# Person effects in agreement with Icelandic low nominatives: An experimental investigation 

Jutta M. Hartmann ${ }^{1}$. Caroline Heycock ${ }^{2}$ (D)

Received: 13 October 2020 / Accepted: 25 November 2022 / Published online: 27 December 2022
© The Author(s) 2022


#### Abstract

This paper investigates agreement-in particular person agreement-in two configurations in Icelandic where there are two potential controllers of agreement and where at least in some cases agreement is with the lower of the two (a "low nominative"). One case is the Dative-Nominative construction, where there is a dative subject and a lower nominative argument. The other is the Specificational Copular Clause (SCC) construction, where there are two nominative arguments. A muchdiscussed aspect of agreement in the former case is that agreement in number with the low nominative is generally possible, but agreement in person is at best highly restricted, leading in some cases to ineffability. This person effect has been claimed to be ameliorated by syncretism in the agreement paradigm, but there is limited data available substantiating this effect, which is however crucial to deciding between two recent types of account. This paper reports on a pair of experimental rating studies on the Dat-Nom and SCC configurations in Icelandic. We show that, taken together, the two sets of data provide evidence against the Person Licensing Condition and in favour of an account of the DAT-NOM construction in terms of morphological conflict arising from double agreement, although we show that the ameliorating effect of morphological syncretism, while real, is limited. Further, we show that there is no evidence of double agreement in the copular clauses investigated. We argue that full agreement with the low nominative here arises if the first nominal can move out of the domain of agreement entirely. The possibility of agreement with the initial nominal we suggest indicates that nominatives, unlike datives, cause the search of the agreement probe to terminate.


[^0]Keywords Agreement • Icelandic • Copula • Person Case Constraint • Person
Licensing Condition $\cdot$ Syncretism

## 1 Introduction

One set of data that has played an important role in the construction of theories that can accommodate cases of multiple potential controllers of a single realization of agreement (multiple goals for single agreement probes) is the pattern of agreement in Dative-Nominative constructions in Icelandic. These are constructions where the subject is dative but there is a lower nominative argument that may trigger agreement on a finite verb, as illustrated in (1).
(1) a. Henni líkað-u peir.
she.DAT like.PST-3PL they.M.NOM
'She liked them.'
b. Honum mund-u virð-ast peir (vera) hæf-ir. he.DAT would-3PL seem-INF they.M-NOM (be.INF) competent-M.PL 'They would seem competent to him.'
(Sigurðsson and Holmberg 2008: (10c))
Current accounts all assume that both DPs participate in an agreement relation with the verb, but differ as to the underlying theory and mechanisms. Crucial to the debate is an asymmetry between person and number agreement: while agreement in number with the low nominative argument is possible for many speakers, agreement in person is at best highly restricted, leading in some cases to ineffability, as illustrated by the contrast between (1a) and the ungrammatical (2).

$$
\begin{align*}
& \text { *Henni líkað-ir/líkað-i bú. }  \tag{2}\\
& \text { she.DAt like.PST-2SG/like.PST-3SG you.NOM } \\
& \text { 'She liked you.' }
\end{align*}
$$

One very influential proposal-for convenience we can refer to this as Theory Iis that the dative argument intervenes to prevent agreement in person with the low nominative argument. And, crucially, this lack of agreement is fatal in the case of 1st and 2 nd person pronouns because their person features have to be licensed by agreement with a functional head (see for example the Person Licensing Condition (PLC) of Béjar and Rezac (2003).

This proposal, with its reliance on the Person Licensing Condition, has however been challenged by an alternative view-Theory II-according to which the Icelandic DAT-NOM constructions involve a single head agreeing with both the dative and the nominative argument; this then gives rise to a problem of morphological exponence. A crucial argument in favour of this proposal is the claim that there is one exception to the ungrammaticality of $1 \mathrm{st} / 2 \mathrm{nd}$ person low nominatives controlling agreement. This exception arises when there happens to be morphological syncretism between the relevant feature sets for the verb involved, thus indirectly showing that the problematic cases are due to a morphological clash.

While Theory I draws parallels between the Icelandic Dat-Nom construction and ditransitive constructions in other languages where there are constraints on the person of the lower argument (varieties of the "Person Case Constraint"), there is a potentially closer parallel within Icelandic: the configuration found in certain copular clauses-Specificational Copular Clauses (SCCs)—as in (3).

> Aðalvandamál-ið er/eru foreldrar-nir
> main_problem-DEF.NOM be.PRES.3SG/be.PRES.3PL parent-PL.DEF.NOM
> 'The main problem is/are the parents.'

The current leading analyses of the Dat-Nom construction all assume that the initial, dative, nominal interacts with agreement as though it were a 3rd person nominative (regardless of its apparent person features), thus making it, by hypothesis, equivalent-at least for the purposes of agreement-to the initial nominal in an SCC like the one in (3). Further, researchers working on copular clauses generally agree that the second nominal in an SCC is a referring expression rather than a predicate; as such it can also be a personal pronoun, including a 1st or second person pronoun, as in the English example in (4):
(4) The main problem is you/me.

Observe that when a pronoun appears as the second nominal in an English SCC it is in the accusative case, but that this is not so in Icelandic: in this language the postcopular nominal in an SCC appears in the nominative case. So here we have in Icelandic a second case of a "low nominative" argument appearing below a higher 3rd person argument. Icelandic SCCs, then, can provide a testbed for the theories of agreement that have been developed on the basis of the Dat-Nom construction. Conversely, it is to be hoped that the extensive study that has been devoted to the Dat-Nom cases-in particular the person effects discussed above-should illuminate the properties of the less well-studied SCCs, and constrain the possible analytical options. Thus this study aims also to contribute to current discussions concerning person effects in copular clauses more generally.

This paper aims to take advantage of these parallels between Icelandic DAT-NOM and SCC configurations to contribute to our understanding of agreement, and in particular how the kind of person effect illustrated in (2) is to be derived.

First, in Sect. 2 we present the Dat-Nom cases in Icelandic in more detail, and set out more fully the two types of theory that have been put forward to account for the person effects observed. Then, in Sect. 3 we review the existing data concerning in particular the effect of syncretism in the Dat-NOM construction, showing that there is very little currently available data on this theoretically important point. We then present the data from our experimental rating study on Icelandic that looks specifically at judgments on agreement with non-3rd person low nominatives, including minimal comparisons of cases with and without syncretism. We show that there is indeed evidence for an ameliorating-although not categorical-effect of syncretism, and we discuss possible explanations for the intermediate status of these examples.

In Sect. 4 we turn to the companion rating experiment on agreement in copular sentences, again focussing in particular on cases with non-3rd person low nomina-
tives. Our results show-consistently with our earlier production studies-that there is variation in the agreement in these copular sentences. In contrast to the Dat-Nom cases, however, low non-3rd person nominatives do not result in ineffability: agreement with the first nominal and agreement with the second-even in the absence of syncretism-are both grammatical.

Crucially, because these two experiments were conducted in parallel-with the same participants, at the same time-we are in the best position to do a direct comparison between the results. In Sect. 5 we argue that the two sets of data provide evidence against the Person Licensing Condition, and in favour of the view that the Person Effect observed in Dat-Nom constructions is due to problems of morphological realisation arising from a head agreeing with two nominals (Theory II). On the other hand, the comparison between results from the two experiments reveals that there is no evidence of "double agreement" in the copular clauses that we investigated, where instead speakers vary between full agreement with either the first or the second DP. We argue that the possibility of full agreement with the low nominative here follows because in these specificational copular clauses the first DP can move out of the domain of agreement entirely. The possibility of full agreement with the initial DP, on the other hand, we suggest indicates that nominative DPs, unlike datives, cause the search of the agreement probe to terminate.

The paper concludes in Sect. 6 with some discussion of methodological issues and directions for further research.

## 2 Constraints on person agreement with Icelandic low nominatives

### 2.1 Person effects in Dat-Nom constructions: The basic pattern

As mentioned above, one of the striking syntactic properties of Icelandic that has been much discussed in the literature is the possibility of nominative case on, and agreement of the finite verb with, arguments that remain low in the clause: we will refer to these as Low Nominatives. Two cases of such nominatives are, first, the objects of certain verbs whose subject is dative, and, second, subjects of some embedded non-finite and small clauses. These two cases are illustrated in (1)—repeated here as (5)-(6): note that in both examples the finite verb is agreeing in number with the nominative object/embedded subject (for evidence that it is the preverbal, dative argument that is the subject of the finite verb here, see e.g. Zaenen et al. 1985; Sigurðsson 1989).
(5) Henni líkað-u peir.
she.DAT like.PST-3PL they.M.NOM
'She liked them.'
(6) Honum mundu virð-ast peir (vera) hæf-ir.
he. DAT would.3PL seem-INF they.M.NOM (be.INF) competent-M.PL
'They would seem competent to him.'
(Sigurðsson and Holmberg 2008: (10c))

Following Sigurðsson and Holmberg (2008), we will call the construction in (5), where the dative and nominative DP are co-arguments of a single verb, the Simplex DAT-NOM construction. The construction(s) in (6) we will refer to collectively, again following Sigurðsson and Holmberg (2008), as the Complex Dat-Nom construction.

There is a rich literature on Number agreement patterns in Icelandic and the effect of the linear position of the verb with respect to the dative argument: see, among others, Boeckx (2000); Holmberg and Hróarsdóttir (2004); Sigurðsson and Holmberg (2008); Preminger (2011a,b, 2014); Ussery (2017). Here, however our focus will primarily be on Person agreement. It is by now well-established in the literature (see Sigurðsson 1991, 1996; Taraldsen 1995, 1996; as well as many subsequent authors) that Low Nominative agreement for person and for number behave differently in Icelandic. In particular, in contrast to the possibility of number agreement illustrated in (5) and (6), Low Nominatives in both of the Dat-Nom constructions are blocked from controlling person agreement. We illustrate for both the simplex Dat-Nom construction in (7a) and the complex DAT-NOM construction in (7b).
a. *Henni líkað-ir pú. she-DAT like.PST-2SG you.SG.NOM Intended: 'She liked you.'
(Sigurðsson 1996: (68b))
b. *Henni virt-umst við vera duglegar. she.DAT seem. PST-1PL we.NOM be.INF industrious Intended: 'We seemed to her to be industrious.'
(Sigurðsson 1996: (76b))
For those who are familiar with the literature on agreement in Dat-Nom constructions in Icelandic, we should note that the ungrammaticality of agreement with non3rd person nominative appears to be unrelated to the linear position of the dative argument, for all speakers. This contrasts with the status of agreement for number, which for some speakers (those classified in Sigurðsson and Holmberg 2008 as speakers of Icelandic B) is grammatical if and only if the dative does not intervene between the finite verb and the nominative argument-as can happen when the first position is occupied by an expletive or some other phrase. For extensive discussion of inter-speaker differences in the patterns of number agreement with Low Nominatives and the effect of the position of the dative argument, see Holmberg and Hróarsdóttir (2004); Sigurðsson and Holmberg (2008); Thráinsson et al. (2015b); Ussery (2017).

Thus far we have seen no distinction between the simplex and complex Dat-Nom constructions. A difference emerges when we consider an alternative possibility for agreement in these sentences: "default" 3rd person singular morphology on the verb. In the case of the simplex construction, this is also ungrammatical. Thus there is no type of agreement that will make this construction grammatical with a non-3rd person nominative: a much-cited instance of ineffability (but see below for crucial exceptions to this pattern). Thus examples like (8), with 3rd singular agreement morphology, are typically cited as ungrammatical for most speakers, and so not a possible alternative to the also ungrammatical agreeing form in (7a). ${ }^{1}$

[^1](8)
\[

$$
\begin{aligned}
& \text { *Henni líkað-i pú. } \\
& \text { she.DAt like.PST-3SG you.SG.NOM } \\
& \text { Intended: ‘She liked you.' }
\end{aligned}
$$
\]

In contrast, in the complex construction a non-3rd person nominative is grammatical, if and only if the agreement on the verb is 3rd singular. So (9) is grammatical, in contrast to the corresponding agreeing variant in (7b):
(9) Henni virt-ist við vera duglegar. she.DAT seem.PST-3SG we.NOM be.INF industrious
'We seemed to her to be industrious.'
(Sigurðsson 1996: (76b))

## 2.2 "Agree-Move-Agree" and the Person Licensing Condition

Within the generative literature on agreement, there have been numerous proposals (see Boeckx 2000; Anagnostopoulou 2003; Béjar and Rezac 2003; and the overview and references in Anagnostopoulou 2017) that the "Person Effect" that we have just observed in the Icelandic DAT-NOM constructions should be assimilated to the Person Case Constraint (PCC), according to which in some languages 1st/2nd person clitic objects are ungrammatical in the presence of an intervening indirect object, as in (10). ${ }^{2}$

$$
\begin{align*}
& \text { Je le/*te lui ai présenté. (French) }  \tag{10}\\
& \text { I 3SG.ACC/2SG.ACC 3SG.DAT have introduced } \\
& \text { 'I introduced him/*you to her/him.' } \\
& \text { (Béjar and Rezac 2003: 49) }
\end{align*}
$$

An influential approach to the Person Case Constraint was developed in Béjar (2003); Béjar and Rezac (2003). A number of different authors have built on this and similar proposals in subsequent years; a recent modification that includes an application to the Icelandic Dat-NOM constructions is set out in Preminger (2011b, 2014). This type of approach can be characterized as "Agree-Move-Agree." In this type of approach, the derivation of a ditransitive construction proceeds along the following lines.

- Person ( $\pi$ ) and Number (\#) probe separately, with Person probing first.
- The Indirect Object is higher than the Direct Object, and so is found when Person probes (Agree).
- When the Indirect Object is agreed with and it cliticizes (this cliticization may be the only morphological signal of the hypothesized agreement), the movement of the clitic removes this argument from the domain of agreement; it is no longer a potential intervener (Move).
- When Number probes, it can reach and agree with the Direct Object (Agree).

Under this account, a direct object is agreed with in number but not person, if an indirect object intervenes. But that still leaves unexplained why this results in ungrammaticality just for non-3rd person direct objects. In order to account for this,

[^2]it is proposed that 1 st and 2 nd person pronouns have a special licensing requirement that 3rd person pronouns do not, as expressed in the Person Licensing Condition (PLC) of Béjar and Rezac (2003):

## Person Licensing Condition (PLC)

Interpretable $1 \mathrm{st} / 2$ nd person features must be licensed by entering into an Agree relation with an appropriate functional category.
(Béjar and Rezac 2003)
In Béjar and Rezac (2003) and subsequently in Preminger (2011b), this approach is extended to the Icelandic Dat-Nom construction (as well as Dat-Nom constructions in other languages, which we will not discuss here). In this case the agreement probes are associated with T, rather than v (in Preminger's version there are distinct Person and Number heads in the functional spine, with Number the higher of the two). Again, Person probes first, and by hypothesis the first DP with $\phi$-features that it encounters in an Icelandic DAT-NOM construction is the dative argument. ${ }^{3}$ The probe must attempt to establish an agreement relation with this DP. However, the effect of non-nominative case in languages like Icelandic is to render the $\phi$-features unavailable for copying over to the probe. On Preminger's account this is an implementation of the idea of the case-discrimination property of $\phi$-agreement from Bobaljik (2008), building in turn on Moravcsik (1974, 1978); see also Atlamaz and Baker (2018). The probe's search aborts, rather than continuing (since it did locate a DP with $\phi$ features), but no features are copied onto the probe: 3rd person morphology is then the expression of lack of features (other authors have slightly different mechanisms that all achieve the effect of the dative inducing 3rd person morphology on the verb). This is the first Agree stage of the derivation. The fact that interaction of the person probe with the higher dative produces 3rd person morphology explains why in the DAT-NOM constructions there is never 1st or 2nd person agreement morphology on the verb, even when the (lower) nominative argument is 1 st/2nd person (see (7) above).

Subsequently, once the Person probe has found, and matched/attempted to match the dative, the dative moves high enough not to intervene for further probing (achieving the same effect as cliticization in the ditransitive cases discussed above). In the terminology of Béjar and Rezac (2003), T "displaces the dative to [Spec,TP] via its $[\pi]$-probe." Finally, the Number probe initiates a search, finds the nominative argument, and agrees with it. This derives the possibility of Number agreement with the low nominative argument in the DAT-NOM construction, as illustrated above in (5)-(6).

As illustrated by (8) above, "default" 3rd person agreement in the Simplex DATNom construction is ungrammatical for most speakers if the nominative argument is 1st or 2nd person. In the Agree-Move-Agree accounts, this follows from the Person Licensing Condition: the person features of these pronouns need to be licensed by entering into an Agree relation with an appropriate functional category. What is however problematic for this type of account is that, as illustrated above with (9), and in

[^3]the additional examples in (12), the complex Dat-Nom construction allows 1st and 2nd person nominatives freely, just as long as the finite verb shows only 3rd singular agreement morphology.
(12) a. Kennarum *fund-umst/fann-st við svo sniðug. teacher.DEF.DAT find.PST-1PL/find.PST-3SG we.NOM so clever 'The teacher considered us so clever.'
b. Henni *pótt-ir/pótt-i pú vera she.DAT think.PST-2SG/think.PST-3SG you.SG.NOM be.INF dugleg. industrious
'She thought that you were industrious.' (Sigurðsson 1996: (76a))
Such examples without person agreement ought to fall foul of the Person Licensing condition, and so are incorrectly predicted to be as ungrammatical as simplex cases like (8); see Preminger (2011b).

The most common approach to the possibility of apparently default agreement in the complex Dat-Nom construction, in contrast to its unavailability in the simplex construction, is that in the complex construction the nominative argument has the option of remaining within the embedded non-finite/small clause and receiving nominative case there by some mechanism, the details of which vary from author to author (see e.g. Schütze 2003: fn. 2; Sigurðsson and Holmberg 2008: Sects. 2, 4; Ussery 2017). It is assumed that in this configuration the nominative argument is not within the same domain as the probe in the higher clause, which therefore shows 3rd singular agreement (whether because it is agreeing with the embedded clause as a whole, or with the Dative argument, or simply showing default agreement as its search for valuation has failed). Following this line, Preminger (2011b) proposes that the Person Licensing Condition should be relativized to a local domain. His proposal is that only a non-3rd person pronoun in the same clause as a Person $\phi$-probe has to be licensed by agreement with that $\phi$-probe:

## Person Licensing Condition (PLC)—Revised Version

A 1st/2nd-person pronoun in the same clause as a person $\phi$-probe must be agreed with by that $\phi$-probe.
(Preminger 2011b)
The intended consequence of this revision is that the person effect (the ungrammaticality of 1 st and 2 nd person pronouns) in the Icelandic Dat-Nom construction is restricted to the simplex case, where the nominative argument is necessarily within the same clause as the $\phi$-probe. In the complex case the nominative argument can remain within the lower clause where there is no such probe, and hence the requirement for agreement does not apply. As discussed in Preminger (2011a, 2019) the same revision can explain the absence of PCC effects in non-finite clauses in Basque, and see Coon and Keine (2021) for a summary of other cases where PCC effects do not obtain in the absence of $\phi$-agreement or cliticization. However, as Coon and Keine (2021) note, while the revision is empirically adequate, it is a stipulation that does not seem organically related to the original PCC; it "is successful because it effectively
restates the empirical puzzle as part of the analytical constraint" (Coon and Keine 2021: 9). ${ }^{4}$

### 2.3 Person effects in Icelandic as an effect of the exponence of double agreement

The main alternative approach to the different behaviour of person and number agreement in the Icelandic Dat-NOM constructions is that this is a case where the finite verb establishes an agreement relation with both the dative (which by hypothesis results in a 3rd person singular form of the verb) and the nominative argument. The result is only grammatical if there is a morphological form that can spell out the resulting feature combination. We will refer to this as the DOUBLE AGREEMENT approach, intending this as a general characterisation covering a number of different implementations, to be discussed in more detail below. Such an approach was advocated in Schütze (2003), based above all on the observation in Sigurðsson (1996) that agreement with a 1 st or 2 nd person nominative is greatly improved if the agreeing form of the verb is syncretic with 3rd person. The following judgments are as reported in Sigurðsson (1996); he says about the examples in (14b) that "many speakers seem to accept" them (see Sect. 3.1 for the details of Sigurðsson's data):

# a. Henni *leidd-umst/?*leidd-ist við. she.DAT bore.PST-1PL/bore.PST-1/2/3SG we.NOM 'She found us boring.' 

b. ?Henni leidd-ist ég/bú.
she.DAT bore.PST-1/2/3.SG I.NOM/you.SG.NOM
'She found me/you boring.'
(Sigurðsson 1996: (69), (74))
Schütze (2003)—who takes the data and discussion in Sigurðsson (1996) to indicate that examples like (14b) are "essentially fine"-proposes that the problem of 1st/2nd person Low Nominative agreement is one of morphological exponence. Sigurðsson and Holmberg (2008) subsequently adopt this as part of their own proposal, although their implementation is different.

