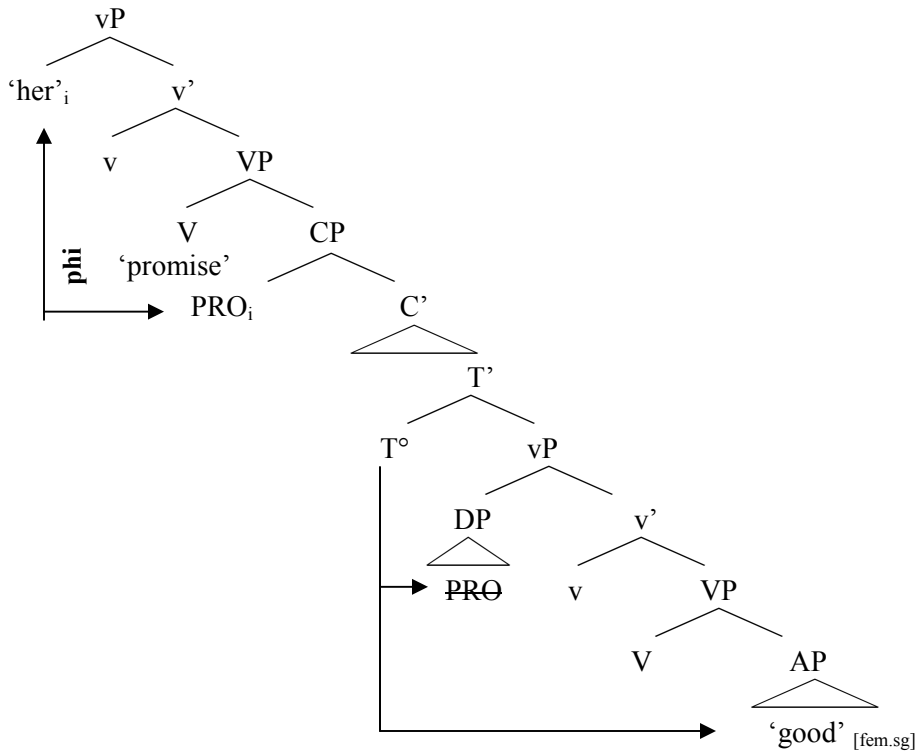


b. Control not established



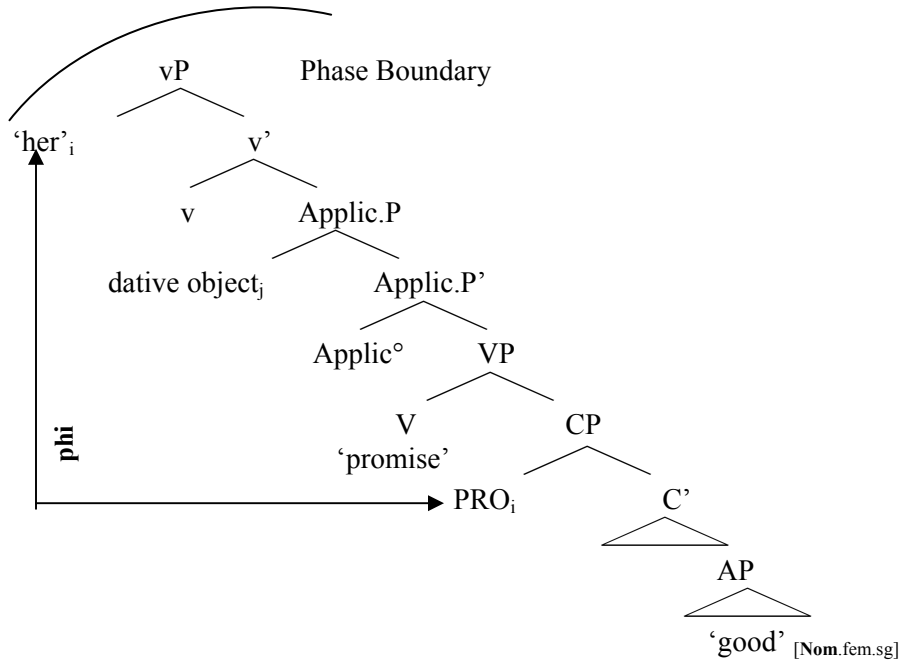
- Minimal Distance Principle (Rosenbaum 1970).^v

(28)



