

Agreement in Icelandic: An Argument for Derivational Theory of Intervention Effects

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Some recent work has argued from Icelandic agreement patterns that agreement is essentially non-derivational, and involves non-trivial calculations of locality (Chomsky 2001, 2004, 2005; Hiraiwa 2005).¹ Based on new data from Icelandic, I show that the availability of agreement with a Nominative object is in fact restricted by simple locality and has a crucially derivational character. The relevant locality condition must hold at some point in the derivation and is simple in that it does not assume extension or contraction of the relevant probing domain, unlike proposals that explain the apparent optionality of agreement in bi-clausal environments by appealing to optional restructuring (Boeckx 2004; Nomura 2005; Bhatt 2003; Bobaljik 2006). More concretely, I argue that Dative intervention effects in Icelandic depend on whether the potential intervener undergoes object shift or it does not. I argue that the locus of agreement is v , whose unvalued ϕ -features act as a probe. If the potential intervener undergoes object shift, v is free to probe the Nominative object. If object shift is blocked, the intervener is closer to the probing head than the Nominative object and the intervention effect arises.

1 Puzzle

An Icelandic finite verb agrees with a Nominative argument, even if the argument is an object (1). The Nominative object agreement is obligatory in a mono-clausal environment but optional in a bi-clausal environment (2).

- (1) það voru konugi gefnar ambáttir í vettur.
EXPL **were.pl** king.Dat given *slaves.Nom* in winter
'A king was given female slaves in winter.'
- (2) a. Einhverjum stúdent finnst tölvurnar ljótar.
some student.Dat **finds.sg** *the-computers.Nom* ugly.Nom
b. Einhverjum stúdent finnst tölvurnar ljótar.
some student.Dat **find.pl** *the-computers.Nom* ugly.Nom
'Some student finds the computers ugly.'

If a Dative DP (DAT) ('experiencer') linearly intervenes between the finite verb and the Nominative object, agreement is still obligatory in a mono-clausal environment (1) but blocked in a bi-clausal environment (3) (Watanabe 1993; Taraldsen 1995; Schütze 1997). Surprisingly, Holmberg and Hróarsdóttir (2003) argued that some DAT are transparent for nominative object agreement (NOA) (4).

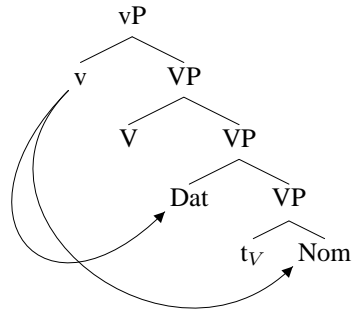
This paper addresses two basic questions: (i) what is the difference between Dative arguments that block NOA and Dative arguments that are transparent for NOA, and (ii) why the difference arises only in bi-clausal environments. I will call the Datives that are opaque for NOA the O(paque)-Dat and those that are transparent the T(ransparent)-Dat (5).

- (3) a. Það virðist einhverjum manni hestarnir vera
EXPL **seems.sg** *some* *man.Dat* the-horses.Nom be
seinir.
slow.Nom
- b. *Það virðast einhverjum manni hestarnir vera seinir.
EXPL **seem.pl** *some* *man.Dat* the-horses.Nom be slow.Nom
'A man finds the horses slow.'
- (4) a. Það finnst mörgum stúdentum tölvurnar
EXPL **finds.sg** *many* *students.Dat* the-computers.Nom
ljótar.
ugly.Nom
- b. Það finnast mörgum stúdentum tölvurnar ljótar.
EXPL **find.pl** *many* *students.Dat* the-computers.Nom ugly.Nom
'Many students find the computers ugly.'
- (5) a. *V O-Dat Nom
└──────────┘↑
- b. V T-Dat Nom
└──────────┘↑

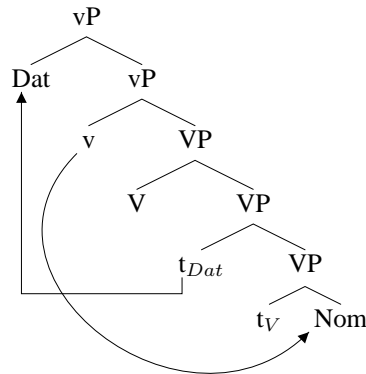
I will provide an argument that (5a) and (5b) correspond to different syntactic structures. Opaque datives can never undergo Object shift, (5a). Therefore they always stay below *v* and intervene between the probing head and the Nominative object. In contrast, transparent datives may undergo Object shift, (5b). If they undergo object shift, i.e., if they raise above *v*, the phase head is free to probe the Nominative object. In case the DAT does not undergo object shift, the DAT behaves as an intervener and default agreement is established. The corresponding syntactic structures are schematized in (6) and (7). It follows that the ϕ -features that probe for Nominative are located on *v*. If ϕ -features were located on *T*, the difference in the syntactic position of opaque and transparent datives would be irrelevant for probing since in both structures the Dative would intervene between *T* and the Nominative object. I thus assume that *T* inherits features from *v*. Thus *T*