[^4]The account in Sigurðsson and Holmberg (2008) proposes, in common with the account in e.g. Preminger (2011a,b, 2014), that Person and Number are syntactically distinct heads. However, in Sigurðsson and Holmberg (2008) the two heads are crucially ordered differently, with Person dominating Number, rather than the other way around. As they point out, this ordering is in line with the verbal morphology in Icelandic, where the order of affixes is Root-Tense-Number-Person. Schematically, the structure that they propose is as in (15):


The dative subject originates within vP , then moves up through the edges of the functional projections. Sigurðsson and Holmberg propose that variation between different varieties of Icelandic with respect to the conditions under which they allow number agreement with the nominative argument depends on the relative timing of the movement of the dative argument from within vP. As we are focussing on person, rather than number, agreement in this paper we do not discuss the details of this aspect of their analysis further.

The general assumption is that probing by the Number (Nr) and Person (Pn) heads takes place immediately after each one is merged and the verb moves to adjoin to it. In order to account for the effect of syncretism, Sigurðsson and Holmberg (2008) propose that when Person probes, it does not terminate its search on finding and Agreeing with the dative, but continues to search, so that in the simplex construction it will, and in the complex construction it may, find and Agree also with the nominative argument. In this case, as proposed by Schütze (2003), the consequent feature clash will result in ungrammaticality unless there is syncretism in the morphology between 3rd person ("agreement" with the dative) and the person of the nominative argument.

A similar approach is advocated more recently in Ackema and Neeleman (2018), although their assumptions about the structure are different. Person and Number are not distinct heads, and agreement can be established either "upwards" or "downwards": the DAT-NOM construction in Icelandic involves simultaneous upward and downward agreement with the dative and the nominative argument respectively. When the result of this double agreement results in multiple feature bundles for the same class of $\phi$-features, as for example would be the case in (14a), spell-out of the finite verb is blocked (Ackema and Neeleman 2018: 325). However, if the phonological realization of the two bundles can be unified (because they are phonologically identical), the requirement for a single affix to realize all the feature bundles carried
by the finite verb can be satisfied, hence the grammaticality of (14b), where the realisation of 1st and 2nd person singular, for the class of verbs to which leiðast 'to find boring' belongs, is identical to the realisation of 3rd person singular.

It is a central part of Ackema and Neeleman's theory of agreement that number and person agreement are fundamentally different, in that the default in the person system (3rd person) still carries a specific feature-[DIST] in their system-while the default in the number system (singular) corresponds to an absence of number features. For this reason, double agreement with a dative (requiring "default" agreement) and with a 3rd person plural nominative object straightforwardly allows for syntactic unification of the two feature bundles, as the only actual specification for number is contributed by the plural nominative. This then explains the possibility for number agreement with a plural nominative in the Dat-Nom construction, as in (5) and (6) above.

Finally, Coon and Keine (2021) have generalised this type of account with the aim of explaining PCC effects in clitic combinations as well as the Icelandic Dat-Nom construction, and also asymmetries in agreement in certain copular constructions (we will return to this last case in Sect. 4). As in the PCC-inspired accounts of the person effects in the Icelandic Dat-Nom constructions described above, they propose that Person and Number are distinct probes in Icelandic, with Person probing first. As in a number of other accounts, they allow probes to vary in how specified they are for the part of the feature geometry (the segment) that will satisfy them (and hence halt their search); see among others Béjar (2003); Béjar and Rezac (2009); Deal (2015); Béjar and Kahnemuyipour (2017, 2018). Importantly, before being fully satisfied, a probe may encounter an element bearing features that partially match its specification. In this case the probe will copy over the entire feature hierarchy that includes the matching features, delete the part of its own specification that is matched, but continue searching either until there are no more features to be found within its domain, or until it finds a set of features that satisfy it, in which case again the containing feature hierarchy will be copied over, but now the search will halt. ${ }^{5}$

Thus for Icelandic, Coon and Keine (2021) propose that the Person probe is specified to search not just for a DP carrying person features, but for a DP that is specified for Participant. The probe is articulated as in (16) (Coon and Keine 2021: (79)):

$$
\left[\begin{array}{c}
u \text { Pers }  \tag{16}\\
\mid \\
u \text { Part }
\end{array}\right]_{\pi}
$$

Such a probe will only be partially matched by a 3rd person DP (such DPs carry a [Pers] feature, but no further articulation beneath that node); it will only be satisfied by a 1st or 2nd person pronoun. Importantly, Coon and Keine adopt the idea common

[^5]to most accounts of the DAT-NOM construction that at least in Icelandic dative DPs "behave externally as 3rd person DPs" Coon and Keine (2021: 41). In consequence, when the Person probe has in its domain a dative subject and a 1 st or 2 nd person pronoun nominative below that, it will copy over a [Pers] feature from the dative and delete [ $u$ Pers]. [ $u$ Part] finds no match in the higher DP, but it does match with the [Part] feature on the lower pronoun, and so copies over the person feature geometry also from this DP. Crucially, what is copied over to the probe from this lower goal is not just the segment including and dominated by Part, but the entire person feature structure. As a result, the probe has acquired two different person values: the segment that consists just of [Pers]-corresponding to 3rd person-and the segment consisting of [Pers, Part], and (for a first person pronoun) [Spkr]. And then, just as in all accounts in this vein, ungrammaticality ensues because of a problem with morphological exponence: assuming a Distributed Morphology framework, there are two distinct Vocabulary Items each of which is the best candidate for one of the two persons, and there is no principled way to resolve the clash, so the combination is ineffable. Ineffable, that is, unless there is a Vocabulary Item that can realise both person values: the ameliorating effect of syncretism, as discussed above. ${ }^{6}$

## 3 New data concerning the morphological exponence account of Icelandic Dat-Nom constructions

### 3.1 Background: Data reported in Sigurðsson (1996)

As indicated in the last section, the most direct empirical support for accounts of the person effect in the Dat-NOM constructions in terms of "double agreement" giving rise to problems with morphological exponence is the effect of syncretism illustrated by the contrast between (14a) and (14b), repeated here as (17a-b).

> a. Henni *leidd-umst/?*leidd-ist við. she.DAT bore.PST-1PL/bore.PST-1/2/3SG we.NOM 'She found us boring.'
b. ?Henni leidd-ist ég/bú. she.DAT bore.PST-1/2/3.SG I.NOM/you.SG.NOM 'She found me/you boring.'
(Sigurðsson 1996: (69), (74))
Most discussions of the effect of syncretism that we have found in the literature rely on the data in Sigurðsson (1996). ${ }^{7}$ However, the data provided in that paper are in fact quite restricted, and hence make it difficult to be confident about accounts which rely exclusively on them. One central goal of the current paper, then, is to put

[^6]Table 1 Syncretism in past tense of líka and leiðast

|  | líkar 'to like' | leiðast 'to be fed up with' |
| :--- | :--- | :--- |
| 1SG | líkaði | leiddist |
| 2SG | líkaðir | leiddist |
| 3SG | líkaði | leiddist |
| 1PL | líkuðum | leiddumst |
| 2PL | líkuðuð | leiddust |
| 3PL | líkuðu | leiddust |

Table 2 Judgments on examples with líka with and without syncretism, from Sigurðsson (1996)

|  | Example | Obj | Agreement | Rating |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | OK | ? | ?? | ?* | * |
| a. | Henni líkaði ég | 1SG | 1/3SG | 3 | 2 | 3 | - | 1 |
| b. | Henni líkaðir pú | 2SG | 2SG | - | - | - | 1 | 8 |
| c. | Henni líkuðum við | 1PL | 1 PL | - | - | - | 2 | 7 |
| d. | Henni líkuðuð pið | 2PL | 2PL | - | - | - | 1 | 8 |

Table 3 Judgments on examples with leiðast with and without syncretism, from Sigurðsson (1996)

|  | Example | Obj | Agreement | Rating |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | OK | ? | ?? | ?* | * |
| a. | Henni leiddist ég | 1SG | 1/2/3SG | 5 | 3 | - | - | 1 |
| b. | Henni leiddist pú | 2SG | 1/2/3SG | 5 | 3 | - | 1 | - |
| c. | Henni leiddumst við | 1PL | 1 PL | 1 | 1 | 1 | - | 6 |
| d. | Henni leiddust pið | 2PL | 2/3PL | 1 | 4 | - | - | 4 |

on a firmer footing the facts concerning the effect of syncretism on the possibility of person agreement in the DAT-NOM construction.

Sigurðsson (1996) reports the judgments of 9 speakers on a number of different configurations: the cases relevant for the question of the effect of syncretism are those involving paradigms of agreement with the Dat-Nom verbs líka 'like' and leiðast 'to be bored by, to be fed up with.' As shown in Table 1, both the verbs show a degree of syncretism in their past tense paradigms, although in different ways, with the syncretism in leiðast being more extensive, as person is marked distinctively only for 1st person plural. The forms that are syncretic with 3rd person singular or plural are boldfaced.

Sigurðsson's 9 participants gave judgments on a 5 -point scale that ranged from 0 to -4 , with 0 glossed by Sigurðsson as "OK"; -1 as "?"; -2 as "??"; -3 as "?*"; and -4 as "*." Considering the distribution of scores shown here in Tables 2 and 3 for the two verbs, Sigurðsson observes that 13 out of the 15 highest (1/OK) ratings involve "verb forms that are homophonous with nonagreeing default forms (third person singular)," boldfaced in the two tables. In all cases the dative subject is henni (her).

Table 4 Extended set of judgments on examples with lika with and without syncretism, from Sigurðsson (1996)

|  | Example | Obj | Agreement | Rating |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | OK | ? | ?? | ?* | * |
| a. | Henni líkaðoi ég | 1sG | 1/3SG | 3 | 2 | 3 | - | 1 |
| b. | Henni líkadir pú | 2SG | 2sG | - | - | - | 1 | 8 |
| $\mathrm{b}^{\prime}$. | Henni likaðò pú | 2SG | 1/3SG | 3 | 1 | 2 | - | 3 |
| c. | Henni líkuðum við | 1PL | 1PL | - | - | - | 2 | 7 |
| d. | Henni líkuðư pið | 2PL | 2PL | - | - | - | 1 | 8 |
| $\mathrm{d}^{\prime}$. | Henni likuðи pið | 2PL | 3 PL | - | - | 2 | 1 | 6 |
| $\mathrm{d}^{\prime \prime}$. | Henni likaði pið | 2PL | 1/3SG | 2 | - | 2 | - | 5 |

Sigurðsson (1996) takes these results to show that the speakers who judge the boldfaced examples grammatical do so precisely because of the syncretism between 1st/2nd person agreement and "default" non-agreement ("(some) [...] speakers seem to be able to both eat their cake and have it too, thus accepting verb forms that can be interpreted as being either an agreeing form (satisfying the requirement that Infl should agree with its case assignee) or a default nonagreeing form (satisfying the requirement that objects should not control +Person agreement).") Taken alone, however, this array of judgments could equally be taken to show that some speakers may allow default (3rd person singular) agreement even in the simplex construction, regardless of syncretism. This has been shown to be an option for at least some speakers when the nominative argument is 3rd plural (see Thráinsson et al. 2015b; Ussery 2017); and in Sigurðsson and Holmberg (2008) it is argued, on the basis of a subsequent survey, that there are indeed speakers who allow default agreement of this kind even with non-3rd person nominatives like those at issue here. ${ }^{8}$

One way to establish a crucial role for morphological syncretism with third person singular forms would be to compare the syncretic cases (the (a) example in Table 2 and the ( $\mathrm{a}, \mathrm{b}$ ) examples in Table 3) with cases where third person singular agreement is not syncretic with the relevant full Person/Number agreement. Clearly, the prediction would be that such cases should be judged less grammatical. Sigurðsson (1996) argues that considering such cases supports his observation. The full range of examples that he goes on to present are given in Tables 4 and 5, again with the cases showing agreement that is syncretic with 3rd person singular boldfaced; the additional examples (those that were not already set out in Tables 2 and 3 above) are in italics.

It is not clear however that this fuller paradigm gives strong support for the relevance of syncretism. Considering first the cases where the nominative argument is

[^7]Table 5 Extended set of judgments on examples with leiðast with and without syncretism, from Sigurðsson (1996)

|  | Example | Obj | Agreement | Rating |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | OK | ? | ?? | ?* | * |
| a. | Henni leiddist ég | 1SG | 1/2/3sG | 5 | 3 | - | - | 1 |
| b. | Henni leiddist pú | 2SG | 1/2/3sG | 5 | 3 | - | 1 | - |
| c. | Henni leiddumst við | 1PL | 1PL | 1 | 1 | 1 | - | 6 |
| $\mathrm{c}^{\prime}$. | Henni leiddust við | 1PL | 2/3PL | 1 | 2 | 2 | 2 | 2 |
| $\mathrm{c}^{\prime \prime}$. | Henni leiddist við | 1PL | 1/2/3sG | 3 | 2 | 1 | 2 | 1 |
| d. | Henni leiddust pið | 2PL | 2/3PL | 1 | 4 | - | - | 4 |

singular, the additional instance is ( $\mathrm{b}^{\prime}$ ) in Table 4, Henni líkaði pú 'her like-1/3sG you.SG.' This is precisely a case where the 3rd person agreement morphology on the verb could only be grammatical for speakers who allow default agreement even in this simplex case, as there is no syncretism between 2nd singular and 3rd singular with this verb. But in fact this example gets ratings that are not obviously worse than the ratings given to the (a) example in the same table, Henni líkaði ég 'her like-1/3SG I,' even though it is only in the latter case that the morphology is syncretic in the relevant way. In fact, these extended sets of data give at least some support to the alternative interpretation that speakers to some extent allow 3rd singular "default" agreement even in this simplex construction-see also the ratings for the cases with 3rd singular agreement and plural nominative arguments, i.e. (d') in Table 4, Henni líkaði pið 'Her like-1/3SG you.PL,' and ( $\mathrm{c}^{\prime \prime}$ ) in Table 5, Henni leiddist við 'Her bore-1/2/3sG us.' In these cases too the judgments on these cases of default agreement seem to be higher overall than the corresponding examples with full agreement. The question then becomes whether or not there is an effect of syncretism in addition to what appears to be an option for default agreement.

A second, partly overlapping, question is latent in these data but brought out in later work (Sigurðsson and Holmberg 2008: Sect. 7). In that paper, which includes reference to data from a subsequent survey of 9 informants, it is argued that it is not syncretism specifically with 3rd singular agreement that allows agreement with a non3rd person low nominative, but syncretism with 3rd person agreement of the same number as the nominative argument. Thus Sigurðsson and Holmberg (2008) note the grammaticality of virtust in (18a)-their (53a)—where the agreement morphology is syncretic between 2nd and 3rd plural, contrasting with the pattern in (19)-their (54)-for the verb bykja, which does not have the same syncretism. ${ }^{9}$

[^8](18) a. Henni virt-ist /virt-ust pið eitthvað she.DAT seem.PST-3.SG /seem.PST-2/3PL you.PL.NOM somewhat einkennilegir.
strange
'You (pl) seemed somewhat strange to her.'
b. Henni virt-ist /?*virt-ust /*virt-umst við she.DAT seem.PST-3SG /seem.PST-2/3PL /seem.PST-1PL we.NOM eitthvað einkennilegir. somewhat strange
'We seemed somewhat strange to her.'
a. Henni pótt-i /??pótt-u /*pótt-uð pið she.DAT think.PST-3SG /think.PST-3PL /think.PST-2PL you.PL.NOM eitthvað einkennilegir.
somewhat strange
'She found you (pl) somewhat strange.'
b. Henni pótt-i /??pótt-u /*pótt-um við
she.DAT think.PST-3SG /think.PST-3PL /think.PST-1PL we.NOM eitthvað einkennilegir.
somewhat strange
'She found us somewhat strange.'
Sigurðsson and Holmberg (2008) sum up as follows:
(20) Syncretism Generalization

For most speakers, no Person Restriction arises in Dat-Nom constructions if, for morphological (paradigmatic) reasons, the 'would be' first or second person agreeing form is homophonous with the third person form (in the same number).

This is exactly the pattern predicted by the approaches in Sigurðsson and Holmberg (2008) and Ackema and Neeleman (2018), analyses that are of course based on this account of the facts. However, the grammaticality of (18a) with $2 / 3-\mathrm{PL}$ agreement seems in conflict with the judgments that were reported in Sigurðsson (1996) on (21), an example of the simplex construction with the same configuration of morphology (the "*" judgment is Sigurðsson's own from 1996).

```
*Henni leidd-ust pið
    she.DAT bore.PST-2/3PL you.PL.NOM
    'She was fed up with you (pl).'
```

The full judgment data on this example from Sigurðsson (1996) are given in the final-(d)—example in Table 5.

The status of examples like (18a)/(21), where there is syncretism with 3rd person plural rather than singular-thus avoiding the conflation with possible "default" agreement-is thus important in deciding between accounts of the person effect in Icelandic that invoke the Person Licensing Condition on the one hand, and accounts in terms of double agreement on the other. At the same time, as we have just seen, the data currently available in the literature seem rather contradictory. The next section
describes an experiment that aims at replicating some of Sigurðsson's crucial results concerning the effect of syncretism in licensing the occurence of non-1st/2nd person pronouns in the Dat-Nom construction in Icelandic.

### 3.2 Experimental study of Person agreement in Icelandic Dat-Nom constructions

### 3.2.1 Design

To investigate person agreement in Icelandic Dat-Nom constructions, we considered both the simplex and the complex cases. We constructed a thermometer study (see Featherston 2008) to compare, across both constructions, the acceptability of three different types of agreement with a non-3rd person plural nominative: unambiguous "default" agreement, unambiguous person agreement with the nominative; agreement with the nominative that is syncretic with 3 rd plural agreement. This gives a $2 \times 3$ design: ${ }^{10}$

- Variable 1: Structure
- Embedded clause (complex Dat-Nom construction)
- Single clause (simplex Dat-Nom construction)
- Variable 2: Agreement
- "Default" agreement (unambiguously 3rd person singular) ${ }^{11}$
- Unambiguous full person agreement
- Person agreement syncretic with matching (plural) 3rd person

All the verbs that were used have the same pattern of syncretism as was already seen for leiðast in Table 1: that is, there is syncretism in the plural between 2nd and 3rd person, but 1 st person plural is distinctively marked. There is a distinct form in the singular (but no distinction in the singular between persons).

The six conditions are exemplified in (22), with the verb finnast' 'to find, to consider' and the verb leiðast 'to be fed up with.'
A. COMPLEX-DEFAULT

Kennarum fann-st pið svo sniðug. the.teacher.DAT find.PST-1/2/3SG you.PL.NOM so clever 'The teacher found you so clever.'
B. COMPLEX—FULL

Kennarum fund-umst við svo sniðug. the.teacher.DAT find.PST-1PL we.NOM so clever 'The teacher found us so clever.'
C. COMPLEX-SYNCRETIC

Kennarum fund-ust pið svo sniðug. the.teacher.DAT find.PST-2/3PL you.PL.NOM so clever 'The teacher found you so clever.'

[^9]D. SIMPLEX-DEFAULT

Kennarum leidd-ist pið alveg rosalega
the.teacher.DAT bore.PST-1/2/3SG you.PL.NOM very much
'The teacher was really fed up with you.'
E. SIMPLEX-FULL

Kennarum leidd-umst við alveg rosalega
the.teacher.DAT bore.PST-1PL we.NOM very much 'The teacher was really fed up with us.'
F. SIMPLEX-SYNCRETIC

Kennarum leidd-ust pið alveg rosalega
the.teacher.DAT bore.PST-2/3PL you.PL.NOM very much 'The teacher was really fed up with you.'

According to the literature, all speakers allow the "default" agreement pattern in the complex construction, so we expect that Condition A complex-default (the complex Dat-Nom construction with a 2 nd person nominative and default agreement) should be grammatical for all participants. In the simplex construction, on the other hand, it has been claimed that only a minority of speakers accept this agreement pattern, ${ }^{12}$ so overall SIMPLEX—DEFAULT (D) should get lower ratings than COMPLEX—DEFAULT (A).