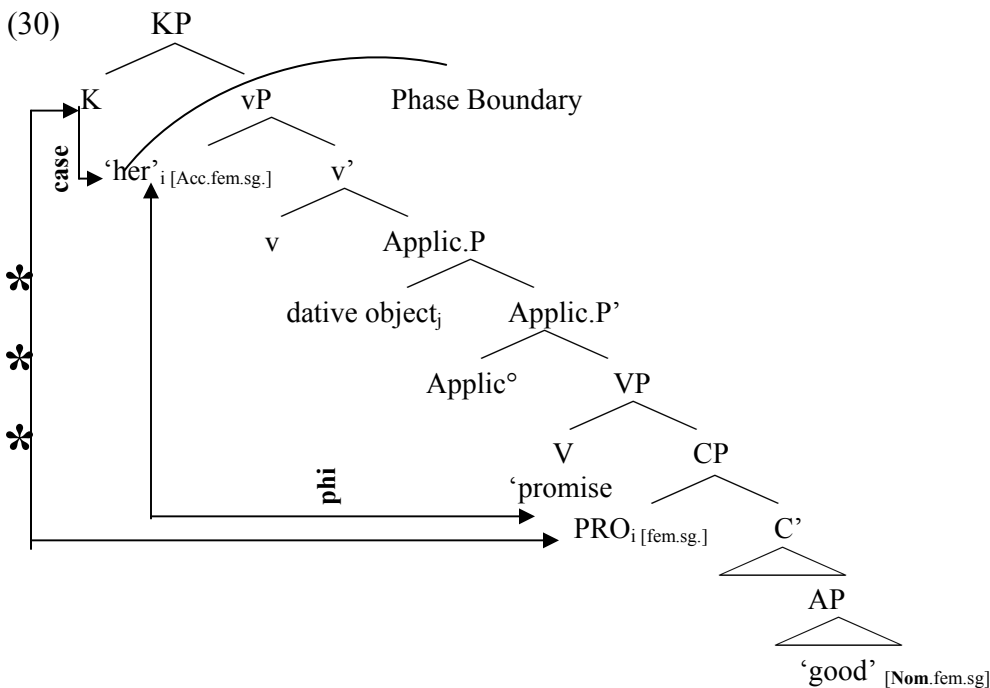
- AGREE established between the controller and PRO.
- PRO inherits the controller’s phi features.

(29)^{vi}



- Dative argument late-merged.
 - Can't be the controller because Agree has already been established with the subject.
- We can end up with a surface structure represented by (27b), but Agree holds at the point in the derivation when we have the representation in (27a).
 - After the object is merged, it intervenes between the controller and PRO. The dative object blocks K from assigning case to PRO.

(30)

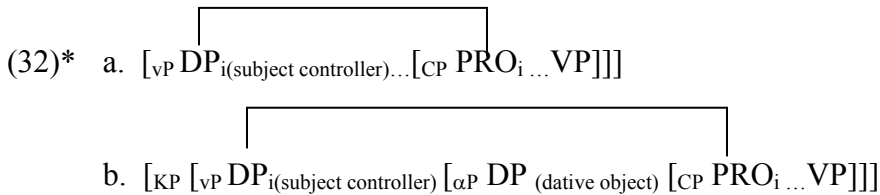


- K assigns case to the controller, but the object intervenes between the controller and PRO.
- Violates the condition on Agree which blocks feature valuation across an intervener that bears a distinct index.

➤ **Why can't K Agree with the controller and PRO before the dative argument is merged?** This would deliver subject control and the optionality observed in other control constructions.

(31) **Phase Impenetrability Condition** (Chomsky 1999, 2000, 2001)

- Dative object is merged inside vP.
- Case-assigner is merged outside vP.
- vP is a phase.

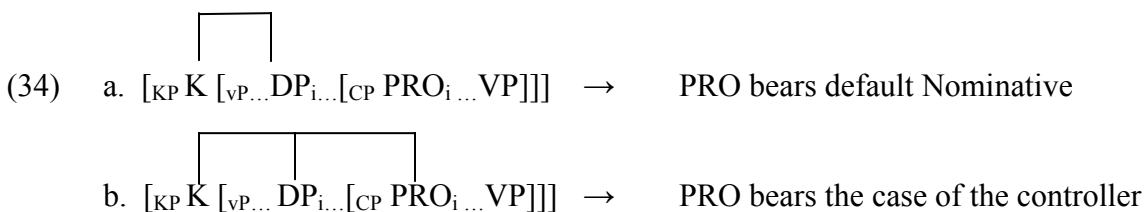


Not all Datives Block! Other Verbs that Take an Object and an Infinitival Complement

- These are object control: *order, request, force, persuade*
- Get case optionality!
- Dative arguments do not prevent case optionality! The argument structure of ‘promise’ prevents optionality.^{vii}

(33) hún skipaði honum_i(**Dat.masc.sg.**) að PRO_i vera góður(**Nom.masc.sg.**)/góðum(**Dat.masc.sg.**)
 she ordered him to to-be good
 ‘She ordered him to be good.’ (Andrews 1981:453)

- No late merge: these objects are not applicatives. They are real arguments of the verb.
 - *She ordered to be good.
- Object control is established the same way as subject control.
- Derivation is the same as non-‘promise’ subject control; K can assign case to the controller or to the controller and PRO.