does not behave as the probe (contrary Chomsky 2005; Nomura 2005 and others). I argue, following Bobaljik (2006), that agreement is a postsyntactic operation and as such is sensitive to the post-spell-out configuration at the phase level, i.e., *vP*-level.

- (6) Opaque Dative does not undergo OS (5a):



- (7) Transparent Dative undergoes OS (5b):



Before I approach to the actual analysis, I will briefly review the basics of predicate agreement in Icelandic. In Icelandic there is no direct correspondence between a structural position and Case. A Nominative argument can be either the subject (8a), or an object (8b). Similarly, a Dative argument can be either an object (9a), or the subject (9b). For arguments that non-Nominative (quirky) subjects are indeed subjects see Zaenen et al. (1985) and Sigurðsson (1992). The arguments are based for example on their behavior within ECM, in reflexivization, subject-verb inversion, and raising to subject. For arguments that Nominative objects are indeed objects see Harley (1995) and Jónsson (1996) (in short, Nominative objects fail in the subject-hood tests and can undergo object shift).

- (8) a. Ég hafði séð hana.
I.Nom had seen her.Acc
'I had seen her.'
- b. Henni þykir Ólafur leiðinlegur.
her.Dat thinks Olaf.Nom boring.Nom
'She finds Olaf boring.'
- (9) a. Ég hjálpaði honum.
I.Nom helped him.Dat
'I helped him.'
- b. Henni þykir Ólafur leiðinlegur.
her.Dat thinks Olaf.Nom boring.Nom
'She finds Olaf boring.'

Predicate agreement is sensitive to Case, i.e., agreement is always with Nominative. As can be seen in (10) the verb agrees with the Nominative argument in both Number and Gender. Agreement with a Nominative argument is obligatory even if the subject is Dative, as in (11). Notice that the actual position of the Dative argument is irrelevant for agreement. If there is no Nominative, default agreement emerges (default in both Number and Gender) (12).

- (10) a. Ólafur var farinn til Íslands.
Olaf.Nom.**M** was gone.**M.sg** to Iceland.G
- b. Sigga var farin til Íslands.
Sigga.Nom.**F** was gone.**F.sg** to Iceland.G
- c. Barnið var farið til Íslands.
the-child.Nom.**N** was gone.**N.sg** to Iceland.G
- (11) a. Jóni líkuðu þessir sokkar.
Jon.Dat **liked.pl** these socks.Nom
'Jon liked these socks.'
- b. Það líkuðu einhverjum þessir sokkar.
EXPL **liked.pl** *someone.Dat* these socks.Nom
'Someone liked these socks.'
- c. Það voru konugi gefnar ambáttir í vettur.
EXPL **were.pl** *king.Dat* given slaves.Nom in winter
'There was a king given maidservants this winter.'
- (12) Stelpunum var hjálpað.
the-girls.Dat.**F.pl** was.3.sg helped.**N.sg**.
'The girls were helped.'

There is a lot of variation among Icelandic speakers with respect to agreement (there are differences between rural and urban areas, and generational differences; Dianne Jonas, p.c.). The judgments reported in this paper are exclusively from

young Icelanders (20–24 years) from Reykjavík. I have taken into account only data from those speakers who share the contrast reported in (5).

2 Nominative Object Agreement and Object Shift

As we have seen in (2), repeated below as (13), if no argument intervenes between the finite verb and the Nominative object, Nominative object agreement (NOA) in a bi-clausal environment is *optional*. In contrast, if there is a Dative argument linearly intervening between the finite verb, NOA is (sometimes) *blocked* (Watanabe, 1993; Schütze, 1997) (14). Crucially, some Dative arguments appeared to be *transparent* for NOA (Holmberg and Hróarsdóttir, 2003) (15).