Under all the accounts in the literature, unambiguous Person agreement with a non-3rd person nominative in either of the DAT-NOM constructions is predicted to be unacceptable (generally speaking this is the basic fact that all accounts are designed to predict). We therefore expect examples in COMPLEX-FULL and SIMPLE-FULL ( B and E ) to be ungrammatical for all speakers.

Finally, if for at least some speakers agreement with a non-3rd person nominative in the Dat-NOM constructions is possible if and only if the morphology of the agreement is syncretic with 3rd person, as described in Sigurðsson and Holmberg's Syncretism Generalization in (20) above and predicted by the type of double agreement accounts of Schütze (2003); Sigurðsson and Holmberg (2008); Ackema and Neeleman (2018) and (with the caveats mentioned above) Coon and Keine (2021), COMPLEX-SYNCRETIC and SIMPLEX-SYNCRETIC (C and F) should be rated as more acceptable than the equivalent constructions with unambiguous full person agreement, B and E, respectively. If Person agreement is simply blocked by the intervention of the dative argument, on the other hand, as in accounts relying on the Person Licensing Condition, such as Béjar and Rezac (2003); Preminger (2011b, 2014), no such difference is predicted.

### 3.2.2 Materials

As we wanted all participants to rate three examples of each condition, and no individual participant to see different variants of the same item, we constructed eighteen

[^10]Table 6 Verbs used in the Dat-Nom rating experiment

| Construction | Verb | Number of items |
| :--- | :--- | :--- |
| Simplex | bjóðast 'be offered' | 6 |
| Simplex | gagnast 'be of use to' | 6 |
| Simplex | leiðast 'be fed up with' | 6 |
| Complex | finnast + Small Clause 'to consider X Y' | 2 |
| Complex | finnast + Infinitival Clause 'to consider X to Y' | 3 |
| Complex | heyrast + Infinitival Clause 'to sound to s.o. like/as if' | 4 |
| Complex | sýnast + Infinitival Clause 'to seem to s.o. to' <br> Complex | virðast + Infinitival Clause 'to seem to s.o. to' |

different items along the lines of (22) above. Note that each item had to include examples with two different verbs (three examples for each verb), since different verbs participate in the complex and the simplex construction. Ideally we would have used 18 different verbs from each class, but our choices were limited by the number of verbs that both participate in these construction and that can have a DP referring to a human as the nominative argument. Further, we wanted all the verbs to have the same pattern of syncretism. Taking all of these constraints into consideration, we restricted ourselves to three different verbs appearing in the simplex construction, and four different verbs appearing in the complex construction. Table 6 gives a table of the verbs used.

We constructed six different lists, according to a Latin Square design: each list included three examples of each condition, with no two examples in a single list being drawn from the same item. In addition to the 18 test items, there were 46 fillers, consisting of 36 items from different subexperiments including the experiment on specificational copular clauses reported in Sect. 4, and 10 other fillers which ranged from perfectly natural sentences, via cases judged by linguists to be "grammatical but awkward," to clearly ungrammatical examples (see Appendix C).

### 3.2.3 Procedure

We conducted a thermometer rating task (see Featherston 2008) which is a version of the magnitude estimation technique (see Bard et al. 1996). Participants are asked to rate a sentence in relation to two reference sentences (see Appendix B), one receiving the value 30 (as a rather good value), one receiving the value 20 (rather mediocre). Participants were asked to rate the naturalness of individual examples by providing numerical scores for individual sentences. As with the magnitude estimation technique this allows participants in principle to choose between more levels and distinguish different degrees of acceptability both with acceptable and unacceptable sentences. Furthermore, the resulting ratings provide an interval scale allowing for the corresponding statistical tests.

The rating task was administered online using the OnExp software (https://onexp. textstrukturen.uni-goettingen.de). Materials were collected in individual blocks of up

Table 7 Conditions and results of the rating study on Icelandic DAT-NOM constructions

| Agreement |  |  |  | Complex |  |  | Simplex |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Cond | $\begin{aligned} & \text { z-score } \\ & \text { (SD) } \end{aligned}$ | Rating (SD) | Cond | $\begin{aligned} & \text { z-score } \\ & \text { (SD) } \end{aligned}$ | Rating (SD) |
| Default | Dat-3sG | V-3SG | Nom-2PL | A | 0.70 (0.65) | 26.7 (6.0) | D | -0.45 (0.87) | 17.5 (8.1) |
| Full | Dat-3sG | $\mathrm{V}-1 \mathrm{PL}$ | Nom-1PL | B | -0.98 (0.59) | 12.8 (7.4) | E | -0.75 (0.88) | 15.1 (8.5) |
| Syncretic | Dat-3sG | V-2/3PL | Nom-2PL | C | -0.31 (0.79) | 18.3 (8.5) | F | -0.33 (0.91) | 18.6 (8.5) |

to 11 sentences in order to avoid too many examples of the same type following each other; both blocks and sentences within blocks were randomized for each participant.

### 3.2.4 Participants

Participants were recruited through contacts and were invited to take part in a lottery for internet gift vouchers. 60 participants completed the questionnaire; 59 speakers self-identified as native speakers of Icelandic, with the majority resident in Iceland. One participant gave German as their native language; their data are excluded from the analysis. The participants' ages varied between 22 and 79 years; the mean was 48.

### 3.2.5 Results

Raw judgments were z-transformed per participant (with fillers included), ${ }^{13}$ i.e. the mean rating for each participant is set to 0 and their standard deviation (a measure of variance) to 1 , a positive $z$-score means that the data point is above the mean, a negative $z$-score below. Table 7 gives the overall means for the raw ratings, as well as the z -scores for the 6 conditions. These z -scores are graphed in Fig. 1, which additionally plots standard errors for each condition.

The results clearly support the observation from the literature that default (3rd singular) agreement is available in the complex construction (A). It is notable that default agreement is given very much lower ratings in the simplex construction (D) This is largely in line with the literature, but the magnitude of the difference shows that only a small proportion of our speakers allow for default agreement in the simplex construction, perhaps fewer than would have been expected given the relatively high rates of acceptance of this kind of agreement reported in Sigurðsson (1996)—see Tables 4 and 5.

Nevertheless, even in the simplex construction, and very clearly in the complex construction, the lowest ratings are for full, morphologically unambiguous Person agreement (conditions E and B respectively).

Importantly, these data also show an effect of morphological syncretism. In both the complex and the simplex conditions, the examples where the agreement with the

[^11]Fig. 1 Normalized mean ratings for the Icelandic Dat-NOM constructions

(2nd person plural) nominative argument is syncretic with 3rd person plural agreement ( C and F ) are better than the comparable examples where the agreement with the (1st person plural) nominative argument is unambiguous.

In order to evaluate the significance of the observed effects, we fitted a linear mixed effects model taking construction type (simplex vs. complex) and agreement type (full vs. default vs. syncretic) as fixed factors and items and participants as random factors (using lmer function of the lme4 R package). The co-efficents of the model are given in Table 19 in Appendix A. In the complex condition, syncretic agreement is estimated to lower ratings by -1.01 (SE $0.08, \mathrm{t}=-12.27, \mathrm{p}<.00001$ ) compared to default agreement (the intercept of 0.70). Full agreement decreases ratings even more compared to the default by -1.68 (SE 0.08, $\mathrm{t}=-20.33, \mathrm{p}<.00001$ ). In the simplex condition, the default is lower. Additionally we get a significant interaction between the factors: while there is a difference between default and the syncretic form in the complex construction, this difference is much smaller and in the opposite direction in the simplex construction (SE $0.12, \mathrm{t}=9.669$ ). Concerning the difference between the default and full agreement (SE $0.12, \mathrm{t}=11.77, \mathrm{p}<.00001$ ) the simplex structure is rated with 1.38 less of a difference. The results for the random effects show a low variance and standard deviation for Participant ( $\operatorname{Var}=0.00656, \operatorname{StdDev}=$ $0.0810)$ and Items ( 0.01840 , $\operatorname{StdDev}=0.1356$ ).

We performed likelihood ratio tests for all fixed effects (using the mixed function of the afex package in R ) which show a significant effect of both factors, agreement type ( $\chi^{2}(2)=253.68, \mathrm{p}<.001$ ) and construction type $\left(\chi^{2}(1)=43.20, \mathrm{p}<.001\right)$ and an interaction between the two $\left(\chi^{2}(2)=146.25, \mathrm{p}<.001\right)$.

To explore the interaction further we included two contrasts in the estimation. Separately for the simplex and complex constructions we calculated (i) the effect of default agreement vs. full and syncretic agreement taken together and (ii) within the non-default agreement forms, the effect of syncretic vs. full agreement. As expected, this reveals a significant difference between default agreement and full/syncretic agreement in the complex construction but not in the simplex one. The difference between full vs. syncretic agreement is significant in both constructions; see Table 8.

Table 8 Effects of agreement (default vs. (full and syncretic) agreement) and agreement type (full vs. syncretic) in both the simplex and complex constructions

| Simplex construction |  |  |  |  |
| :--- | ---: | :--- | ---: | :--- |
| Contrasts | Estimate | Std. Error | t -value | p |
| (Intercept) | -0.51335 | 0.06992 | -7.342 | $<.00001$ |
| default vs. agreement (full and syncretic) | -0.09347 | 0.07843 | -1.192 | 0.234 |
| full vs. syncretic agreement | 0.42342 | 0.09073 | -4.667 | $<.00001$ |
| Complex construction |  |  |  |  |
| Contrasts | Estimate | Std. Error | t -value | p |
| (Intercept) | -0.19558 | 0.04916 | -3.979 | $<.001$ |
| default vs. agreement (full and syncretic) | -1.34728 | 0.05944 | -22.665 | $<.00001$ |
| full vs. syncretic agreement | 0.66634 | 0.06871 | -9.698 | $<.00001$ |

The significant improvement in the conditions with morphological syncretism over the conditions with full person agreement is predicted by the double-agreement accounts where the ungrammaticality of non-3rd person nominatives in the Dat-NOM construction is derived from a problem of morphological exponence. However, inspection of the graph in Fig. 1 makes it clear that although the improvement in the ratings of acceptability is significant, it is not categorical. In particular, we could take the ratings for Condition A-default agreement in the complex condition-to give an idea of how high speakers can rate DAT-NOM constructions in the particular circumstances of this experiment. It is clear that even in the syncretic condition the mean ratings are much lower than this. Why might that be?

In his 1996 paper, Sigurðsson notes that there is considerable variation between individual verbs. We can see from Condition A (COMPLEX-DEFAULT) that the verbs that participate in the complex construction do receive good ratings when they can legitimately have default agreement. But it is possible that the verbs that participate in the simplex construction might vary, with the ratings being pulled down by an individual verb. We investigated this by fitting a linear mixed effects model to the judgments on the conditions involving the simplex construction, with Agreement Type (default, full Person, and syncretic) and VerbType (3 levels, for each of the three verbs that participate in the simplex construction) as fixed effects, and Item nested under VerbType and Participant as random effects. This revealed a significant interaction between the two fixed factors. The effect is illustrated in Fig. 2; for the full figures see Table 20 in Appendix A.

This breakdown of the data shows that for gagnast 'be useful to,' the full person agreement condition (Hjúkrunarkonunni gögnuðumst við nánast ekkert 'We were ( 1 PL ) almost of no use to the nurse') is as good as the syncretic condition (Hjúkrunarkonunni gögnuðust pið nánast ekkert 'You were ( $2 / 3 \mathrm{PL}$ ) almost of no use to the nurse'), which is not the case with the other two verbs ( $\mathrm{p}<.001$ ). This might be due to the fact that gagnast is in fact a "symmetric verb," meaning that either the dative or the nominative argument may be the subject. If the nominative argument is interpreted as the subject, full person agreement is predicted to be grammatical

Effects of verb (simplex)


Fig. 2 Normalised judgments for the simplex Dat-Nom constructions by verb and condition
by all theoretical accounts. Although in our examples the dative argument was in sentence-initial position, a parse where the nominative was the subject and the dative a topicalized object is possible, given the V2 nature of Icelandic. This could then explain why full person agreement with this verb was better than with the other two verbs. ${ }^{14}$

Second, for leiðast 'be fed up with,' default agreement is somewhat better than full person agreement and syncretic agreement, which is not the case for the other two verbs. ${ }^{15}$ This observation is similar to what Sigurðsson (1996) and Sigurðsson and Holmberg (2008) have reported for some speakers; we come back to this below.

But the main point is that overall, it is not that there is a single verb getting low ratings that are having a disproportionate effect in lowering the overall mean. Rather, for all three verbs the overall ratings are low: for each one, the mean for the normalised ratings for the syncretic condition is still below the overall mean for all the data (0 on the y axis in Fig. 2).

An obvious next question is whether the low means for the judgments on syncretic agreement are due to this pattern being only marginally grammatical for all speak-

[^12](i) D. SIMPLEX—DEFAULT

Pjónustustúlkunni leiddist pið afskaplega mikið.
waitress.DEF.DAT bore.PST.3SG you.PL.NOM awfully much
'The waitress was very fed up with you.'
E. SIMPLEX—FULL

Pjónustustúlkunni leidd-umst við afskaplega mikið.
waitress.DEF.DAT bore.PST-1PL we.NOM awfully much
'The waitress was very fed up with us.'
F. SIMPLEX-SYNCRETIC

Pjónustustúlkunni leidd-ust pið afskaplega mikið.
waitress.DEF.DAT bore.PST-2/3PL you.PL.NOM awfully much
'The waitress was very fed up with you.'
ers, or whether they are the result of putting together judgments coming from two (or more) distinct groups of speakers with distinct (sub)grammars for the Dat-NOM constructions. This is not an easy question to resolve. It does seem to be the case that the normalised ratings for the syncretic agreement are not as clearly clustered round a single mode as the ratings for the other conditions, as illustrated by the histograms in Fig. 3, which plot the mean ratings per condition per participant. ${ }^{16}$ This suggests that the "intermediate" average score is rather the result of a mixture of high and lower ratings.

While these histograms do show an overall pattern, we would like to establish whether there are speakers who consistently accept the examples in the syncretic conditions (both simplex and complex), while rejecting non-syncretic agreement.

In order to do so, we first visualize to what extent the participants' mean ratings for full person agreement relates to their mean ratings for the syncretic conditions, in the simplex and complex constructions: see Fig. 4. Here we see that there is only a very small number of participants whose ratings are above 0 (recall that 0 is the overall mean for all examples, including fillers) for full person agreement. In both constructions, we also find a large proportion who do not accept syncretic agreement, however there is a smaller proportion who do, with a distribution across the full scale, i.e. several participants provide mediocre mean values.

From the scatterplots in Fig. 4, then, we can see that while there is almost no acceptance of full agreement in either the simplex or complex construction, there are individuals who accept-to a greater or lesser extent-the syncretic agreement. In order to see whether they do so consistently across both constructions, in Fig. 5 we plot participants' mean ratings for the syncretic conditions only, plotting the simplex against the complex construction. There are several participants who give a similarly high mean rating for the syncretic conditions in both the simplex and complex construction. Additionally there are a number of speakers who have relatively high ratings for syncretic agreement in the complex structure but low mean ratings for the simplex structure. There are also several speakers who rate syncretic agreement in both constructions relatively low. Interestingly, there are few speakers who rate it high in the simplex construction while rating it low in the complex.

Taken together, these distributions suggest that there is a good proportion of speakers who prefer syncretic agreement to full agreement but still give it rather intermediate ratings; at the same time there is a small group of speakers who fully accept agreement when the verb shows a syncretic form. There are also some who distinguish between the effects of syncretism in the complex and simplex constructions. It has to be borne in mind, though, that our data only provide a limited basis for establishing the nature of possible "dialects." First the number of participants in some potential dialect groups is small. Second, we do not have a value independent of participants' ratings that would allow to test the statistical significance of these groups. Finally, the scatterplots in Figs. 4 and 5 plot each participant according to the mean value of their ratings in each condition: that is, we still do not see the extent of any

[^13]
## Complex DAT NOM

Histogram for default complex


ZScore mean per participant in (default complex)

Histogram for full person complex


ZScore mean per participant (full person complex)

Simplex DAT NOM
Histogram for default simplex


Histogram for full person simplex


ZScore mean per participant in (full person simple;

## Histogram for syncretic complex



ZScore mean per participant (syncretic complex)

Histogram for syncretic simplex


ZScore mean per participant in (syncretic simplex

Fig. 3 Histograms of mean ratings per participant and condition
variability within speakers as to how they judge individual sentences in the same condition. ${ }^{17}$

[^14]

Fig. 4 Scatterplot of mean ratings of participants for the full person agreement vs. syncretic agreement conditions

Fig. 5 Scatterplot of mean ratings of participants for the syncretic conditions of the simplex vs. complex structure


### 3.2.6 Discussion

To summarise: a minority of speakers allow agreement with a non-3rd person Low nominative as long as the form is syncretic with 3rd person agreement of the same number (that is, their judgments are in line with the Syncretism Generalization of Sigurðsson and Holmberg 2008 given in (20) above). A larger proportion of speakers reject all cases where there is agreement with a non-3rd person Low Nominative argument, regardless of the morphological form. And other speakers have judgments that vary between these two poles. The question then is how this rather complex situation is best accounted for in terms of the competing theories of agreement discussed above.

We believe that the most economical account is that the limitations on Person agreement in the Dat-NOM constructions follow from a double-agreement account
(following Schütze 2003; Sigurðsson and Holmberg 2008; Ackema and Neeleman 2018; Coon and Keine 2021), in which the dative argument is specified for third person. As the dative argument matches, but does not satisfy, a probe that is specified for participant, the search continues until the probe matches against the $1 \mathrm{st} / 2 \mathrm{nd}$ person nominative argument, now giving rise to a clash between the two different sets of person features copied over to the probe. It appears that for some speakers but not others, syncretism with 3rd person can to a large extent resolve the clash. This then leads to the question of why syncretism is not a total "fix" for all speakers, as seems to be predicted by the system in Coon and Keine (2021). We see two possible explanations for this (which are not mutually exclusive).

The first is that the account given in Coon and Keine (2021) tacitly assumes that number agreement with the lower nominative is fully available for all speakers. However, there is evidence that this is not in fact the case. Sigurðsson and Holmberg (2008) claim that with respect to number agreement in DAT-NOM constructions there are three dialects of Icelandic. In one (their "Icelandic C") only singular agreement is possible, as illustrated in (23):

> Henni líkað-i/*líkað-u beir.
> her.DAT like.PST-3SG/like.PST-3PL they.M.NOM
> 'She liked them.'

There is more empirical evidence in the extensive survey of variation in Icelandic syntax in Thráinsson et al. (2015b: 209-217). This study included items investigating number agreement in both the simplex and complex constructions. The majority of speakers accepted both singular and plural agreement; however in the complex construction the acceptance rate was generally higher for singular than for plural, and in both constructions, when asked directly for their preference between the two options, a clear majority chose singular agreement. ${ }^{18}$

In Hoover (2020) it is proposed that this difference arises from a difference between dialects as to whether or not dative arguments have number features that are accessible to the probe. If the dative does carry an (invariably singular) number feature, this will satisfy the number probe, giving rise to singular agreement; if it carries no number feature at all, the probe will continue its search and find and agree in number with the plural, nominative, argument. However the singular agreement is derived, as Hoover points out, to the extent that speakers only allow/prefer this parameterisation of the features of the dative argument, they will also only allow/prefer syncretism between 2nd and 3rd person singular, rather than 2nd and 3rd plural, in the type of cases we investigated. Thus this might account for at least some of low ratings in the (plural) syncretic condition (and could also in fact explain why "default" agreement is rated higher than full person agreement, given that for all these verbs the default (3rd singular) form is syncretic with the 2nd singular form). ${ }^{19}$

[^15]Table 9 Past tense middle forms: heyra 'to hear'

|  | singular | plural |
| :--- | :--- | :--- |
| 1 | heyrðist | heyrðumst |
| 2 | heyrðist | heyrðust |
| 3 | heyrðist | heyrðust |

Table 10 Possible Vocabulary Items for person agreement

| Vocabulary Items |  |  |
| :--- | :--- | :--- |
| -ist | $\leftrightarrow$ | []$_{\pi} / \ldots[\mathrm{sg}]_{\#}$ |
| -ust | $\leftrightarrow$ | []$_{\pi} / \ldots[\mathrm{pl}]_{\#}$ |
| -umst | $\leftrightarrow$ | $[p e r s[\text { part }[\mathrm{spkr}]]]_{\pi} / \ldots[\mathrm{pl}]_{\#}$ |

The second possible explanation for the limited "fix" lies in the underlying theory of morphological realisation in such cases. It has often been suggested that only syncretism that is systematic in some way can resolve the kind of problem at hand; mere "accidental" homophony is not enough. Thus for example Asarina (2011) argues on the basis of facts concerning case conflicts in right-node raising in Russian that when two feature structures are competing for a single insertion site, the outcome will only be grammatical if the features structures are spelled out by "a single insertion rule." Within a Distributed Morphology framework, the closest equivalent restriction would be that there is a single Vocabulary Item (VI) that can spell out both feature structures, where, crucially, a VI is a pairing between syntactic features and morphological realisation. In the Icelandic cases we investigated, all the verbs were past tense "middles." All such verbs share the paradigm illustrated for leiðast 'to be fed up with' that was given in Table 1. Table 9 illustrates with the past tense middle forms of heyra 'to hear.'