- The controller and PRO share an index and unlike with ‘promise’, there is no intervener.

6. Conclusion

- Provided an account of control which derives the different behavior of case and phi features.
- Proposed that there is a direct Agree relation between the controller and PRO which results in phi feature agreement.
- Proposed that the case-checker for the controller optionally checks the case of PRO.
- Motivated an Agree relationship that allows for items that share an index to have their features checked by the same head.
- Argued that the specialness of ‘promise’ can be derived from conditions on Agree.

Appendix - Extension to Russian

Adjectives either agree in case with the subjects they modify or bear Instrumental case.

- (i) Maša obeščala spat' golaja/goloj
Masha(**Nom**) promised to-sleep naked(**Nom/Inst**)
'Masha promised to sleep naked.'
(Franks and Hornstein 1992:21; Data from Comrie 1974)

With an overt object, the construction becomes degraded if the adjective agrees in case with the controller.

- (ii) Maša obeščala mužū spat' ?golaja/goloj
Masha(**Nom**) promised husband(**Dat**) to-sleep naked(?**Nom**)/(**Inst**)
'Masha promised her husband to sleep naked.'
(Franks and Hornstein 1992:21; Data from Comrie 1974)

These data seem to provide preliminary cross-linguistic support for the proposed analysis of 'promise'. Though, in Russian, case agreement when there is a dative argument is marginal, not ungrammatical as in Icelandic.

ENDNOTES

ⁱ Nominals and participles also agree in case, gender, and number with their subjects. Andrews (1982) notes that adjectives are more likely to display the optionality in case marking discussed in this paper. Why adjectives should be more susceptible to optionality than nominals or participles is a mystery.

ⁱⁱ The options are listed in order of preference, as reported by Andrews (1891, 1982).

ⁱⁱⁱ Boeckx and Hornstein (2006) observe that structural cases seem to be preferred to lexical or inherent cases, though they do note in a footnote that for some speakers, in examples such as (4), the Nominative form is perfectly acceptable. My goal is not to explain the nature of the preferences, but to explain why the optionality is allowed.

^{iv} For simplicity, I have omitted *til* 'towards' from the derivation. Andrews (1981) proposes that *til* serves as a preposition in this construction, however it does not seem that *til* checks a case feature here. Moreover, *til* does not appear in the object control (see (2b, 3b, and 4).

^v The present system would need to allow for Visser's (1973) Generalization to be upheld. Object control verbs are easily passivized – *John was ordered/persuaded to leave* – while subject control verbs resist passivization – **John was tried/promised to leave*. The system would also need to account for cases in which it seems that 'promise' allows for object control – *John was promised to be allowed to leave early*. In Larson's (1991) account, Visser's Generalization is obeyed because the D-structure object does not c-command the infinitival. Larson argues that since control is established at D-structure, there is no possible controller in sentences such as **John was promised to leave*. In the system I have proposed, the object of 'promise' does c-command the infinitival, so there would have to be some other mechanism which rules this structure out.

^{vi} Here I have merged the dative argument as a high applicative (above the verb). Pylkkänen (2002) proposes that high applicatives add another argument to the event described by the verb while low applicatives indicate a transfer of possession between the direct and indirect object. Based on these characterizations, it seems that the indirect object of 'promise' is a high applicative. However, Maling (2002) states that for Icelandic verbs that take a Nominative subject and two dative objects (this is the case frame for 'promise' when it takes two NP objects), the first dative argument is a recipient and the second dative is a theme. If this is the case, then the indirect object would be a low recipient applicative in Pylkkänen's system. I do not think that merging the indirect object lower than the verb would affect the present analysis. However, it does seem that when 'promise' takes an NP and an infinitive as its complements, the NP argument is less like a recipient than when there are two NP arguments. In *Susan promised John a bike*, Susan professes that at some point in time, John will be the recipient of a bike. However, in *Susan promised John to wash the dishes*, it is harder to think of John as the recipient of Susan's activity of washing the dishes. I leave this question open.

^{vii} See Sigurðsson and Holmberg (2006) (among others) for a discussion of Dative arguments in Icelandic blocking agreement between verbs and Nominative arguments.

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