- (13) a. Einhverjum stúdent finnst tölvurnar ljótar.
 some student.Dat finds.sg the-computers.Nom ugly.Nom
 b. Einhverjum stúdent finnst tölvurnar ljótar.
 some student.Dat find.pl the-computers.Nom ugly.Nom
 ‘Some student finds the computers ugly.’
- (14) a. Það virðist einhverjum manni hestarnir vera
 EXPL **seems.sg** *some man.Dat the-horses.Nom* be
 seinir.
 slow.Nom
 b. *Það virðast einhverjum manni hestarnir vera
 EXPL **seem.pl** *some man.Dat the-horses.Nom* be
 seinir.
 slow.Nom
 ‘A man finds the horses slow.’
- (15) a. Það finnst mörgum stúdentum tölvurnar
 EXPL **finds.sg** *many students.Dat the-computers.Nom*
 ljótar.
 ugly.Nom
 b. Það finnst mörgum stúdentum tölvurnar ljótar.
 EXPL **find.pl** *many students.Dat the-computers.Nom ugly.Nom*
 ‘Many students find the computers ugly.’

Based on these facts, Holmberg and Hróarsdóttir 2003 concluded that NOA is conditioned by feature values of the intervening Dative. According to them, a Dative argument is transparent for NOA only if the Dative and the Nominative object share the same ϕ -features. In the rest of this section I will argue that this generalization is empirically incorrect, and I will propose a different generalization.

2.1 New generalization

Since Holmberg and Hróarsdóttir 2003 condition the distribution of NOA by ϕ -feature values of the relevant argument, they predict the following distribution of agreement in Icelandic:

- (16)
- a. EXPL V_{sg} Dat_{sg} Nom_{sg}
 - b. *EXPL V_{pl} Dat_{sg} Nom_{sg}
 - c. EXPL V_{sg} Dat_{pl} Nom_{sg}
 - d. *EXPL V_{pl} Dat_{pl} Nom_{sg}
 - e. EXPL V_{sg} Dat_{sg} Nom_{pl}
 - f. *EXPL V_{pl} Dat_{sg} Nom_{pl}
 - g. EXPL V_{sg} Dat_{pl} Nom_{pl}
 - h. **EXPL V_{pl} Dat_{pl} Nom_{pl}**

The most relevant configuration is that one given in (16h). The other grammatical configurations cannot be tested because they are ambiguous between a default agreement and NOA. All things being equal, the prediction is clear: any plural Dative should be equally transparent for NOA. However, this is not what we find. Speakers who perceive a contrast between (14) and (15) do not find NOA across certain other plural Datives equally good, as can be seen in (17–18).

- (17)
- a. Það finnst fáum börnum tölvurnar ljótar.
EXPL **find.sg** *few* *children.Dat.pl* computer.D.Nom.pl ugly
 - b. *Það finnst fáum börnum tölvurnar ljótar.
EXPL **find.pl** *few* *children.Dat.pl* computer.D.Nom.pl ugly
'There are few children that find the computers ugly.'
- (18)
- a. Það finnst báðum köttumum mýsnar góðar.
EXPL **find.sg** *both* *cats-the.Dat* mice-the.Nom tasty
 - b. *Það finnst báðum köttumum mýsnar góðar.
EXPL **find.pl** *both* *cats-the.Dat* mice-the.Nom tasty
'Both the cats find the mice tasty.'

I argue instead for a new generalization given in (19).² The table in (20) gives a list of DPs depending on their behavior with respect to NOA and their ability to undergo object shift. As can be seen from the table, the two properties fully coincide.

(19) **New generalization:**

A Dative argument is transparent for NOA only if the Dative DP can independently undergo Object shift (OS, Holmberg (1986); Thráinsson (2001)).

(20) **Correlation between NOA and object shift:**

Quantifier	Is NOA possible?	Is OS possible?
almost all	no	no
few	no	no
all	no	no
both the	no	no
almost all the	no	no
each	no	no
many	yes	yes
three	yes	yes
exactly three	yes	yes
few of the	yes	yes
some pl	yes	yes

To decide whether a DP can or cannot undergo object shift, I tested its behavior with respect to negation. It is known that Icelandic allows object shift of full DPs, i.e., an object can either precede, or follow negation (21). As can be seen in (22–23), DPs that are opaque for NOA cannot precede negation, thus, they cannot independently undergo OS. In contrast, DPs that are transparent for NOA can independently undergo OS, as seen in (24–25).

- (21) a. Nemandinn las *ekki* **bókina**.
student-the read not book-the
b. Nemandinn las **bókina_i** *ekki* t_i .
student-the read book-the not
‘The student didn’t read the book.’