As is fairly evident from Table $9,-ð$ - is the realisation of past tense. This suggests that the vocabulary items for person agreement would be as in Table 10, where indeed there is a single VI-the second in the list of competing VIs-for both 2nd and 3rd person plural. However, there is reason to think that this may not be the correct morphological analysis of these forms.

Note that the $2 \mathrm{nd} / 3$ rd plural syncretism is not found in the present tense. Table 11 shows the present and past forms side-by-side. These should then be compared with the corresponding active forms in Table 12. The first thing to observe is that clearly we need to separate the -st suffix as a distinct middle morpheme that attaches outside all other inflectional morphology. If we do this, we can see that a large number of the middle forms, in both tenses, are as would be expected if the -st morpheme simply followed the usual forms of the active in the relevant tense.

There are in fact just two cases where the person morphology in the middle differs from the active forms, across both tenses. First, the $-r$ - person marking is lost wherever it appears in the singular paradigms, so that in the middle there is full syncretism across all persons in the singular, in both tenses, as seen clearly in Table 11. Second, the - $\partial$ - 2nd person marking is lost in the plural both in the present (heyr-i-st rather than heyr-ið-st) and in the past (heyr- $\partial$ - $u$-st rather than heyr- $\partial$ - $u$ - $-s t$ ), as shown in

Table 11 Present and past tense middle forms of heyra 'to hear'

|  |  |  |  |  |  |  | Present |  |  | Past |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | singular | plural |  | singular | plural |  |  |  |  |  |  |
| 1 | heyr-ist | heyr-umst |  | heyr-ð-ist | heyr-ð-umst |  |  |  |  |  |  |
| 2 | heyr-ist | heyr-ist |  | heyr-ð-ist | heyr-ð-ust |  |  |  |  |  |  |
| 3 | heyr-ist | heyr-ast |  | heyr-ð-ist | heyr-ð-ust |  |  |  |  |  |  |

Table 12 Present and past tense active forms of heyra 'to hear'

|  | Present |  |  | Past |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | singular | plural |  | singular | plural |
| 1 | heyr-i | heyr-um |  | heyr-ð-i | heyr-б-um |
| 2 | heyr-ir | heyr-ið |  | heyr-ð-ir | heyr-б-uð |
| 3 | heyr-ir | heyr-a |  | heyr-ð-i | heyr-д-u |

Table 13 Agreement affixes in present and past tense middle forms of heyra 'to hear'

|  | Present |  | Past |  |
| :---: | :---: | :---: | :---: | :---: |
|  | singular | plural | singular | plural |
| 1 | heyr-i-st | heyr-um-st | heyr-ð-i-st | heyr-д-um-st |
| 2 | heyr-i(r)-st | heyr-i( $\partial$ )-st | heyr-ð-i(r)-st | heyr-ð-u( $\partial$ )-st |
| 3 | heyr-i(r)-st | heyr-a-st | heyr-ð-i-st | heyr-ð-u-st |

Table 13. As can be seen, this results in syncretism with 3rd plural only in the past tense-the bolded forms in Table 13.

As far as the systematic syncretism in the singular is concerned, Wood (2021) has argued in some detail that the absence of the $-r$ person marking is not the result of a regular phonological or morpho-phonological rule, as there exist near-minimal pairs suggesting that the [rst] sequence is well-formed-e.g. berst 'carry-PRES.SG.MID' (where $r$ is part of the stem) vs *serst 'see-PRES.SG.MID' (where $r$ is not part of the stem). Wood argues rather that there is ultimately a syntactic explanation for the lack of person distinctions in the singular of -st middles. As our experiment did not probe the effects of syncretism in the singular, we will not go into this point here, but refer the reader to Wood's paper.

As far as the deletion of $-\varnothing$ before the $-s t$ suffix in the plural is concerned, however, it is very plausible that this may be the result of a general phonological constraint. Although the sequence [ðst] does occur in codas in the language, all the cases that we have identified so far involve stressed syllables (e.g. stuðst 'support-PPRT.MID'), which might support more complex codas than the unstressed syllables in the paradigm we are looking at. ${ }^{20}$

If it is indeed the case that the apparent $2 / 3$ syncretism in the plural of the $-s t$ middle forms is the result of a general phonological process, then in fact there would be no single vocabulary item for these two persons in the past plural. Consequently, to the extent that syncretism can only "fix" syntactic clashes when there is such a vocabulary item, one explanation for the pattern that we found in our results could

[^16]be that speakers of the language vary in their morphological analysis of these forms, with some but not others positing that the -ust ending in the 2nd plural is underlyingly -uðst. An alternative possibility is that even "accidental" homophony can have some limited ameriorating effect (Pullum and Zwicky 1986; and see the discussion in Ackema and Neeleman 2018). This is currently a matter of ongoing research-see e.g. Bjorkman (2021); Sigurðsson and Wood (2021).

In sum, an account in terms of double-agreement giving rise to (potentially resolvable) problems for morphological exponence appears to us to be more adequate than any variant of the kind of licensing-based account proposed in e.g. Boeckx (2000); Preminger (2011a,b, 2014). As far as we can see, such accounts would have to either discard the judgments of the speakers who exhibited a syncretism effect, or treat them as extra-grammatical in some way.

We do not see any valid justification for doing the former. The latter has been proposed in Deal (2021), who suggests assimilating this case to the well-known cases of "agreement attraction" where, for example, a plural nominal contained in the modifier to a singular subject sometimes results in plural agreement on the verb; a classic example sentence is The key to the cabinets are on the table. While we agree it is wise not to discount the possibility of some kind of processing effect out of hand, much more work would be needed to establish whether there is in fact a genuine parallel with agreement attraction as discussed in the literature. First, and most importantly, typical agreement attraction cases involve two potential controllers of agreement (one the syntactically licit controller, the other the "attractor"), both of which are on the same side of the verb. This is true even of the study cited by Deal involving agreement attractors in object position in Dutch, given that these were presented in SOV orders (Hartsuiker et al. 2001). This is different to the case in hand: the low nominatives (the purported "attractors") are in a "non-canonical" position lower than and linearly to the right of the verb, and they are not "competing" for agreement with a "licit" controller on that same side (or, in fact, at all). ${ }^{21}$ Second, the role of syncretism would still have to be explained; this is not something that is relevant to-and is therefore not accounted for-in the vast majority of cases of agreement attraction, beyond the Hartsuiker et al. (2001) paper cited by Deal, where the relevant syncretism relates to the case morphology of the nominals, not to the agreement morphology on the verb.

What about the speakers who do not show a syncretism effect? One consideration is that, given that we have to adopt a double-agreement account for the first, syncretism-sensitive, group of speakers, then even if this type of analysis was only as good as-but not necessarily better than-the licensing-based analysis in accounting for the second, syncretism-blind group, we should prefer it in order to avoid multiplying accounts. Added to this is the issue noted above at the end of Sect. 2.2 that once the agreement pattern in the Dat-Nom construction in Icelandic is given this kind of analysis there is no principled way to explain the absence of PCC effects on the objects of ditransitives.

In sum, our experimental data on the Icelandic DAT-NOM cases support the Double Agreement approach, as we do find effects of syncretism that cannot be

[^17]straightforwardly explained in the Person Licensing account. In order to further test the two types of approach, we now turn to the second phenomenon where they make predictions about the possibility of person agreement: Specificational Copular Clauses (SCCs).

## 4 A second case of "Low Nominative" agreement for Person in Icelandic: Specificational Copular Clauses

### 4.1 Low nominative agreement in Icelandic specificational copular clauses

As outlined in the introduction, the second configuration involving possible agreement with a low nominative in Icelandic is that of copular constructions with two nominals. Ackema and Neeleman (2018) (and essentially the same facts are given in den Dikken 2014) show that Dutch clefts exhibit a very similar pattern of agreement to the Icelandic DAT-NOM construction. (24) gives some examples.
a. Het is hij die de whisky gestolen heeft. it is he that the whisky stolen has 'It's him who stole the whisky.'
b. Het *is/zijn zij die de whisky gestolen hebben. it is/are they that the whisky stolen have 'It's them who stole the whisky.'
c. Het \%is/*ben ik die de whisky gestolen heeft. it is/am I that the whisky stolen has Intended: 'It's me who stole the whisky.'
d. Het was ik/jij die de whisky gestolen heeft. it was I/you.SG that the whisky stolen has 'It was me/you.SG who stole the whisky.'
(Ackema and Neeleman 2018: 199-200)
Ackema and Neeleman sum up the agreement pattern in Dutch clefts as follows:
(i) Number agreement with a clefted nominative is obligatory [...] (ii) If there is unambiguous person agreement, first and second person nominatives cannot be clefted [...] (iii) Some speakers allow suspension of person agreement with clefted nominatives. In that case, there is no person restriction [...] (iv) Where the verb forms triggered by the pronoun in subject position (het 'it') and by the clefted nominative DP are identical, the person restriction is lifted for all speakers.
(Ackema and Neeleman 2018: 199)
As Ackema and Neeleman argue, a "double agreement" account of the Icelandic Dat-NOM extends naturally to these data, given the generally adopted assumption mentioned already that the Icelandic dative subjects give rise to 3rd person singular agreement in just the same way as an actual 3rd person singular pronoun like het 'it.'

Strikingly, however, $i t$-clefts in Icelandic itself do not follow the same pattern (as Ackema \& Neeleman note). Sigurðsson (2004) and Sigurðsson and Holmberg (2008) specifically contrast the Person Effect observed in Dat-Nom constructions
in Icelandic with the lack of any such effect in copular constructions in the same language where the subject is petta 'this' or pað 'it, that.' Here the nominative focus can be a non-3rd person pronoun, and in this case it is stated that the finite verb shows full person agreement, for all speakers, as noted already in Sigurðsson (1996):
a. Pað erum (bara) við.
it be.PRES.1PL (only) we.NOM
'It/this is (only) us.'
b. (bara) pið.
it ber eruð PRES.2PL (only) you.PL.NOM
'It is (only) you.'

Sigurðsson and Holmberg argue that this full agreement is possible because petta and $p a ð$ are devoid of $\phi$-features, hence invisible to probing for both Person and Number; agreement is thus established exclusively with the nominative DP low in the structure. Thus this pattern again provides evidence that "downward" agreement in Person is possible (contra Baker 2008 and den Dikken 2019). ${ }^{22}$

Sigurðsson \& Holmberg go on to claim that the type of agreement shown in (25) is strictly confined to clauses with demonstrative petta 'this' and bað 'it, that' as a subject, citing the following contrast:
(26) a. Petta höfum/?*hefur líklega bara verið við.
this have.1PL/have.3SG probably only been we.NOM 'This has probably only been us.'
b. Pessir menn hafa/*höfum líklega bara verið við. these man.PL.NOM have.3PL/have.1PL probably only been we.NOM 'These men have probably only been us.'
(Sigurðsson and Holmberg 2008: ex. (34) )
The pattern in (26), Sigurðsson and Holmberg state, does not show any inter-speaker variation in Icelandic (footnote 17). ${ }^{23}$ Despite this claim, however, we have presented in Hartmann and Heycock (2017) results from a production experiment that show this type of "downward" agreement occurring in copular sentences where the subject is

[^18](i) Í gær varst pað pú sem tókst bókina.
yesterday was-2.SG it you.SG that took-2.SG book-DEF
'Yesterday it was you who took the book.'
(Ackema and Neeleman 2018: 203)

[^19]a full DP rather than an expletive/demonstrative: specifically, in specificational copular sentences, like The best part of the performance BE the dancers, or The reason that she left BE the noisy neighbours. ${ }^{24}$ While in English agreement in such cases is overwhelmingly with the linearly first nominal (DP1 henceforth), Icelandic speakers frequently choose plural agreement (agreement with the second, lower nominalDP2), even when the syntactic context is set up to make sure that the initial DP is in the canonical subject position (by making the clause an embedded interrogative, a context which resists non-subject initial embedded Verb Second even in Icelandic; see Heycock et al. 2012). Thus for example, when choosing a form of the copula to fill in the blank in embedded interrogative clauses such as (27), in 123 out of 186 cases ( $66 \%$ ), the participants in the experiment chose plural rather than singular agreement: ${ }^{25}$

## (27) Sálfræðingarnir spurðu hvort aðalvandamálið

 psychologist.PL.DEF asked whether main_problem.DEF __foreldrarnir
parent.NOM.PL.DEF
'The psychologists asked whether the main problem $\qquad$ the parents.'

When DP2 was a non-3rd person pronoun, the preference for DP2 agreement was neutralized, but agreement with the pronoun was still chosen rather than agreement with the 3rd person subject around half the time. For example, to fill in the blank in examples such as (28a,b), in 204 out of 426 cases ( $49 \%$ ), the participants chose a form of the copula that shows unambiguous (non-syncretic) agreement with the 2nd person singular pronoun $p u$ ú.
(i) Frægasta hljómsveitin hefur/*hafa lengi verið Bítlarnir. most famous band has.3sG/have.3PL long been the Beatles 'The most famous band has long been the Beatles.'
${ }^{24}$ Specificational copular clauses-defined as a class most extensively in Higgins (1973)—involve two nominals, the first of which is 3rd person, and typically (althought not necessarily) a definite description, and the second a referring expression, as in the following:
(i) a. The source of the rumour was you.
b. The most likely winners are those two athletes over there.
c. The reason that she left was the noisy neighbours.

It has proved hard to give a satisfactory definition for the class of specificational sentences, as there is disagreement in the literature as to how they are best characterized. There is general agreement that the linearly second DP (DP2) is interpreted as denoting an individual (just as the corresponding nominal would if acting as the argument to a verb like see or meet), but that the first DP (DP1) does not. For some authors, DP1 is argued to receive a predicative (type <e,t>) interpretation (see e.g. Heggie 1988; Moro 1991, 1997; Mikkelsen 2005; den Dikken 2006); others have argued that it is interpreted as a function from worlds to individuals (the type of an individual concept, or possibly a concealed question, as in I guessed the source of the rumour/the most likely winners/the reason that she left)—see e.g. Romero (2005); Heycock (2012); Arregi et al. (2021).
${ }^{25}$ Participants varied as to whether they used present or past tense, and whether the verb appeared in the indicative or the subjunctive. The forms counted as singular were er (ind.pres.3.sg), var (ind.pst.3.sg), sé (sbj.pres.3.sg) vari (sbj.pst.3.sg); and the forms counted as plural were eru, voru, séu, varru.
a. Hann var að̃ velta fyrir sér hvort aðalvandamálið he was wondering whether main_problem.DEF __ pú.
you.SG.NOM
'He was wondering whether the main problem was you.SG.'
b. Hann var að velta fyrir sér hvort líklegasti sigurvegarinn $\qquad$ he was wondering whether most_likely winner.DEF __ pú.
you.SG.NOM
'He was wondering whether the most likely winner was you.SG.'
These Icelandic copular constructions therefore merit further investigation as a way to enrich the data against which we can test theories of agreement. The next question to address, then, is how they might allow us to distinguish between different possible theories. That is, what predictions do our current approaches to agreement make for the agreement in these cases, and in particular, are there particular configurations in which the predictions of different approaches differ, in ways that can be tested empirically?

### 4.2 Predictions for agreement in Icelandic specificational copular clauses

### 4.2.1 Predictions assuming that DP1 is structurally similar to the dative

As a first pass, it appears that both the families of agreement theories discussed above with respect to the Dat-NOM constructions will make the same predictions concerning person agreement for these copular constructions, given two assumptions:
(29) a. In a binominal copular construction, at the point at which agreement takes place, the two DPs are in a hierarchical arrangement with the linearly first DP (DP1) higher in the structure than the second DP (DP2), just as the dative DP in the DAT-NOM construction enters the derivation in a structurally higher position than the nominative.
b. The dative argument in a DAT-NOM construction interacts with agreement in exactly the same way as a 3rd person nominative.

Given these assumptions, it follows that the predictions for agreement in the DatNom construction will carry over to the copula construction. In both cases the first DP will intervene between the agreement probe and the second DP, and will give rise to 3rd person agreement. Depending on the theory adopted, this will either prevent the person probe reaching the second DP and hence cause it to fall foul of the Person Licensing Condition; or it will give rise to a morphological conflict when the probe continues its search for [Participant] and tries to agree with both DPs. In principle, again we could tell the two types of theory apart by the existence of syncretism effects, because, as we have seen, only "double agreement" theories predict an improvement when there is syncretism between 3rd person agreement and the person agreement triggered by the second DP. In the case of the Icelandic copula, such syncretism is only found between 1st and 3rd person singular, as illustrated in Table 14

Table 14 Present indicative

|  | Singular | Plural |
| :--- | :--- | :--- |
| 1 | er | erum |
| 2 | ert | eruð |
| 3 | er | eru |

for the present indicative (the same pattern obtains in both past and present, and in indicative and subjunctive).

Recall that there were actually two distinct patterns in the DAT-NOM "construction." In the Simplex case (where the two DPs are co-arguments of the verb) and there is a 1 st or 2 nd person nominative object, most speakers do not accept "default" 3rd person singular agreement, while this is the preferred option in the Complex case, where the nominative argument originates in some kind of minimal clause (either a small clause or an infinitival clause). As stated earlier, this difference has been attributed to the possibility of the nominative DP remaining within this clause which must be taken to be a domain inaccessible to agreement. What then is expected in the copular construction?

On the one hand, most current analyses of copular constructions assume that the copula takes as its complement a small clause, typically taken to be headed by some functional projection, as shown schematically in (30):


One DP then raises out of the small clause to become the subject of the enclosing clause. This then suggests that the second, unmoved DP is in a position comparable to the low nominative argument in the Complex Dat-Nom construction and hence that it should be able to remain "protected" from a higher Person probe.

On the other hand, there are empirical grounds for concluding that the small clause in a copular construction is somehow more "permeable" than in the DAT-NOM cases. For one, the nominative case on the second DP in the copular construction is somehow copied from the first, raised DP, while the nominative case in the Dat-Nom construction is independent of the external environment. This can be seen from the fact that if the two constructions are embedded under an ECM verb, in the Dat-Nom construction the second DP retains nominative case, as shown in (31a); but in the copular construction the second DP now bears the same, accusative, case as the first, as shown in (31b) ((31a) is from Zaenen et al. 1985: 449; the example and judgments in (31b) are from Halldór Ármann Sigurðsson, personal communication).
(31) a. Ég tel henni hafa alltaf pótt Ólafur leiðinlegur. I. believe she.DAT have.INF always thought Olaf.nOm boring.NOM 'I believe her to have always thought Olaf boring.'

# b. Ég tel besta prestinn vera \{Ólaf/*Ólafur\}. I believe best.ACC priest.ACC be.InF \{Olaf.ACC/Olaf.nOM \} 'I believe the best priest to be Olaf.' 

Perhaps most telling, though, is a fact mentioned earlier with respect to the examples in (25), cases where DP1 is a non-referring pronoun. Sigurðsson (1996); Sigurðsson and Holmberg (2008) state that when the first DP is expletive pað 'it' or petta 'this,' in all varieties of Icelandic there is full agreement with DP2, and, crucially for the point here, "default" 3 rd person singular agreement is not acceptable. That is, not only is the full person agreement in (25) grammatical, the same examples with 3rd singular agreement are not: ${ }^{26}$
a. Pað erum/*er
(bara) við.
it be.PRES.1PL/be.PRES.3SG (only) we.NOM
'It is (only) us.'
b. Pað eruð/*er
(bara) pið.
it be.PRES.2PL/be.PRES.3SG (only) you.PL.NOM
'It is (only) you.'

If DP2 could remain in a domain inaccessible to agreement in a copular clause, then the default agreement in examples like (32) ought to be grammatical here just as it is for the complex DAT-NOM construction: a false prediction. ${ }^{27}$

In sum, if the assumptions given above in (29) are maintained, the prediction under all accounts examined so far is that these copular constructions in Icelandic will show the same type of Person Effect as observed in the Dat-Nom constructions, most plausibly patterning together with the Simplex cases in allowing neither full agreement with DP2 nor 3rd person agreement.

### 4.2.2 Predictions assuming the possibility of "evading" agreement

At this point however we need to consider that the particular type of copular constructions examined in Hartmann and Heycock (2017, 2019b), namely SPECIFICATIONAL

[^20]copular clauses (SCCs) may differ from the Dat-NOM construction specifically in that the assumption in (29a) may not hold. In Hartmann and Heycock $(2016,2017)$ it is assumed that-following many other authors on this topic since Williams (1983), Heggie (1988), and particularly Moro (1997)—DP2 in a specificational clause is merged into the structure as the subject of a small clause, with DP1 in final position. The specificational order results from this latter DP moving left out of the small clause, as shown schematically in (33): ${ }^{28}$


Most authors assume that the initial movement of this DP out of the small clause has to be very local; specifically this means that the first landing site of the moved DP (DP1) is still below the point at which the agreement probe(s) is/are introduced (e.g. adjoined to the VP in the schematic structure in (33)). If this is the case, then DP1 will be closer than DP2 to the agreement probe despite its original position below it. This is the assumption made, for example, in Béjar and Kahnemuyipour (2017, 2018). In this case the assumption in (29a) would still hold. However, in Hartmann and Heycock $(2016,2017,2019 b)$ it is argued that DP2 agreement in specificational copular clauses arises if/when DP1 moves directly to a position above the $\phi$-probe, so that it never intervenes between the probe and DP2. DP1 agreement, on the other hand, arises if/when DP1 moves initially to a position between the $\phi$-probe and DP2, as shown schematically in (34), assuming for the moment that the agreement probe is located in T :



be $\mathrm{DP} 2<\mathrm{DP} 1>$

[^21]The actual structure proposed in these papers is more complex than this: in particular we adopt the proposal of Sigurðsson and Holmberg (2008), mentioned above in Sect. 2.3, according to which Icelandic Person and Number constitute separate heads in the clausal spine, each of which probes for a DP with the relevant features as soon as the verb moves to that head. Thus the available positions that DP1 may pass through are indicated in the tree in (35):


The reason that this structure is adopted in Hartmann and Heycock $(2016,2017)$ is that a significant number of participants in the study produced "Number-only" DP2 agreement: that is, when DP1 was 3rd singular, and DP2 2nd plural, one option for many speakers was to produce a form of the copula that showed 3rd plural agreement, as illustrated in (36). ${ }^{29}$
(36) Hann var að velta fyrir sér hvort aðalvandamálið væru
he was wondering if main_problem.DEF be.SBJ.PST.3PL pið.
you.PL.NOM
'He was wondering whether the main problem is you (PL).'
This option is derived if DP1 moves initially above Number but below Person (the position labelled (2) in the tree in (35)). In this position, DP1 "intervenes" for Person, but not Number agreement with DP2, hence the "Number-only" agreement possibility.

[^22]The other two options (full DP1 agreement or full DP2 agreement) are derived essentially as in the simpler structure in (33), (34) above. If DP1 moves to either Spec,TP or Spec,VP (positions 3 or 4), it will be the highest DP below the $\mathrm{V}+\mathrm{T}+\mathrm{Nr}$ complex when this is established. This will result in Number agreement with this DP (DP1). The next step in the derivation could be either a subsequent move of DP1 to Spec, NrP (position 2) followed by movement of the $\mathrm{V}+\mathrm{T}+\mathrm{Nr}$ complex to Pn, or just this latter step. Either way, again DP1 will be immediately below the $\mathrm{V}+\mathrm{T}+\mathrm{Nr}+\mathrm{Pn}$ complex, resulting in Person agreement also with DP1. Alternatively, if DP1 moves directly to a position above Person (position 1), it "evades" agreement entirely, resulting in full DP2 agreement. ${ }^{30}$

What about "full" DP1 agreement? That is to say, if DP1 moves to a position that intervenes between an agreement probe and DP2, do we expect the probe to halt its search, establishing an agreement relation only with DP1, or do we expect it to continue, establishing agreement with both DPs and hence the same need for morphological resolution (the syncretism effect that we saw in the DAt-Nom construction)? In Hartmann and Heycock $(2016,2017)$ it is essentially assumed that the former is true, but as discussed above, theoretical discussions of the Dat-NOM construction have generally assumed that the dative argument interacts with agreement exactly like a nominative 3 rd person argument in all relevant respects-the assumption spelled out in (29b) above. If this assumption is adopted, it seems that agreement with DP1 should only be possible if DP2 is able to remain in a domain unreachable by agreement. As mentioned above in Sect. 4.2.1, however, there is evidence that this cannot be the case. In fact, for the type of analysis proposed in Hartmann and Heycock $(2016,2017,2019 b)$ there is an additional reason to reject the hypothesis that in these SCCs DP2 can remain in a position inaccessible to agreement.

Recall that it is argued in Hartmann and Heycock (2017) that DP1 in the copular construction can evade agreement entirely by moving above all potential agreement probes, as schematised in (37).

## (37) DP1 Pers Num [FP DP2 PP4]

To the extent that full person agreement with DP2 is possible, it must be the case that DP2 can be accessible to the Person probe, whether because there is an instantiation of FP that does not constitute a barrier for the probe or because DP2 does a short movement out of the embedded clause ("Movement to (Nominative) Object"). But if DP2 could remain "protected" from the agreement probe-whether because of an alternative structure for FP (see Ussery 2017 for such a proposal for the complex Dat/Nom construction) or because DP remains within FP rather than moving out of it-there should be a derivation available where neither DP is in the domain of agreement: DP1 because it is too high, DP2 because it is too low. In this case we would expect to get true default agreement-3rd person singular, even when DP1 is plural. After all, it is exactly the possibility of the low nominative remaining within a "protective" embedded clause that allows the 3rd singular agreement in the complex

[^23]DAT-NOM construction for all speakers. It turns out that the results in Hartmann and Heycock (2017) suggest that this is not an option in the specificational construction, however: in the one condition where neither DP1 nor DP2 was 3rd person singular (DP1 was 3rd plural, DP2 2nd plural), "default" agreement was never chosen (0 out of 209 cases). This, then, constitutes a further argument that in the specificational copular construction-in contrast to the Complex DAT/NOM construction-DP2 is always local to the agreement probe; that is, in this respect it is comparable to the nominative DP in the simplex, rather than the complex Dat-Nom construction. This means that if double agreement is indeed the result of a general property of person agreement probes in Icelandic to have to agree with all the candidates in their domain, 3rd person agreement (agreement with DP1) should be as low-rated as it is in the Simplex Dat/Nom constructions, rescuable only by syncretism. On the other hand, if it is the result of a special property of datives to establish 3rd person agreement but not halt further search by a person probe, we would not expect to find evidence for double agreement in the copular construction: that is, full DP1 agreement would be grammatical.

The results cited above from the production study reported in Hartmann and Heycock (2017: 255 , Table 7) suggest that this latter situation obtains. That is, where DP1 and DP2 are both singular, but DP2 is non-3rd person, in a significant number of cases (222 out of 426), speakers opted for DP1 agreement even though this is not syncretic with the agreement that would also match in person with DP2, as illustrated in (38):
(38) Hann var að velta fyrir sér hvort aðalvandamálið
he was wondering whether main_problem.DEF
\%væri/\%værir pú.
be.SBJ.PST.3SG/be-SBJ.PST.2SG you.SG.NOM
'He was wondering whether the main problem was you (SG).'
Given that we have seen that there is evidence that DP2 in a specificational copular clause is never "protected" from the agreement probe by the clause boundary, for speakers who choose this option it seems that it must be the case that the nominative DP1, in contrast to the initial dative in a DAT-NOM construction, causes the probe's search to halt. Note that this further casts doubt on the applicability of the Person Licensing Condition: the PLC would incorrectly predict that in a specificational sentence with a non-3rd person pronoun focus in Icelandic, agreement with DP1 should always result in ungrammaticality because the pronoun would violate the PLC.

### 4.3 Person agreement in specificational copular clauses in Icelandic: New rating study

It is important to observe that the results reported in Hartmann and Heycock (2017) were all from elicited production studies. These clearly give a different kind of information from what can be obtained from judgment studies. On the one hand, as participants in a production task are never faced with explicit examples of the variants at issue, and also are not called on to make metalinguistic judgments, they may
be less influenced by prescriptive norms. On the other, since a fill-in-the-blanks production task is a kind of forced choice, in the sense that participants have no straightforward way of simply rejecting any way of completing the given sentence, if two agreement options were chosen more or less equally, it is possible that in fact neither option is grammatical, and participants simply chose-possibly at random-between two ungrammatical options. Further, the difference between a dispreferred structure and one that is ungrammatical is perhaps harder to detect than in a judgment task, even when individuals are given multiple chances to make a particular choice (in the studies just cited, each participant gave three responses in every condition). For these reasons, the results of such production studies cannot be compared directly to those from judgment studies.

More generally, in order to directly compare the acceptability of non-3rd person agreement with low nominatives in the Icelandic Dat-NOM constructions and in copular sentences, it is necessary to have similar types of data. For that reason, the online questionnaire described in Sect. 3.2 also included a subexperiment investigating the judgments on specificational copular sentences with non-3rd person DP2s.

### 4.3.1 Design

The experiment investigates judgments on person agreement in the six conditions set out in Table 16. The overall goal of this experiment is to supplement the results from previous production studies on agreement in Icelandic copular sentences, addressing in particular the following questions:

- Are specificational sentences with pronoun foci degraded in acceptability, regardless of agreement?
- Is default agreement-as distinct from DP1 agreement-ungrammatical, as predicted if DP2 is always within the domain of the agreement probe?
- Is unambiguous DP1 agreement grammatical if there is a non-3rd person "low nominative" (DP2) in this construction?
- Is full (non-syncretic) agreement with a non-3rd person low nominative (DP2) in this construction as unacceptable as it is in the Dat-Nom construction? Or is it more acceptable than it is in the Dat-Nom construction, as predicted by the account in Hartmann and Heycock (2017)?
Ideally we would also want to test for an effect of syncretism. However, as will become clear later, this is hard to do.

The pattern of syncretism in agreement morphology shown by the copula verb vera 'to be' was illustrated in Table 14 for the present tense. The pattern is the same in the past subjunctive, the forms used in the materials. For ease of reference, we give the full paradigm for the past subjunctive in Table 15; again the syncretic forms are boldfaced.

Turning to the conditions set out in Table 16: conditions A and B allow a direct comparison of the acceptability of DP1 and DP2 agreement where DP2 is a non3rd person pronoun. In Condition B the morphology of agreement is unambiguous person agreement with DP2. Further, condition B can be compared to the cases of unambiguous Person agreement in the Dat-Nom constructions, which as we have seen receive very low ratings and may be taken to be ungrammatical.

Table 15 Past subjunctive forms
of vera 'to be'

|  | Singular | Plural |
| :--- | :--- | :--- |
| 1 | væri | værum |
| 2 | værir | væruð |
| 3 | væri | væru |

Table 16 Conditions for experiment on Person agreement in Specificational Copular Sentences

| Condition | DP1 | DP2 | Agreement | Agreement type | Example |
| :--- | :--- | :--- | :--- | :--- | :--- |
| A | 3SG | 2PL | væri (1/3SG) | DP1/Default | Our only hope be.1/3SG you.PL |
| B | 3SG | 2PL | væruð (2PL) | DP2 | Our only hope be.2PL you.PL |
| C | 3SG | 2PL | væru (3PL) | DP2 Num only | Our only hope be.3PL you.PL |
| D | 3PL | 2PL | væri (1/3SG) | Default | The most likely winners be.1/3SG you.PL |
| E | 3SG | 3SG | væri $(1 / 3 \mathrm{SG})$ | Full match/Default | Our only hope be.1/3SG she |
| F | 3SG | 1SG | væri $(1 / 3 \mathrm{SG})$ | Syncretic match/Default | Our only hope be.1/3SG I |

Condition C is included given that we found in our production experiments that a significant number of speakers produced a form that agrees with DP2 in number, but not in person. This is the "Number-only" agreement pattern described in Sect. 4.1 above and illustrated in (36); it is a kind of what Sigurðsson and Holmberg (2008: 22) refer to as "half-agreement."

Condition D is intended to establish whether the alternative to agreement with DP2 (whether full or "Number-only") is agreement with DP1 or "default" 3rd singular agreement. If default agreement is possible, then examples of this type should receive similar ratings to examples of the type in (A), where the initial DP is singular, since by hypothesis, in both cases 3rd singular agreement would be the result of a default. It may be recalled that in the production experiment in Hartmann and Heycock (2017) this type of default agreement was not produced, so our expectation is that default agreement in these copular constructions will be ungrammatical.

In Condition E there is no conflict of either person or number between DP1 and DP2, and the 3rd person singular agreement morphology on the verb is consistent with both. Hence judgments on this condition should give us a baseline on how acceptable this construction is with a pronoun focus. As reported in Hartmann and Heycock (2019a), Dutch speakers gave low ratings to all specificational sentences with pronouns as foci, regardless of agreement; this condition allows us to determine whether or not this is the case also in Icelandic.

In Condition F there is a conflict in person between the two DPs, but there is syncretism in the morphology. Note however that because DP1 is 3rd person singular, the 3rd person agreement here could be interpreted theoretically as double agreement with both DPs or as full agreement with DP1 only. ${ }^{31}$ In the Dat-NOm construction we were able to eliminate this confound because there is syncretism between 2 nd and

[^24]3rd person plural morphology; as illustrated in Tables 14 and 15, this is not the case for the copula.

### 4.3.2 Materials

18 items were constructed to appear in each of the conditions set out in Table 16, and 6 lists of examples constructed so that participants would see three examples of each condition, with each example being drawn from a different item. ${ }^{32}$ As in the earlier production experiment of Hartmann and Heycock (2017), the copular clause always appeared in the form of an embedded polar interrogative, in order to minimize the possibility that a participant might parse the clause as exhibiting $\mathrm{A}^{\prime}$-movement of a predicate DP over a DP in the canonical subject position (a case of non-subject-initial V2 equivalent to English The nicest man I know, he is not, rather than specificational The nicest man I know is not him). All the instances of the copula are in the past subjunctive; Icelandic has sequence of tense, and subjunctive is commonly the mood chosen in embedded interrogatives (Thráinsson and Pórðardóttir 2015).

The materials differed from those in the production study in that in addition we included the negation marker ekki 'not' before the focused pronoun. This provides a further barrier to parsing the clauses as instances of embedded topicalisation with DP2 in the canonical subject position, since in such a construction the pronoun would precede, rather than follow negation. However, it does make the examples more complex and is likely to have the effect of decreasing their acceptability overall. It may also have the effect of increasing the acceptability of DP1 agreement / decreasing the acceptability of DP2 agreement (further discussion below). (39) gives examples of one item in all conditions:

$$
\begin{align*}
& \text { Pau voru að velta fyrir sér hvort ... }  \tag{39}\\
& \text { they were wondering whether } \\
& \text { A. aðalvandmálið vær-i } \quad \text { ekki pið. } \\
& \text { main.problem be.SBJ.PST-3SG not you.PL.NOM } \\
& \text { 'the main problem wasn't you (PL)' } \\
& \text { B. aðalvandmálið vær-uð ekki pið. } \\
& \text { main.problem be.SBJ.PST-2PL not you.PL.NOM } \\
& \text { 'the main problem wasn't you (PL)' } \\
& \text { C. aðalvandmálið vær-u } \quad \text { ekki pið. } \\
& \text { main.problem be.SBJ.PST-3PL not you.PL.NOM } \\
& \text { 'the main problem wasn't you (PL)' }
\end{align*}
$$

[^25](i.) a. The problem is you two.
b. \#The problems are you two.
c. \#The most likely winner is you two.
d. The most likely winners are you two.

```
D. líklegustu sigurvegararnir vær-i ekki pið.
    likeliest winners be.SBJ.PST-3SG not you.PL.NOM
    'the most likely winners weren't you (PL)'
E. aðalvandmálið vær-i ekki hún.
    main.problem be.SBJ.PST-3SG not she.NOM
    'the main problem wasn't her'
F. aðalvandmálið vær-i ekki ég.
    main.problem be.SBJ.PST-1/3SG not I.NOM
    'the main problem wasn't me'
```

Each list contained 18 of the test sentences for this experiment, interspersed with the 18 test sentences from the Dat-NOM study discussed above and 28 further fillers.

### 4.3.3 Procedure and participants

As this experiment was run simultaneously with the DAT/NOM experiment discussed above, the procedure and participants are identical; see Sects. 3.2.3 and 3.2.4 above.

### 4.3.4 Results

As discussed above with respect to the Dat/Nom Experiment, raw judgments were z-transformed per participant (with fillers included) and ratings of 0 were changed to the lowest possible rating (1). Table 17 gives the mean ratings and $z$-scores for the 6 conditions; they are graphed in Fig. 6.

Focussing first on the most extreme judgments: Condition E, where there is a pronoun focus but no potential issue with agreement (both DPs are 3rd singular) is given a high rating. So too is Condition F, where DP2 is 1st person singular and the agreement is syncretic between 1st and 3rd singular. Conversely, examples where the agreement is unambiguously "default"-3rd person singular agreement, where both DP1 and DP2 are plural (and DP2 is of a different person), are rated the lowest of all (Condition D). The conditions where agreement is unambiguously with only one of the DPs are conditions A, B and C. Of these, the highest rated is A (DP1 agreement). Agreement in person with DP2 (B) is rated significantly lower, but examples of this type are still rated much higher than "default" agreement (Condition

Table 17 Conditions and results of the rating study on Icelandic SCC construction

| Cond | DP1 | DP2 | Agreement | Type of agreement | z-score | Rating |
| :--- | :--- | :--- | :--- | :--- | ---: | :---: |
| A | 3SG | 2PL | væri (1/3SG) | DP1/Default | 0.34 | 23.4 |
| B | 3SG | 2PL | væruð (2PL) | DP2 Person \& Number | -0.14 | 20.0 |
| C | 3SG | 2PL | væru (3PL) | DP2 Number only | -0.40 | 17.8 |
| D | 3PL | 2PL | væri (1/3SG) | Default | -0.66 | 15.6 |
| E | 3SG | 3SG | væri $(1 / 3 \mathrm{SG})$ | Full match/Default | 0.43 | 24.6 |
| F | 3SG | 1SG | væri $(1 / 3 \mathrm{SG})$ | Syncretic match/Default | 0.56 | 25.5 |



Fig. 6 Normalized mean ratings for Icelandic specificational copular clauses, with fillers
D). Number-only agreement (C) is rated worse than full agreement with either DP1 or DP2, although still significantly higher than "default" agreement. ${ }^{33}$

In order to statistically evaluate our results, we fitted a linear mixed effects model using the lmer-function of R with Condition (6-level, A-F) as fixed factor and participants and items as random factors. Condition has a significant effect on the data $(F(1,5)=101.19, p<.00001)$. We calculated the following planned contrasts for our data (adjusting estimates by using the ginv-Function on the contrast matrix, using the lmer function).