- (22) few
a. Mýs elska *ekki* **fáa ketti**.
mice love not few cats
b. *Mýs elska **fáa ketti** *ekki*.
mice love few cats not
‘Mice do not love few cats.’

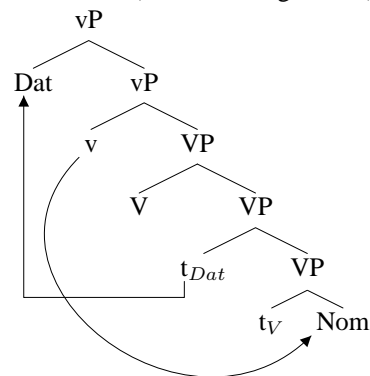
- (23) each
a. Mýsnar elska *ekki* **hvern kött**.
mice love not each cat
b. *Mýsnar elska **hvern kött** *ekki*.
mice love each cat not
‘The mice do not love each cat.’

- (24) exactly three
- a. Mýsnar elska *ekki* **akkúrat þrjá ketti**.
mice-the love not exactly three cats
- b. Mýsnar elska **akkúrat þrjá ketti** *ekki*.
mice-the love exactly three cats not
- ‘The mice do not love exactly three cats.’
- (25) few of the
- a. Mýsnar elska *ekki* **nökkra ketti**.
mice-the love not few-of-the cats
- b. Mýsnar elska **nökkra ketti** *ekki*.
mice-the love few-of-the cats not
- ‘The mice do not love few of the cats.’

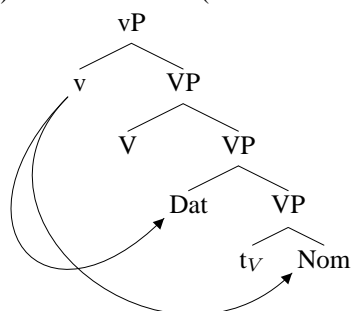
I assume that object shift is A-movement (i.e., syntactic operation) that targets a specifier of *vP* (contra for example, Holmberg (1999); Nilsen (2003); Fox and Pesetsky (2005)). I argue that ϕ -features that act as a probe for agreement are located on *v* (cf. Boeckx (2004); Pesetsky and Torrego (2004) for ideas in a similar direction). If ϕ -features were located on *T*, the difference in the syntactic position of opaque and transparent datives would be irrelevant for probing since in both structures the Dative would intervene between *T* and the Nominative object. Thus, if a Dative DP undergoes object shift, in the end of *vP*-phase, this DP is structurally higher than the probing phasal head. The structure that arise is thus as given in (26–27), repeated here from (6–7).

I argue that this agreement pattern provides an argument for a strictly derivational concept of agreement. Since object shift is possible only if the finite verb moves further to *T/C*, the relevant configuration, i.e., the configuration where there is a difference between a DP that undergoes object shift and a DP that does not, is valid only on the *vP*-level and it gets undone in the next phase once the finite verb moves further.

- (26) Derivation I (Dative undergoes OS):

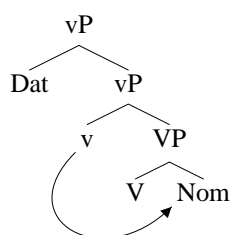


(27) Derivation II (Dative does not undergo OS):



The question that arises is how come these two differing structural configurations are available only in a bi-clausal environment. I argue that the difference between mono-clausal and bi-clausal environments lie in the position where a Dative argument is base generated. I must assume that propositional predicates like *seem*, i.e., the only predicates that show NOA in a bi-clausal environment, do not have any external argument. Dative is an internal argument of VP (cf. Larson (1988); Hale and Keyser (2002)). Dative is generated as an ‘experiencer’, i.e., the individual with respect to whom beliefs expressed by the propositional predicate are evaluated. In contrast, a Dative in a mono-clausal environment is an external argument. As such, it is either merged at Spec,*vP*, or it obligatorily moves there (cf. Bobaljik and Jonas (1996) on heights of Icelandic subjects). As a result, in the end of *vP*-phase, when I argue agreement takes place, the Dative argument is never in the probing domain of *v* and therefore it can never behave as an intervener for NOA (28).

(28)



2.2 Predictions

According to the new generalization given in (19) NOA is crucially dependent on object shift. Thus it should not be available if object shift is independently blocked. Since object shift (Holmberg, 1986, 1999) can move across an adverb, NOA should be optional only if object shift is string vacuous. Whenever, there is an adverb, agreement should be disambiguated. The first prediction is that NOA should not be available if there is a low adverb intervening between the finite verb and the Dative argument. As can be seen in (29–30), this prediction is borne out.