1. Contrast between DP1 vs. DP2 agreement: comparison of A vs. B
2. Effect of syncretism: E vs. F
3. Effect of partial agreement, measured against the worst condition: C vs. D
4. Effect of partial agreement, measured against best condition: C vs. $\mathrm{E} / \mathrm{F}$
5. Contrast between DP2 vs. default agreement: B vs. D

All contrasts except the one between E and F are significant; see Table $18 .{ }^{34}$
The four questions that we planned to address are repeated here:
(i) Are specificational sentences with pronoun foci degraded in acceptability, regardless of agreement?
(ii) Is default agreement-as distinct from DP1 agreement-ungrammatical, as predicted if DP2 is always within the domain of the agreement probe?
(iii) Is unambiguous DP1 agreement grammatical if there is a non-3rd person "low nominative" (DP2) in this construction?
(iv) Is full (non-syncretic) agreement with a non-3rd person "low nominative" (DP2) in this construction as unacceptable as it is in the DAT-NOM construction? Or is

[^26]Table 18 Estimates and CI of contrasts in Icelandic SCC construction

| Fixed Effects (z-score) |  |  |  | Random Effects |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Predictors | Estimates | CI | p |  |  |
| (Intercept) | 0.03 | $-0.03-0.09$ | 0.380 | $\sigma^{2}$ | 0.41 |
| Contrast A vs. B | 0.51 | 0.38-0.65 | $<0.001$ | $\tau$ Participant | 0.03 |
| Contrast E vs F | -0.14 | $-0.27-0.00$ | 0.053 | N | 59 |
| Contrast C vs D | 0.27 | 0.13-0.41 | $<0.001$ | Observations | 1003 |
| Contrast C vs E/F | -0.89 | $-1.01--0.77$ | $<0.001$ | Marginal $\mathrm{R}^{2}$ | 0.319 |
| Contrast B vs D | 1.02 | 0.88-1.16 | $<0.001$ | ConditionalR ${ }^{2}$ | 0.369 |

it more acceptable than it is in the DAT-NOM construction, as predicted by the account in Hartmann and Heycock (2017)?
Ad (i). Overall, specificational copular clauses are slightly degraded compared to fillers that were designed to be fully grammatical: see Fig. 6, which shows the means of the z-scores for the specificational clauses in Conditions A-F plotted together with the scores for the fillers that were designed to be fully grammatical ('Good'), grammatical but "awkward" ('Medium'), and entirely ungrammatical ('Bad'). The best cases of the specificational sentences (recall that all of these sentences had pronominal foci) are rated well above the intermediate fillers. The condition in which there is no possible issue caused by agreement itself is E, where both DPs were 3rd singular and the agreement was 3 rd singular. We conclude that SCC sentences are grammatical to native speakers even though the complexity of our examples sets them apart from the best fillers.

Ad (ii). Our second question was whether default agreement, as distinct from DP1 agreement, is ungrammatical. We conclude from the low rating for unambiguously "default" agreement (Condition D) that indeed this is the case. We can see that the difference between DP1 agreement and default agreement is striking and significant. Additionally default is lowest rated of all SCC conditions and also rated below the medium fillers, though still slightly above the lowest fillers, which were all fully ungrammatical in different dimensions, exhibiting violations such as topicalization within a $w h$-clause, the use of subjunctive in a context where indicative is required, and a long-distance reflexive in a context where it is not licensed (see Appendix C for details). This is also in line with what is reported for production experiments in Icelandic (Hartmann and Heycock 2017) where default agreement was never produced in this configuration, and confirms the conclusion reached also in Hartmann and Heycock (2018b) that such default agreement is not an option in specificational copular clauses. Note that the low ratings given to these instances of unambiguous default agreement contrast sharply with the ratings given to the other sentences with 3rd singular agreement: Conditions A, E and F. We take it that this contrast shows clearly that in the three latter cases the 3rd singular agreement is not to be interpreted as "default," but rather as agreement with DP1 (A) or ambiguously with DP1 or DP2 ( E and F ).

Ad (iii). The third question was whether unambiguous DP1 agreement is grammatical in the presence of a non-3rd person DP2. As discussed above, this kind of
agreement is predicted to be impossible if DP2 always has to be agreed with. The high ratings for Condition A (DP1 3rd singular, DP2 2nd plural, agreement 3rd singular) indicate that the answer to this is yes. That is, the small difference between A and $\mathrm{E} / \mathrm{F}$ is certainly not to be interpreted as an ungrammatical/grammatical contrast, but might perhaps be due to some complexity in interpreting these examples where the two DPs differ in both person and number.

Ad (iv). The final question was whether full person agreement with DP2 in a specificational sentence is grammatical (at least for some speakers) as would be expected from the production study, and in contrast to such agreement in the Dat-Nom constructions. As we would expect from the production study, DP1 agreement (A), unambiguous person agreement with DP2 (B) and Number-only agreement with DP2 (C) are all judged significantly better than "default" agreement. What is unexpected given the production study is the relative ranking of judgments: DP1 agreement $>$ DP2 agreement > Number-only agreement. On the basis of the production study we would have expected rather that DP2 agreement would be the most highly ranked, with DP1 agreement and Number-only agreement approximately the same.

Although we can only speculate here, we think that the reversal of the relative ranking of DP1 and DP2 agreement in the judgment task may be at least partly due to the inclusion of negation in the rating study. We know from an earlier production study of number agreement in Faroese specificational clauses that the inclusion of an adverb between the verb and DP2 significantly increased the frequency of DP1 agreement at the expense of DP2 agreement (Hartmann and Heycock 2017), and a similar effect obtains in Dutch (but not German), as noted in Hartmann and Heycock (2014). Further research is clearly needed to explain why this effect should obtain, but it is plausible that it also had the effect of depressing the ratings of DP2 agreement in this experiment. As for ratings for the Number-only agreement: we think that it is possible here that-on top of any effect of the intervening negation-speakers are more aware of prescriptive pressures in the ratings task than in the production task. Recall that in the case of Number-only agreement, the morphology of the verb is neither a full match for DP1 or DP2. Clearly this is a rare configuration in the language, and although as far as we know there are no articulated prescriptions about agreement in specificational sentences in Icelandic, any speaker who is hesitant about the "correctness" of their response is unlikely to conclude that Number-only agreement is the prescribed form. In the earlier production experiment, speakers were never presented with forms of the copula: they generated these forms to fill the blanks. On the other hand, in the ratings task here, speakers were presented with examples in other conditions where the copula can be interpreted as agreeing fully with DP1 and/or DP2. We therefore suggest tentatively that speakers may be more conscious in the ratings task of alternative forms that seem more "standard" and that this may account at least in part for the rating of Number-only agreement being lower than would be expected from its frequency in production. However, this idea clearly needs substantiation, and the status of Number-only agreement clearly requires further exploration.

Crucially, however, while full person agreement with DP2 is rated lower than agreement with DP1, it is nevertheless the case that such person agreement is acceptable to many speakers, and clearly better than such agreement in either of the DatNom constructions. To see this, consider the plots showing the relevant comparisons


Fig. 7 Comparison of agreement in SCC and DAT/NOM constructions
between agreement in the copular construction and the two DAT-NOM constructions in Fig. 7.

In all the cases graphed here, the first DP (a dative in the Dat-Nom cases, a nominative in the SCC cases) is 3rd singular, and the second DP is non-3rd person. Examples of all the relevant conditions are given in (40)-(42). ${ }^{35}$ There is no example of the syncretic condition for the specificational copular clauses because, as stated above, the verb vera 'be' does not exhibit any syncretism in the plural.
(40) 3 SG agreement (default agreement triggered by dative/agreement with DP1)
a. ... aðalvandmálið vær-i ekki pið.
main.problem be.SBJ.PST-1/2/3.SG not you.PL.NOM
' $\ldots$. the main problem wasn't you(PL).' SCC: 3SG
b. Kennarum fann-st pið so sniðug. the.teacher.DAT find.PST-1/2/3SG you.PL.NOM so clever 'The teacher found you so clever.' Complex Dat-Nom: 3sG
c. Kennarum leidd-ist pið alveg rosalega the.teacher.DAT bore.PST-1/2/3SG you.PL.NOM very much 'The teacher was really fed up with you.' Simplex Dat-Nom: 3SG
(41) Full person agreement with nominative/DP2
a. ... aðalvandmálið vær-uð ekki pið.
main_problem be.SBJ.PST-.2PL not you.PL.NOM
'.. the main problem wasn't you(PL).'
SCC: 2PL
b. Kennarum fund-umst við so sniðug. the.teacher.DAT find.PST-1PL we.NOM so clever 'The teacher found us so clever.' Complex Dat-Nom: 1PL

[^27]c. Kennarum leidd-umst við alveg rosalega
the.teacher.DAT bore.PST-1PL we.NOM very much
'The teacher was really fed up with us.' $\quad$ Simplex DAT-NOM: 1PL

Syncretic (2/3PL) agreement with nominative DP
a. Kennarum fund-ust pið so sniðug. the.teacher.DAT find.PST-2/3PL you.PL.NOM so clever 'The teacher found you so clever.' Complex DAT-NOM: 2/3PL
b. Kennarum leidd-ust pið alveg rosalega the.teacher.DAT bore.PST-2/3PL you.PL.NOM very much 'The teacher was really fed up with you.' Simplex DAT-NOM: 2/3PL

Recall that 3rd singular agreement is expected to be grammatical for all speakers in the complex DAT-NOM construction, as in (40b), regardless of the person of the nominative argument (because the nominative may remain within a clause that blocks further probing by the agreeing head). And indeed we see in Fig. 7, as we saw above in Sect. 3.2.5, that such agreement is fully grammatical. In contrast, the same agreement in the simplex DAT-NOM construction, as in (40c), is predicted to be ungrammatical because-here assuming an account in terms of double agreement-the agreement probe finds and establishes 3SG agreement with the dative argument, but then does not halt, and also finds and establishes agreement with the nominative argument, now setting up a situation where there is no possible morphological exponence. And as we see again in the graph, indeed such examples got a low rating in our experiment. ${ }^{36}$ Importantly, 3SG agreement in the specificational copular clauses with a 3SG subject, as in (40a) is significantly better than in the simplex DAT-NOM construction. This supports our contention that there is no "double agreement" in the SCC construction: if DP1 moves to a position between the agreeing head and DP2, the probe reaches only DP1. Either interacting with the nominative DP1 must cause the person probe to halt (in a way that interacting with the dative in the DAT-NOM configuration does not), or DP2 must be able to remain within a domain inaccessible to the probe. See above for a discussion of why the latter seems to us the less likely scenario; we will also return to this point very shortly.

The second set of points in the graph in 7 show the ratings for full agreement with the lower argument in the three cases. As we have already seen, the ratings for unambiguous full person agreement in the DAT-NOM constructions, as in (41b) and (41c), are very low. ${ }^{37}$ Importantly, we can see that specificational copular clauses showing

[^28]full person agreement with DP2, as in (41a), are indeed rated significantly higher than the DAT-NOM constructions, despite the overall somewhat depressed ratings for all instances of the specificational copular examples discussed above. In fact, this full person agreement with DP2 is rated higher even than the syncretic agreement cases for the DAT-NOM constructions (the difference is small, but statistically significant).

## 5 Theoretical discussion

In the previous section, we have presented the details for the following results from our experiment on SCCs:
(i) Specificational sentences with pronoun foci are acceptable.
(ii) Default agreement-as distinct from DP1 agreement-is ungrammatical.
(iii) Unambiguous DP1 agreement is grammatical even if there is a non-3rd person "low nominative" (DP2) in this construction.
(iv) Full (non-syncretic) agreement with a non-3rd person "low nominative" in SCCs is grammatical even though slightly degraded, and clearly different from the ungrammatical cases of such agreement in the Dat-NOM construction.
Based on these results we are now in a position to further evaluate the different accounts for the DAT-NOM constructions in Icelandic-ie. Person Licensing Condition vs. double agreement accounts-as well as evaluating different accounts of agreement patterns in SCCs.

First of all, as already discussed looking only at the DAT-NOM results, the accounts based on the person licensing condition cannot account for the data here. In SCCs it is fully grammatical to not agree with a non-3rd person low nominative. Additionally our data show that agreement in SCCs patterns differently from DAT-NOM cases: that is, our data provide evidence against accounts that predict that the two should behave exactly alike, such as the multiple agreement accounts. The availability of both DP1 and DP2 agreement in SCCs stands in stark contrast to the unavailablity of such agreement without a syncretic form in the DAT-NOM cases. Conversely, it is in line with the proposal from Hartmann and Heycock (2016, 2017, 2019a,b) according to which SCCs and DAT-NOM clauses are more different in their structure, in such a way that DP2 agreement is possible in SCCs because DP1 can "evade" the probe's search by moving directly from a position below DP2 to a position above the probe.

As argued above, we are proposing that in specificational clauses in Icelandic, full person agreement with DP2 is rendered possible because DP1 can evade the person probe entirely. On the other hand, the possibility of agreement with DP1 shows that double agreement (as evidenced by the effects of syncretism observed in the DatNom construction as well as other considerations discussed in Coon et al. 2017) does not obtain when DP1 is in the domain of agreement. Finally, we conclude from this that it is some special property of the dative argument in the DAT-NOM construction that results in the person probe continuing its search; that is, this is not just a general property of 3rd person arguments.

[^29]Thus we have argued that we have to reject both of the assumptions that were given in (29) above, repeated here as (43):
(43) a. In a binominal copular construction, at the point at which agreement takes place, the two DPs are in a hierarchical arrangement with the linearly first DP (DP1) higher in the structure than the second DP (DP2), just as the dative DP in the DAT-NOM construction enters the derivation in a structurally higher position than the nominative.
b. The dative argument in a DAT-NOM construction interacts with agreement in exactly the same way as a 3rd person nominative.

So let us now turn to alternative analyses of SCCs that challenge the evasion agreement account: there is a different way in which the assumption in (43b) might be challenged, and we need to consider how this might impact on our conclusions. Specifically, it is proposed in Béjar and Kahnemuyipour $(2017,2018)$ that the initial DP in a specificational sentence is not a typical 3rd person argument because it entirely lacks a person feature. ${ }^{38}$ Béjar and Kahnemuyipour do not discuss Icelandic in detail, but in Béjar and Kahnemuyipour (2017) they give an analysis of DP2 agreement in Persian that they suggest in their 2018 paper could be extended to Icelandic. The feature structure assumed is given in (44). [d] is the name they give to the person feature; [ $n$ ] is the minimal feature possessed by every nominal (Béjar and Kahnemuyipour 2018):


In their system there is a single agreement probe, which may vary from language to language in its "person sensitivity." In order for Agree to succeed, the features of the goal must be a superset of the probing features (Béjar and Kahnemuyipour 2017: 487-488; note the contrast to the system in Coon and Keine 2021 where the two feature sets are only required to intersect). DP2 agreement in specificational sentences arises, they argue, when the probe is specified to search specifically for $[d]$. This is how the probe is specified in Persian, and this would also be the case in Icelandic. According to their hypothesis, the initial DP in a specificational sentence is lacking exactly this person feature [d], hence it will be ignored by the probe, which will instead match against the person feature of DP2. As for number agreement, in this system this is entirely "parasitic" on a match determined by another feature (here person [d]).

Following the argumentation in Hartmann and Heycock (2018b, a), we do not think that Béjar \& Kahnemuyipour's system can be adopted for Icelandic in a way that will also allow for an account of the DAT-NOM constructions. If the dative argument in

[^30]these constructions contrasts with a specificational subject in carrying the person feature [d], the probe would always Agree with the dative and the search would terminate. There could then be no number agreement with the lower nominative argument in a DAT-NOM construction (since in this system with only a single probe, number agreement is parasitic on person agreement), counter to fact. Conversely, if the dative argument is taken, like a specificational subject, also not to have a person feature that is accessible to the probe, full agreement with the low nominative argument in the Dat-NOM structure should be as grammatical in the Dat-NOM construction as it is in the specificational copular construction, and we have just seen that this is not borne out by the facts. ${ }^{39}$

Nevertheless, the hypothesis that the initial DP in a specificational sentence lacks person features could potentially be combined with a double-agreement theory along the lines of Coon and Keine (2021). Recall that in the system that they propose, person and number in Icelandic are distinct probes, and the person probe has the feature structure in (16), repeated in (45):

$$
\left[\begin{array}{c}
u \text { Pers }  \tag{45}\\
\mid \\
u \text { Part }
\end{array}\right]_{\pi}
$$

As discussed above, in Coon \& Keine's proposal, the features of an argument will be copied over to the probing head if there is an intersection between the two sets of features. If a 3rd person argument carries a person feature, and dative DPs of any person behave externally like 3rd person pronouns in this regard, a [person] feature will be copied over to the probe, but it will continue to search for a match for [ $u$ Part]. This is what generates potential conflicts of exponence in the DAT-NOM construction. But now suppose that just in the case of a specificational sentence, the initial DP does not even carry a [Pers] feature at all. In this case the probe will not interact with DP1 at all, no person features will be copied over, the probe will continue its search. If it encounters a non-3rd person DP2 there will be a full match for person features, and the result will be full DP2 agreement. This then would account for the contrast between SCCs and Dat-Nom sentences with respect to the possibility for person agreement with the low nominative argument (DP2).

What about DP1 agreement in SCCs, though, which we have seen is even more generally accepted by Icelandic speakers than DP2 agreement? It will not do to propose that speakers have an alternative specification for the person probe available which will be satisfied fully by any nominal argument. This would indeed allow for DP1 agreement in SCCs-but it would also predict that 3rd person agreement would be fully grammatical also for all DAT-NOM constructions, even the Simplex cases. The only alternative seems to be to adopt the hypothesis that DP2 in a specificational sentence can remain within a domain that is inaccessible to agreement. In this case the Person probe would never be satisfied in an SCC, but it would be spelled out

[^31]as 3rd person by default. As outlined above however, this hypothesis that DP2 in a copular clause is not accessible to an outside probe is problematic-and, notably, it seems very much at odds with Coon \& Keine's own assumptions about agreement in other copular constructions, where they have argued that (in German at least) a nominative DP2 is necessarily in the domain of agreement of the probe.

There is one other set of data that may help in deciding between the evasion account (as in the works of Hartmann and Heycock cited above) and the account in which DP1 allows further search by the probe. Under most assumptions about agreement in Icelandic Dat-NOM constructions and more generally, an agreement probe may continue past an intervening goal if the probe is more specified than that higher goal, but it can never copy over a feature set from a lower DP that is less fully specified than a higher goal. ${ }^{40}$ Thus, if we could set up an SCC where DP1 had a fuller set of $\phi$-features than DP2, we should never see DP2 agreement, on the assumption (precisely the assumption we are interested in testing) that DP1 is in an intervening position. On the "evasion" account of Hartmann and Heycock, however, speakers who allow DP2 agreement do so because DP1 may entirely escape the domain of agreement; hence under this account speakers who allow DP2 agreement should do so even if DP2 is less fully specified than DP1.

In most cases this difference in predictions is impossible to test. DP1 in a specificational sentence is always 3 rd person (the least specified person), ${ }^{41}$ and although it can be plural (as for example in cases like My favourite authors are Austen and Heller), generally in such cases DP2 also has to be plural, rather than singular. ${ }^{42}$ However, Hartmann and Heycock (2018b) present data from a configuration in Icelandic that precisely allows DP1 to be plural (the more specified number feature) while DP2 is singular. This constellation can arise because Icelandic has a number of nouns that are pluralia tantum: that is, formally plural but semantically singular. Such nouns include for example upptök 'cause,' rök 'reason,' mistök 'mistake.' It is therefore possible to test for the acceptability of singular vs. plural agreement in Icelandic sentences like (46):

> Pau spurðu hvort eldsupptökin vær-i/vær-u ekki they asked whether fire_causes be.SBJ.PST-3SG/be.SBJ.PSG-3PL not purrkurinn. drought.DEF

[^32](i) She thought that ...
a. I was Omar/you (because she couldn't see well in the dark).
b. I was Omar (but actually my name is Osman).

These are however not generally taken to be specificational clauses in the literature (and the same for hypotheticals like If I were you . . . ). For some discussion of such cases see Heycock (2021).
${ }^{42}$ See the discussion above, (and more detail is given in Hartmann and Heycock 2018b), for evidence that the number feature of a plural DP1 in an SCC is accessible to an external probe (a point also conceded in Béjar and Kahnemuyipour 2018, who argue that in this number features are different to person).
'They asked whether the cause (lit: causes) of the fire wasn't/weren't the drought.'
(experimental material, without judgment)
The situation in Icelandic is made more complex by the fact that, as we have seen, many speakers allow or even prefer DP1 agreement in specificational sentences. However, given that DP2 agreement is a possibility for at least some speakers, there are now different predictions depending on whether or not DP1 must remain within the domain of agreement or can "evade" it. If it must remain within the domain of agreement, then singular agreement here is predicted to be unacceptable for all speakers. And in fact it seems it would also be expected that plural agreement should also be the only option if the order of the two DPs is reversed, as in (47):
(47) Pau spurðu hvort purrkurinn vær-i/vær-u ekki they asked whether drought.DEF be.SBJ.PST-3SG/be.SBJ.PST-3PL not eldsupptökin.
fire_causes.DEF
'They asked whether the drought wasn't/weren't the cause (lit: causes) of the fire.'
(experimental material, without judgment)
If, on the other hand, DP2 agreement in SCCs arises because DP1 in this type of copular clause can evade the domain of agreement entirely, singular agreement should be relatively acceptable in an SCC like (46), and there is no expectation that plural agreement should be possible if the order is reversed, as in (47) (a predicational copular sentence where DP1 is first-merged higher than DP2).

The judgment task reported in that paper revealed that the predictions were in line with the evasion account of agreement in SCCs. First, singular agreement in sentences like (46) was judged significantly more acceptable than in sentences like (48), where there was no singular DP2:

$$
\begin{align*}
& \text { Pau spurðu hvort eldsupptökin vær-i/vær-u ekki í }  \tag{48}\\
& \text { they asked whether fire_causes be.SBJ.PST-3SG/be.SBJ.PST-3PL not in } \\
& \text { rannsókn. } \\
& \text { investigation } \\
& \text { 'They asked whether the cause (lit: causes) of the fire wasn't/weren't under } \\
& \text { investigation.' } \\
& \text { (experimental material, without judgment) }
\end{align*}
$$

And second, plural agreement is significantly degraded (and significantly worse than singular agreement) when the order of the two DPs is reversed, as in (47). For full details of the data and argumentation the reader is referred to Hartmann and Heycock (2018b).

## 6 Conclusions and directions for further research

To sum up, in this paper we have aimed to contribute to current research on the interaction of syntactic and morphological constraints on agreement by investigat-
ing two cases in Icelandic where it has been argued that there are multiple potential controllers of verbal agreement: DAT-NOM constructions and specificational copular clauses. For the DAT-NOM, we argue that our data is not straightforwardly compatible with a Person Licensing account, as we do observe syncretism effects, even though they are not as strong as predicted in the double agreement account (we offer an explanation of why this might be). Additionally, we do not find the same restrictions on person agreement in the second construction, specificational copular clauses, that we would expect under a PERSON LICENSING CONDITION account.

Our data show that in the specificational copular construction in Icelandic, both DP1 and DP2 may be agreed with in person, as well as in number, with speakers varying in their preferences. The acceptability of person agreement with DP2 in SCCs contrasts with the significantly lower ratings for person agreement with the low nominative argument in the DAT-NOM constructions. The fact that DP2 agreement is possible in SCCs we have argued to show that DP1 may "evade" the probe's search by moving directly from a position below DP2 to a position above the probe. The fact that DP1 agreement is grammatical even when this agreement is not syncretic with DP2 agreement shows that there is no "double agreement" in these cases, again in contrast to the DAT-NOM constructions. We have, rather more tentatively, argued that this suggests that such double agreement arises from a special property of Icelandic datives as opposed to nominatives (including 3rd person nominatives), namely their inability to halt the search of the probe. Finally, we have argued that there is no consistent way to account for the contrasts between the agreement patterns observed in Dat-Nom configurations and in Specificational Copular Clauses in Icelandic if in the latter case, as well as the former, the initial DP is always an intervenor for agreement, even if it is assumed that specificational subject DPs lack person features.

We would like to conclude with some observations about the interpretation of judgments of relative acceptability, and with some pointers for further research. Concerning the first of these points: it is well-known-but perhaps always bears repeating-that acceptability and grammaticality are distinct concepts. This already poses challenges for interpreting judgment data, since these only constitute evidence for acceptability, and although we may do our best to eliminate or control for factors other than the ones we are deliberatively manipulating, we can never be sure that we have succeeded. But the data that we have been considering here show up a further issue. Our results from the subexperiment on specificational copular clauses did show that full person agreement with a non-3rd person low nominative received lower mean ratings than examples with 3rd person agreement. If this difference was interpreted categorically, in isolation, this difference might have been interpreted to show that full person agreement with a low nominative in this construction was ungrammatical, and that these SCCs showed an identical pattern to that observed in Dat-Nom constructions. It is when we contrast this with judgment data on the Dat-Nom construction that is obtained in as similar a way as possible that we can see that in fact the patterns are distinct, and that we have good grounds for concluding that for at least some speakers, full person agreement with a low nom-
inative is in fact grammatical in SCCs, but not in the Dat-Nom construction. We therefore want to sound a note of caution about abstracting away too quickly from relative judgments of acceptability to conclusions about (categorical) grammaticality.

Which brings us to the second, and last issue, that of avenues for further research around the questions addressed in this paper. No doubt many of these will already have occurred to interested readers, but we conclude by mentioning three that we particularly want to draw attention to.

First, there are clearly additional syntactic variables that may influence agreement and shed further light on its workings and on the syntactic structure of copular sentences. We have already mentioned briefly the effect of negation and/or adverbs intervening between the agreeing verb and DP2. Other configurations include additional functional structure (the inclusion of modals and/or aspectual auxiliariessee Costa 2004 for Portuguese, Heycock 2013 for Faroese, Hartmann and Heycock 2014 for Dutch, Holmes 2019 for Dutch and Frisian), and also the strong increase in DP1 agreement documented in Heycock (2013); Hartmann and Heycock (2014) for Faroese, Dutch, German and Icelandic when the agreeing verb precedes both DPs, as in the Icelandic example in (49):

Frá mínum sjónarhóli er/eru aðalvandamálið foreldrarnir
From my point_of_view is/are main_problem.DEF parents.DEF
'From my point of view, the main problem is the parents.'
We could not include these factors in the experiments discussed in this paper and still keep these within reasonable lengths, but we are exploring them in ongoing work.

Second, although we attempted to investigate the extent to which the noncategorical judgments in our data were the results of intermediate judgments by individuals or by mixing together the observation of speakers with distinct idiolects, the nature of our experiments only allowed us to do this to a very limited degree. Thus an important avenue for further research would be detailed work with individual speakers.

Finally, we investigated only one type of copular clauses, specificational copular clauses. There are other types of copular clauses that also involve two nominative arguments, including what are termed in Heycock (2012) sentences expressing "assumed identity" (as in In our role play tonight, my sister will be you or If you were $m e$ ), and statements of mistaken identity (as in In the low light, for a moment I thought your sister was you). It has been argued in Keine et al. (2019) that at least the first type show a person effect in German that is interpreted in Coon and Keine (2021) as following from exactly the same principles as the person effect in the Dat-Nom construction in Icelandic. Given the difficulties just alluded to in interpreting judgments of relative acceptability, a controlled comparative study within Icelandic is clearly in order.

## Appendix A: Statistical results for the DAT-NOM experiment

Table 19 Estimates, standard error and $t$-value for the fixed effects Type (simplex vs. complex) and Agreement (Default, Syncretic, Full)

| Fixed effect | Estimate | Standard Error | t-value |
| :--- | ---: | ---: | ---: |
| (Intercept) | 0.70364 | 0.06745 | $10.433^{* * *}$ |
| TypeSyncretic | -1.01449 | 0.08265 | $-12.274^{* * *}$ |
| TypeFull | -1.68283 | 0.08277 | $-20.331^{* * *}$ |
| Factor2NameSimplex | -1.15374 | 0.08265 | $-13.959^{* * *}$ |
| Factor1NameSyncretic:Factor2NameSimplex | 1.13096 | 0.11697 | $9.669^{* * *}$ |
| Factor1NameFull:Factor2NameSimplex | 1.37737 | 0.11706 | $11.767^{* * *}$ |

Table 20 Estimates, standard error and $t$-value for the fixed effects Agreement (Default, Full, Syncretic) and Verb Type for the simplex structure

| Fixed effect | Estimate | Standard Error | t -value | p |
| :--- | ---: | :--- | :---: | :---: |
| (Intercept) | -0.77570 | 0.12958 | -5.986 | $<.00001$ |
| full | -0.35685 | 0.15113 | -2.361 | 0.018636 |
| syncretic | 0.36929 | 0.15045 | 2.455 | 0.014483 |
| gagnast | 0.14499 | 0.18093 | 0.801 | $<0.426815$ |
| leidast | 0.82901 | 0.18093 | 4.582 | $<.00001$ |
| Full:gagnast | 0.70556 | 0.21325 | 3.309 | 0.001013 |
| Syncretic:gagnast | -0.03355 | 0.21277 | -0.158 | 0.874784 |
| Full:leidast | -0.55216 | 0.21325 | -2.589 | 0.009928 |
| Syncretic:leidast | -0.71920 | 0.21325 | -3.373 | 0.000809 |

## Appendix B: Reference sentences

(1) Reference sentence value 30

Orðheppni stjórnmálamaðurinn lofaði áheyrendunum gulli og eloquent politician.DEF promised audience.DEF gold and grænum skógum.
green woods
'The eloquent politician promised the audience everything.'
(2) Reference sentence value 20

Ég spurði af hverju Pétur aldrei læsi pað.
I asked about why Peter never read this
'I asked why Peter never read this.'

## Appendix C: Standard filler sentences

The experiments included 10 filler sentences that provide a range of scale for good, intermediate and fully ungrammatical sentences. These are provided here. The intermediate and ungrammatical filler sentences are based on the observations in Thráinsson et al. (2015a) with the intermediate fillers being accepted only by a subset of native speakers.
I. Good filler sentences

1. Pjálfarinn var mjög stoltur af árangri liðsins. coach.DEF was very proud of results team.DEF.GEN 'The coach was very proud of the team's success.'
2. Mér finnst mjög gaman að læra ný tungumál.
I.DAT finds very enjoyable to learn new languages 'I really like studying new languages.'
II. Intermediate filler sentences. These contained the following structures: toughconstruction, impersonal passive, preposition hjá with possessive, complex comparative and topicalization of an embedded modifier under hvort 'whether.'
3. Pess vegna eru stólarnir mjög auðveldir að prífa. this because are chairs.DEF very easy to clean 'Because of this the chairs are very easy to clean.'
4. Bað var oft klippt hárið á mömmunum á Raudharárstíg. it was often cut hair.DEF of mother on Rauðarárstígur. 'Mum often got her hair cut on Rauðarárstígur.'
5. Bíllinn hjá henni erí viðgerð. car.DEF with her is in repair 'Her car is being repaired.'
6. Hann frysti ísinn svo harðan að við gátum ekki borðað hann. he froze icecream.DEF so hard that we could not eat.SUP it 'He froze the icecream so hard that we could not eat it.'
7. Pjálfarinn spurði hvort í gær hefðu leikmennirnir komið of seint trainer.DEF asked if yesterday had players.DEF come too late á æfingu.
to training
'The trainer asked if yesterday the players had come too late to practice.'
III. Ungrammatical filler sentences. These involved topicalization within an embedded $w h$-interrogative, the use of subjunctive where indicative is required, and long-distance reflexivation into a conditional clause.
8. Ég spurði hann hverja í gær hefði hann hitt.

I asked him who yesterday had he met 'I asked him who yesterday he had met.'
9. Við förum með ef pað hafi stytt upp. we go with if it have.SUBJ cleared up 'We'll go with you if it has cleared up.'


Fig. 8 Normalised judgments (z-score) for individual fillers

## 10. Jói kemur ef pú býður sér. <br> Joe comes if you.SG invite REFL 'Joe will come if you invite him.'

The ratings given to these fillers by the experimental participants are shown in Fig. 8.

Acknowledgements The research reported here was supported by a British Academy/Leverhulme Small Research Grant (SG142530) awarded to the authors for the project Up or down? Resolving agreement in copular sentences. We gratefully acknowledge this support.

We would also like to express our thanks to a number of people who have provided invaluable help in the course of the research and the writing of this article. First, we thank all the participants in our studies for this gift of their time and attention. We would like to thank Sigríður Mjöll Björnsdóttir for extensive work on the materials and to Julia Restle for help with setting up the experiment in OnExp and processing the result files. We are also grateful to Halldór Ármann Sigurðsson, Heimir Freyr van der Feest Viðarsson, and Jim Wood for their help with various aspects of the Icelandic data. We received valuable feedback from audiences in (sometimes virtually) Berlin, Budapest, Oslo, Zurich, New York, Philadelphia, Chicago, and Frankfurt. Last but by no means least we would like to thank the anonymous referees and Vera Gribanova, the Associate Editor, who all unselfishly gave of their time and expertise to help us improve this paper, and tolerated our delays. We are of course responsible for all remaining errors.

## Declarations

Competing Interests The authors declare no competing interests.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit http://creativecommons.org/licenses/by/ 4.0/.

## References

Ackema, Peter, and Ad Neeleman. 2018. Features of person. Linguistic inquiry monographs. Cambridge: MIT Press.
Anagnostopoulou, Elena. 2003. The syntax of ditransitives: Evidence from clitics. Berlin: de Gruyter.
Anagnostopoulou, Elena. 2017. The Person Case Constraint. In The Wiley Blackwell companion to syntax, eds. Martin Everaert and Henk C. van Riemsdijk. Vol. 1, 1-47. Hoboken: Wiley. https://doi.org/10. 1002/9781118358733.wbsyncom101.
Arregi, Karlos, Itamar Francez, and Martina Martinović. 2021. Three arguments for an individual concept analysis of specificational sentences. Natural Language and Linguistic Theory 39: 687-708. https:// doi.org/10.1007/s11049-020-09491-x.
Asarina, Alevtina. 2011. Case in Uyghur and beyond. PhD diss, MIT.
Atlamaz, Ümit, and Mark Baker. 2018. On partial agreement and oblique case. Syntax 21(3): 195-237. https://doi.org/10.1111/synt. 12155.
Baker, Mark. 2008. The syntax of agreement and concord. Cambridge studies in linguistics. Cambridge: Cambridge University Press.
Bard, Ellen, Daniel Robertson, and Antonella Sorace. 1996. Magnitude estimation of linguistic acceptablity. Language 72: 32-68. https://doi.org/10.2307/416793.
Béjar, Susana. 2003. Phi-syntax: A theory of agreement. PhD diss., University of Toronto.
Béjar, Susana, and Arsalan Kahnemuyipour. 2017. Non-canonical agreement in copular sentences. Journal of Linguistics 53(3): 463-499. https://doi.org/10.1017/S002222671700010X.
Béjar, Susana, and Arsalan Kahnemuyipour. 2018. Not all phi-features are created equal: A reply to Hartmann and Heycock. Journal of Linguistics 54(3): 629-635. https://doi.org/10.1017/ S0022226718000154.
Béjar, Susana, and Milan Rezac. 2003. Person licensing and the derivation of PCC effects. In Romance linguistics: Theory and acquisition, eds. Ana Teresa Perez-Leroux and Yves Roberge, 49-62. Amsterdam: Benjamins. https://doi.org/10.1075/cilt.244.07bej.
Béjar, Susana, and Milan Rezac. 2009. Cyclic agree. Linguistic Inquiry 40(1): 35-73. https://doi.org/10. 1162/ling.2009.40.1.35.
Bjorkman, Bronwyn M. 2021. When syncretism can (and can't) fix feature mismatches. Talk given at Princeton Symposium on Syntactic Theory, March 19-20, 2021.
Bobaljik, Jonathan David. 2008. Where's phi? Agreement as a postsyntactic operation. In Phi features across interfaces and modules, eds. Daniel Harbour, David Adger, and Susana Béjar, 295-328. Oxford: Oxford University Press.
Boeckx, Cedric. 2000. Quirky agreement. Studia Linguistica 54: 354-380. https://doi.org/10.1111/14679582.00070.

Coon, Jessica, and Stefan Keine. 2021. Feature gluttony. Linguistic Inquiry 52(4): 655-710. https://doi. org/10.1162/ling_a_00386.
Coon, Jessica, Stefan Keine, and Michael Wagner. 2017. Hierarchy effects in copular constructions: The PCC corner of German. In Proceedings of NELS 47, eds. Andrew Lamont and Katerina Tetzloff, 205-214. Amherst: University of Massachusetts, Graduate Linguistics Student Association.
Costa, João. 2004. Subjects in Spec,vP: Locality and agree. In MIT working Papers in Linguistics, eds. Ana Castro, Marcelo Ferreira, Valentine Hacquard, and Andrés Pablo Salanova. Vol. 47. Cambridge: MIT.
Deal, Amy Rose. 2015. Interaction and satisfaction in $\phi$-agreement. In Proceedings of NELS 45, eds. Thuy Bui and Deniz Ozyildiz, 179-192. Amherst: Graduate Linguistics Student Association.
Deal, Amy Rose. 2021. Interaction, satisfaction, and the PCC. Linguistic Inquiry. https://doi.org/10.1162/ ling_a_00455.
Dikken, Marcel den. 2006. Specificational copular sentences and pseudoclefts: A case study. In The Blackwell companion to syntax, eds. Martin Everaert and Henk van Riemsdijk. Vol. IV, 272-409. Oxford: Blackwell Sci. https://doi.org/10.1002/9780470996591.ch61.
Dikken, Marcel den. 2014. The attractions of agreement. Ms., Linguistics Program, CUNY Graduate Center.
Dikken, Marcel den. 2019. The attractions of agreement: Why person is different. Frontiers in Psychology 10(978). https://doi.org/10.3389/fpsyg.2019.00978.
Dillon, Brian, Adrian Staub, Joshua Levy, and Charles Clifton. 2017. Which noun phrases is the verb supposed to agree with? Object agreement in American English. Language 93(1): 65-96. https://doi. org/10.1353/lan.2017.0003.

Featherston, Sam. 2008. Thermometer judgements as linguistic evidence. In Was ist linguistische Evidenz?, eds. Claudia Maria Riehl and Astrid Rothe, 69-90. Aachen: Shaker Verlag.
Hartmann, Jutta M., and Caroline Heycock. 2014. Agreement in copula clauses: Evidence for a dual mechanism of agreement. Talk given at GLOW 37.
Hartmann, Jutta M., and Caroline Heycock. 2016. Evading agreement: A new perspective on low nominative agreement in Icelandic. In Proceedings of NELS 46, eds. Christopher Hammerly and Brandon Prickett. Vol. 2, 67-80. University of Massachusetts, Graduate Linguistic Student Association.
Hartmann, Jutta M., and Caroline Heycock. 2017. Variation in copular agreement in Insular Scandinavian. In Syntactic variation in Insular Scandinavian, eds. Höskuldur Thráinsson, Caroline Heycock, Hjalmar P. Petersen, and Zakaris Svabo Hansen. Studies in Germanic linguistics (SIGL), 233-275. Amsterdam: Benjamins.
Hartmann, Jutta M., and Caroline Heycock. 2018a. More on phi-features in and out of copular sentences: A reply to B\&K 2018. Journal of Linguistics 54(3): 637-646. https://doi.org/10.1017/ S0022226718000233.
Hartmann, Jutta M., and Caroline Heycock. 2018b. A remark on Béjar and Kahnemuyipour 2017: Specificational subjects do have phi-features. Journal of Linguistics 54(3): 611-627. https://doi.org/10. 1017/S0022226718000117.
Hartmann, Jutta M., and Caroline Heycock. 2019a. Restrictions on "low" person agreement in Dutch specificational copular constructions. Linguistics in the Netherlands 36(1): 130-146. https://doi.org/ 10.1075/avt.00028.har.