(29) three

- a. Það finnst alltaf þremur börnum
EXPL **find.sg.** ALWAYS *three children.Dat.pl*
tölvurnar ljótar.
computer.D.Nom.pl ugly
 - b. Það finnast (*alltaf) þremur börnum
EXPL **find.pl** ALWAYS *three children.Dat.pl*
tölvurnar ljótar.
computer.D.Nom.pl ugly
- ‘Three children always find the computers ugly.’

(30) many

- a. Það finnst fljótt mörgum köttum mýsnar góðar.
EXPL **finds.sg** QUICKLY *many cats.Dat.pl* the-mice tasty
 - b. Það finnast (??/* fljótt) mörgum köttum mýsnar
EXPL **find.pl** QUICKLY *many cats.Dat.pl* the-mice
góðar.
tasty
- ‘Many cats find quickly the mice tasty.’

It follows that if a Dative argument precedes a low adverb, i.e., if the Dative underwent non-string vacuous OS, NOA is expected to be obligatory. This prediction is borne out as well, as can be seen in (31).

- (31) a. Það finnst mörgum köttum (??/* fljótt) mýsnar
EXPL **finds.sg** *many cats.Dat.pl* QUICKLY the-mice
góðar.
tasty
 - b. Það finnast mörgum köttum fljótt mýsnar góðar.
EXPL **find.pl** *many cats.Dat.pl* QUICKLY the-mice tasty
- ‘Many mice find quickly the mice tasty.’

Another relevant property of object shift is that it has an interpretive effect (Diesing and Jelinek (1995); Diesing (1992); Thráinsson (2001)). As can be seen in (32–33), the interpretation differs depending on whether the relevant DP underwent object shift or it did not.

- (32) Icelandic:
- a. Nemandinn las *ekki þrjár bækur*.
the-student read not three books
'It is not the case that the student read three books.'
 - b. Nemandinn las *þrjár bækur ekki*.
the-student read three books not
'There are three books that the students didn't read.'
- (33) German:
- a. ... weil ich *selten jedes Cello* spiele.
since I seldom every cello play
'It is rarely the case that I play every cello.'
 - b. ... weil ich *jedes Cello selten* spiele.
since I every cello seldom play
'It holds for every cello that I rarely play it.'

If NOA optionality comes from the presence or the absence of object shift, we expect that agreement patterns should have an interpretive effect. As can be seen in (34), this is indeed correct. Informally, for a speaker to accept NOA in these construction, the Dative DP must denote a set of known/given objects. In a scenario where the set of object denoted by the Dative arguments cannot be uniquely determined speakers do not accept NOA and prefer default agreement.

- (34) a. Það finnst mörgum stúdentum tölvurnar
EXPL **finds.sg** many students.Dat the-computers.Nom
ljótar.
ugly.NOm
→ In general, many students find the computers ugly.
- b. Það finnast mörgum stúdentum tölvurnar ljótar.
EXPL **find.pl** many students.Dat the-computers.Nom ugly.Nom
→ There are many students – and I know who they are – who find the computers ugly.

To conclude, I have presented a new generalization on Icelandic Nominative object agreement across a Dative argument. I have argued that a Dative in Icelandic intervenes only if it cannot undergo object shift. If a Dative DP undergoes object shift, it can avoid a relativized minimality violation by being higher than the relevant probing head. I have also argued that the relevant probing head is *v*. *T/C* does not behave as a probe. It can only inherit ϕ -feature from *v*.

Notes

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²This generalization is not easy to test because the set of Dative DPs that can occur in a transitive expletive construction is restricted (e.g., Vangsnes (2002) and references cited herein). Most DPs must be fronted but they cannot stay between the finite verb and the Nominative object, as seen below.

- (35) *Það finnst börnum/börnunum/Páli tölvurnar ljótar.
EXPL finds **children.Dat/the-children.Dat/Paul.Dat** the-computers.Nom ugly.Nom
'Children/The children/Paul find the computers ugly.'
- (36) Börnum/börnunum/Páli finnst tölvurnar ljótar.
children.Dat/the-children.Dat/Paul.Dat finds the-computers.Nom ugly.Nom
'Children/The children/Paul find the computers ugly.'

This empirical restriction makes it difficult to test the full range of the new generalization. I have not found any singular DP that would be allowed between the finite verb and the Nominative object and that would be in the same time able to undergo object shift. Thus, I lack a direct evidence that Number of the Dative intervener is irrelevant for NOA.

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