Hartmann, Jutta M., and Caroline Heycock. 2019b. (Morpho)syntactic variation in agreement: Specificational copular clauses across Germanic. Frontiers in Psychology 10 (2994). https://doi.org/10.3389/ fpsyg.2019.02994.
Hartsuiker, Robert J., Inés Antón-Méndez, and Marije van Zee. 2001. Object attraction in subject-verb agreement construction. Journal of Memory and Language 45: 546-572. https://doi.org/10.1006/ jmla.2000.2787.
Heggie, Lorie. 1988. The syntax of copular structures. PhD diss., University of Southern California.
Heycock, Caroline. 2012. Specification, equation, and agreement in copular sentences. Canadian Journal of Linguistics 57(2): 209-240. https://doi.org/10.1353/cj1.2012.0033.
Heycock, Caroline. 2013. The syntax of predication. In The Cambridge handbook of generative syntax, ed. Marcel den Dikken, 322-352. Cambridge: Cambridge University Press.
Heycock, Caroline. 2021. Copular sentences. In The Wiley Blackwell companion to semantics, eds. Lisa Matthewson, Cecile Meier, Hotze Rullmann, Thomas E. Zimmerman, and Daniel Gutzmann. London: Wiley-Blackwell. https://doi.org/10.1002/9781118788516.sem055.
Heycock, Caroline, Antonella Sorace, Zakaris Svabo Hansen, Frances Wilson, and Sten Vikner. 2012. Detecting the late stages of syntactic change: The loss of V-to-T in Faroese. Language 88(3): 558-600. https://doi.org/10.1353/lan.2012.0053.
Higgins, Francis Roger. 1973. The pseudo-cleft construction in English. PhD diss., MIT.
Holmberg, Anders, and Thorbjörg Hróarsdóttir. 2004. Agreement and movement in Icelandic raising constructions. Lingua 114: 651-673. https://doi.org/10.1016/j.lingua.2004.01.002.
Holmes, Elliot. 2019. An investigation into the locality effects found in Dutch and Frisian specificational copular sentences. PhD diss., University of Edinburgh.
Hoover, Jacob Louis. 2020. Accounting for variation in number agreement in Icelandic dative-nominative constructions. In Proceedings of WCCFL 38, 231-241. Somerville: Cascadilla Press.
Keine, Stefan, Michael Wagner, and Jessica Coon. 2019. Hierarchy effects in copula constructions. Canadian Journal of Linguistics/Revue canadienne de linguistique 64(4): 617-648. https://doi.org/10. 1017/cnj.2019.28.
Mikkelsen, Line. 2005. Copular clauses: Specification, predication and equation. Amsterdam: Benjamins.
Moravcsik, Edith A. 1974. Object-verb agreement. In Working Papers on Language Universals. Vol. 15, 25-140.
Moravcsik, Edith A. 1978. Agreement. In Universals of human language IV: Syntax, ed. Joseph H. Greenberg, 331-374. Stanford: Stanford University Press.
Moro, Andrea. 1991. The raising of predicates: Copula, expletives and existence. In MIT working Papers in Linguistics. Vol. 15, eds. Lisa L. S. Cheng and Hamida Demirdache, 183-218. Cambridge: MIT.
Moro, Andrea. 1997. The raising of predicates: Predicative noun phrases and the theory of clause structure. Cambridge: Cambridge University Press.
Pancheva, Roumyana, and Maria Luisa Zubizarreta. 2018. The person case constraint: The syntactic encoding of perspective. Natural Language and Linguistic Theory 36(4): 1291-1337. https://doi.org/ 10.1007/s11049-017-9395-7.

Preminger, Omer. 2011a. Agreement as a fallible operation. PhD diss., MIT.
Preminger, Omer. 2011b. Asymmetries between person and number in syntax: A commentary on Baker's SCOPA. Natural Language and Linguistic Theory 29(4): 917-937. https://doi.org/10.1007/s11049-011-9155-z.
Preminger, Omer. 2014. Agreement and its failures. Linguistic inquiry monographs. Cambridge: MIT Press.
Preminger, Omer. 2019. What the PCC tells us about "abstract" agreement, head movement, and locality. Glossa: A Journal of General Linguistics 4(13): 1-42. https://doi.org/10.5334/gjg1.315.
Pullum, Geoff, and Arnold Zwicky. 1986. Phonological resolution of syntactic feature conflict. Language 62(4): 751-773. https://doi.org/10.2307/415171.
Romero, Maribel. 2005. Concealed questions and specificational subjects. Linguistics and Philosophy 28(6): 687-737. https://doi.org/10.1007/s10988-005-2654-9.
Schütze, Carson. 2003. Syncretism and double agreement with Icelandic nominative objects. In Grammar in focus: Festschrift for Christer Platzack, eds. Lars-Olof Delsing, Cecilia Falk, Gunlög Josefsson, and Halldór Ármann Sigurðsson, 295-303. Lund: Department of Scandinavian Languages, Lund University.
Sigurðsson, Einar Freyr, and Jim Wood. 2021. Icelandic case syncretism and the syntax-morphology interface. In Working Papers in Scandinavian Syntax, ed. Johan Brandtler. Vol. 105.
Sigurð̀sson, Halldór Ármann. 1989. Verbal syntax and case in Icelandic in a comparative GB approach. PhD diss., University of Lund.
Sigurðsson, Halldór Ármann. 1991. Beygingarsamræmi. Íslenskt Mál og almenn Málfraðði 12/13: 31-77.
Sigurðsson, Halldór Ármann. 1996. Icelandic finite verb agreement. Working Papers in Scandinavian Syn$\operatorname{tax} 57$ : 1-46.
Sigurðsson, Halldor Ármann. 2004. Agree and agreement: Evidence from Germanic. In Focus on Germanic typology, ed. Werner Abraham. Studia typologica, 61-103. Berlin: Akademie Verlag.
Sigurðsson, Halldor Ármann, and Anders Holmberg. 2008. Icelandic dative intervention: Person and number are separate probes. In Agreement restrictions, eds. Roberta D'Alessandro, Susann Fischer, and Gunnar Hrafn Hrafnbjargarson. Interface explorations, 251-280. Berlin: de Gruyter.
Taraldsen, Knut Tarald. 1995. On agreement and nominative objects in Icelandic. In Studies in comparative Germanic syntax, eds. Hubert Haider, Susan Olsen, and Sten Vikner, 307-327. Dordrecht: Kluwer.
Taraldsen, Knut Tarald. 1996. Reflexives, pronouns, and subject/V agreement in Icelandic and Faroese. In Microparametric syntax and dialect variation, eds. James Black and Virginia Motopanyane, 189-212. Amsterdam: Benjamins.
Thráinsson, Höskuldur. 2007. The syntax of Icelandic. Cambridge: Cambridge University Press.
Thráinsson, Höskuldur, and Guðrún Pórðardóttir. 2015. Tilbrigði í íslenskri setningagerð: Helstu niðurstöður. Tölfræðilegt yfirlit. In Tilbrigði í íslenskri setningagerð. Vol. II. Reykjavík: Málvísindastofnun Háskóla Íslands. Chap. 11.
Thráinsson, Höskuldur, Ásgrímur Angantýsson, and Einar Freyr Sigurðsson. 2015a. Tilbrigði í íslenskri setningagerð: Helstu niðurstöður. Tölfraðilegt yfirlit. Vol. II. Reykjavík: Málvísindastofnun Háskóla Íslands.
Thráinsson, Höskuldur, Einar Freyr Sigurðsson, and Jóhannes Gísli Jónsson. 2015b. Samrami (Agreement). Vol. II, 203-231. Reykjavík: Málvísindastofnun Háskóla Íslands. Chap. 12.
Ussery, Cherlon. 2017. Dimensions of variation: Agreement with nominative objects in Icelandic. In Syntactic variation in Insular Scandinavian, eds. Höskuldur Thráinsson, Caroline Heycock, Hjalmar P. Petersen, and Zakaris Svabo Hansen. Studies in Germanic linguistics (SIGL), 165-197. Amsterdam: Benjamins.
Williams, Edwin. 1983. Semantic vs. syntactic categories. Linguistics and Philosophy 6: 423-446. https:// doi.org/10.1007/BF00627484.
Wood, Jim. 2021. Singular -st syncretism and featural pied-piping. Unpublished ms.
Zaenen, Annie, Joan Maling, and Höskuldur Thráinsson. 1985. Case and grammatical functions: The Icelandic passive. Natural Language and Linguistic Theory 3: 441-483. https://doi.org/10.1007/ BF00133285.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.


[^0]:    C. Heycock
    caroline.heycock@ed.ac.uk
    J.M. Hartmann
    jutta-maria.hartmann@uni-bielefeld.de

    1 Department of Linguistics/Faculty of Linguistics and Literary Studies, Bielefeld University, Universitätsstraße 25, 33615 Bielefeld, Germany

    2 Linguistics \& English Language, School of Philosophy, Psychology and Language Sciences, University of Edinburgh, 3 Charles Street, Edinburgh EH8 9AD, Scotland, UK

[^1]:    ${ }^{1}$ Sigurðsson (1996) however notes that (8) (his (75b)) is not as ungrammatical as the fully agreeing form. See Sect. 3.1 for more detailed discussion.

[^2]:    ${ }^{2}$ Note that there are a family of different PCC constraints; for the moment we abstract away from the differences between them: for recent overviews see Anagnostopoulou (2017); Pancheva and Zubizarreta (2018); Coon and Keine (2021).

[^3]:    ${ }^{3}$ It is a potential problem for this account that for speakers of one variety of Icelandic as described in Sigurðsson and Holmberg (2008) (their Icelandic B), A-movement of the dative to a position above the finite verb removes it as an intervenor for Number, but has no such effect for Person.

[^4]:    ${ }^{4}$ It is also worth noting that there is another problem in extending this account to Icelandic. In their 2003 paper, Béjar and Rezac are very explicit that the Person Case Constraint "holds precisely of [...] X ${ }^{0}$ 'phonologically weak' categories," which seems to mean clitics or at the least weak, non-focussed pronouns; this restriction is argued to follow from Focus being a head that itself licenses the $\pi$-feature of a pronoun. The empirical necessity for this proposal is that in some languages-and Béjar and Rezac specifically list Icelandic as one such language-non-clitic pronouns can violate the PCC. In Béjar and Rezac (2003) it is never stated explicitly what Icelandic data they have in mind, but presumably they are thinking of the fact that 1st/2nd person object pronouns can appear even in the presence of an indirect object in this language. That is, there is no PCC effect between Direct and Indirect Objects. If an Icelandic accusative pronoun can avoid falling foul of the Person Licensing Condition by virtue of being "a strong focussed pronoun" (Béjar and Rezac 2003: 54), it is unclear why this is not true also of nominative pronouns (which would then entail the absence of PCC effects in the Dat-NOM constructions). While it is certainly the case that the verb does not show any morphological agreement with the accusative pronouns, this is not a special fact about this particular series of pronouns: Icelandic verbs never show agreement with nonnominative arguments of any kind. There is no independent evidence that the Icelandic object pronouns are "strong, focussed" while subject pronouns are not: in both cases the pronouns can appear when the discourse context is such that they are old information and part of the background, as well as when they are in focus.

[^5]:    ${ }^{5}$ Coon and Keine treat person as one feature structure and number as another, so Agree triggered by a Person probe will copy back all person features, but not number features, and vice versa (Coon and Keine 2021: fn. 23).

[^6]:    ${ }^{6}$ Coon and Keine (2021) set aside how the Number probe is specified in Icelandic. Hoover (2020) extends their approach to Number agreement in Icelandic; see Sect. 3.2.6 for some discussion.
    ${ }^{7}$ A recent large-scale survey of syntactic variation in Icelandic (Thráinsson et al. 2015b) includes items investigating number agreement in DAT-NOM constructions, but Person agreement is not investigated; Ussery's (2017) detailed examination of 10 speakers' agreement preferences in DAT/NOM constructions similarly limits itself to Number agreement.

[^7]:    ${ }^{8}$ Readers may note that this understanding would not explain the apparent improvement of (d) in Table 3 over (d) in Table 2, where leiddust in Table 3 is syncretic not with 3rd person singular, but 3rd person plural. In his 1996 paper, Sigurðsson seems to suggest that this improvement is spurious, and cites both examples as ungrammatical, but he takes a different position in later work, as discussed below.

[^8]:    ${ }^{9}$ Sigurðsson and Holmberg (2008) state that the $2 / 3$ pl form virtust in (18a) was rated fully acceptable by 5 out of 9 participants, and given a rating of "?" by a further two, constrasting with lower ratings (which are not however given in detail) for the 3 pl forms of bykja in (19), which are not syncretic with 1st or 2nd person agreement. Note that the full grammaticality for 3rd singular agreement in all of the examples in (18) and (19) is expected as these are instances of the complex DAT-NOM construction.

[^9]:    ${ }^{10}$ All the materials for both experiments presented in this paper, and the anonymised raw data, are available from the Edinburgh DataShare: https://datashare.ed.ac.uk/handle/10283/3052.
    ${ }^{11}$ We will refer to 3rd singular agreement as "default" here, but it should be noted that it is a matter of analysis whether this is indeed a default or rather actual agreement with a dative argument that is specified as 3 rd singular.

[^10]:    ${ }^{12}$ The claims about this case in Sigurðsson (1996); Sigurðsson and Holmberg (2008) are not entirely clear. The judgments from Sigurðsson (1996) presented in Table 4 seem consistent with the idea that for some speakers at least default agreement is possible in this construction, but that is not the conclusion that is drawn in that paper. In Sigurðsson and Holmberg (2008) it is stated that for one group of speakers "default 3 rd singular is not sharply ungrammatical [with a 1st/2nd person nominative in the simplex construction]," but there is no further discussion of what is to be understood by "not sharply ungrammatical."

[^11]:    ${ }^{13}$ A few participants used 0 as a rating; these were changed to the lowest possible rating (1) before calculating the z -scores.

[^12]:    ${ }^{14}$ We are grateful to an anonymous referee for pointing out this property of gagnast to us.
    ${ }^{15}$ The sentences with leiðast in these three conditions were as follows:

[^13]:    ${ }^{16}$ The histogram for SIMPLEX-DEFAULT also shows a broader distribution, which is probably due to higher acceptability of default agreement with leiðast as discussed above.

[^14]:    ${ }^{17}$ As suggested by a reviewer, it might be possible in principle to model the groupings along the lines of Dillon et al. (2017). But it is not obvious that our data is rich enough for such a model, with the largest group of participants giving mediocre ratings.

[^15]:    ${ }^{18}$ The authors do note however that when participants were asked to choose between two options the order in which the singular and plural options were presented was not randomised: the singular was always presented first (Thráinsson et al. 2015b: 211)
    ${ }^{19}$ To really test this, of course, it would be necessary to test for correlations between judgments involving low nominatives that are 3rd plural and those that are 2nd plural; this was outside the scope of our experiment and remains for future research.

[^16]:    ${ }^{20}$ We are indebted to Jim Wood for very helpful discussion about this issue; all errors of course remain our responsibility.

[^17]:    ${ }^{21}$ As an anonymous referee points out, our participants gave their ratings after reading the entire sentences so it does remain possible that such a case could constitute attraction, albeit of some non-canonical variety.

[^18]:    ${ }^{22}$ Discussing clefts in Dutch, both den Dikken (2014) and Ackema and Neeleman (2018) note that if the initial nominal is dat 'that,' rather than het 'it,' all personal pronouns are possible-and agreed with-in the focus position. However, all these authors argue that in these cases dat is in fact in some kind of topic position (whereas het is not topicalisable); it is the second, focussed pronoun that occupies the canonical subject position and hence controls agreement. This analysis of Dutch dat cannot be extended to Icelandic pað 'it,' however. Ackema and Neeleman (2018: 203) show that in Icelandic clefts, $p a \partial$ 'it' is indeed in the canonical subject position, as shown by its position immediately after the finite verb in a root V2 context:

[^19]:    The same point is made in Sigurðsson and Holmberg (2008: 14).
    ${ }^{23}$ Sigurðsson (1996) cites the following example of agreement in Number with the second DP in such a copular construction, and again states that the singular agreement is obligatory, although in a footnote he attributes to Jóhannes Gísli Jónsson the observation that-outside the standard language-some speakers accept plural.

[^20]:    ${ }^{26}$ Sigurðsson and Holmberg (2008) do not actually give the unacceptable default agreement forms explicitly, but the ungrammaticality of the default form is explicit in Sigurðsson (1996) and Thráinsson (2007: 234). We have also checked with Icelandic speakers that at least number agreement with DP2 is required (person agreement, on the other hand, "does not always seem obligatory" (Thráinsson 2007: 234)). A referee also confirms that they find 3rd singular agreement impossible in such cases.
    ${ }^{27}$ It is also worth noting that Keine et al. (2019); Coon and Keine (2021) argue that copular constructions in German give rise to person effects precisely because both nominal arguments are (obligatorily) agreed with: that is, that copular constructions in this respect pattern with the Simplex, rather than the Complex Dat-NOM construction. On these assumptions, then, it seems that the expectation would be that in Icelandic also DP2 could not be "protected" from agreement by being located in a small clause inaccessible to the agreement probe.

    In fact, the copular constructions that these authors argue to show a person effect are what is called in Heycock (2012) "assumed identity" copular clauses; the kind of specificational copular clauses discussed here for Icelandic do not show person effects in German. Keine et al. (2019) follow Heycock (2012); Hartmann and Heycock (2017) in assuming that in these cases DP1 is not in fact the closer of the two DPs to the agreement probe at the point of agreement (that is, they do not adopt for these cases the assumption in (29a)).

[^21]:    ${ }^{28}$ Here we leave unexplored the exact internal structure of the small clause.

[^22]:    ${ }^{29}$ The breakdown of forms produced in this condition was: 3rd singular: 68 (32\%)
    2nd plural: $\quad 80$ (38\%)

    3rd plural: $\quad 63$ (30\%).

[^23]:    ${ }^{30}$ Evidently this account requires movement to the intermediate positions to be possible but optional. While there are various ways that this could be implemented theoretically, Hartmann and Heycock (2017) do not offer an explanation for the variation. We believe that further cross-linguistic work may help to shed light on this issue, but we are not currently in a position to improve on our earlier discussion on this point.

[^24]:    ${ }^{31}$ If we have evidence from Condition D that true "default" agreement is in fact possible, contra our earlier conclusions, this would be one further possible interpretation of 3rd person singular agreement in this context.

[^25]:    ${ }^{32}$ As can be seen from Table 16, and illustrated in (39), each item consisted of a choice of a singular DP1 to appear in 5 out of the 6 conditions, and a choice of a plural DP1 to appear in the remaining condition. Ideally to maintain a minimal contrast the same DP would have been used throughout an item, differing only in number, but this was not possible for semantic/pragmatic reasons: when DP1 denotes a human individual, it is likely to be more natural if it agrees in number with DP2 (and so cannot be singular if DP2 is plural); conversely abstract nouns like hope or problem are less natural when pluralized:

[^26]:    ${ }^{33}$ We had to exclude one item (no. 12) from our analysis as we discovered an error in our materials. In the "Default" condition DP1 has to be plural, but in this item the DP1 that appeared here had as its head noun fólk 'people,' which in Icelandic is formally singular.
    ${ }^{34}$ With both participant and item as random factors the variance of item was estimated to be 0 with a singular fit error. We calculated the same model without item as random effect and compared the two models using the Anova function. There is no significant difference between the two models. Therefore we only report the random effect for participant.

[^27]:    ${ }^{35}$ The SCC clauses were all presented as embedded interrogatives for the reasons stated above; we omit the matrix clause here just for ease of comprehension.

[^28]:    ${ }^{36}$ As noted in Sect. 2.3, Sigurðsson and Holmberg (2008) suggest that there are some speakers for whom "default" agreement is also possible in this construction. Such speakers would have to have a system where the probe does not continue to seek a match after encountering the dative. Alternatively, for the relevant verbs they could have reinterpreted nominative as an "inherent" case assigned by the verb, making the nominative argument unavailable as a target of agreement (Sigurðsson 1996). A closer look at our data reveals that first of all acceptance of default occurs mostly with the verb leiðast. Additionally, most of those speakers who provide high ratings for the default with leiðast do not show a syncretisim effect, as expected if the NOM is not agreed with. This suggests that the proposal by Sigurðsson (1996) may be on the right track.
    ${ }^{37}$ Keine et al. (2019: 626) have speculated that speakers may give relatively high ratings for ungrammatical agreement patterns in "ineffable" configurations in experimental conditions; that is, where there is no grammatical competitor. The fact that the rating for full person agreement in the simplex Dat-Nom

[^29]:    construction (where there is no grammatical agreement pattern for many speakers) is almost as low as the same type of agreement in the complex construction (where 3rd singular is a grammatical alternative ) suggests that in our data if there is such an effect at all it is very weak.

[^30]:    ${ }^{38}$ In fact in Béjar and Kahnemuyipour (2017) the proposal is made that DP1 in a specificational sentence lacks all $\phi$-features; this is amended in Béjar and Kahnemuyipour (2018) to the narrower claim discussed here.

[^31]:    ${ }^{39}$ It is also not possible simply to adapt Béjar and Kahnemuyipour's system by splitting their single probe: see Hartmann and Heycock (2018a: 643-645) for discussion.

[^32]:    ${ }^{40}$ In the theory developed in Coon and Keine (2021), this follows from the basic premises of the system, as outlined in Sect. 2.3 above; see Coon and Keine (2021:19) for more detail.
    ${ }^{41}$ There are certainly binominal copular clauses where the subject is 1 st or 2 nd person, such as examples like (i):

