Comparing the Argument Structure of Alternating Dat-Nom/Nom-Dat Predicates in German and Icelandic*

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Abstract

In this paper we compare a set of 15 Icelandic verbs licensing both a nominative and a dative argument, investigated by Somers & Barðdal (2022), with a corresponding set of 15 German verbs. The Icelandic dataset consists of verbs selecting for three different argument structures: a) ordinary Nom-Dat verbs, non-alternating Dat-Nom verbs and, finally, alternating Dat-Nom/Dat-Nom verbs. The German dataset contains either (near-)synonyms or cognates to the Icelandic verbs. One of our most important findings is that apparent Dat-Nom verbs in German, like *gefallen* 'please, like' and *genügen* 'be enough, be sufficient' are in fact alternating Dat-Nom/Nom-Dat verbs in that language. That is, these verbs can either instantiate the Dat-Nom or the Nom-Dat argument structure, as opposed to Nom-Dat verbs like 'help', which consistently select for the Nom-Dat argument structure. This conclusion is supported by word order counts, which show a major difference between alternating Dat-Nom/Nom-Dat verbs, on the one hand, and ordinary Nom-Dat verbs, on the other, across both German and Icelandic.

1 Introduction

It is by now well known in the scholarship on argument structure in the Germanic languages that there are verbs that select for two arguments, dative and a nominative, which alternate between two diametrically opposed argument structure constructions without any change in the assignment of semantic roles. In other words, the semantic roles are constant across the morphological cases, with an experiencer in the dative case and a stimulus in the nominative case. Such alternating structures have been discussed by Barnes (1986) and Barðdal (2023) for Faroese, Allen (1995) and Barðdal (2023) for Old English, Barðdal (1998, 2023) for Old Swedish and Old Danish, Lenerz 1977: 112–116), Primus (1994, 2012), Eythórsson & Barðdal (2005), Barðdal, Eythórsson & Dewey (2014, 2019), Rott (2016), Barðdal (2023) and Somers

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(2023) for Modern German, and last but not least, Bernódusson (1982), Sigurðsson (1991), Jónsson (1997–98), Barðdal (1998, 1999, 2001, 2023), Platzack (1999), Wunderlich (2009), Rott (2013, 2016), Barðdal, Eythórsson & Dewey (2014, 2019), Wood & Sigurðsson (2014), and Somers & Barðdal (2022) for Modern Icelandic.

Examples of this type are shown in (1–3) below for Icelandic, Faroese and German, involving the predicates *falla vel* 'like, be to sb's liking' in Icelandic (1) and Faroese (2) and their German cognate *gefallen* with the same meaning (3):

Modern Icelandic

Dat-Nom

(1) a. ***Ungu*** ***fólki*** *hefur* *ávallt* *fallið* ***þessi***
young.DAT people.DAT has.3SG always fallen this.NOM
tíska *vel.*
fashion.NOM well
'Young people have always liked this fashion.'

Nom-Dat

b. ***Þessi*** ***tíska*** *hefur* *ávallt* *fallið* ***ungu***
this.NOM fashion.NOM has.3SG always fallen young.DAT
fólki *vel.*
fólki.DAT well
'This fashion has always been to the liking of young people.'

Modern Faroese

Dat-Nom (here realized as Dat-Acc)

(2) a. ***Føroyingum*** *hevur* *altíð* *fallið* ***fermenteraðan***
Faroese.people.DAT has.3SG always fallen fermented.ACC
mat *væl.*
food.ACC well
'The Faroese people have always liked fermented food.'

Nom-Dat

b. ***Tað fermenteraða*** *hevur* *altíð* *fallið*
the fermented.food.NOM has.3SG always fallen
føroyingum *væl.*
Faroese.people.DAT well
'Fermented food has always been to the Faroese people's liking.'

Modern German

Dat-Nom

(3) a. ***Den Kunden*** *haben* ***die Autos*** *nicht* *gefallen.*
the.DAT customers.DAT have.3PL the.NOM cars not liked
'The customers did not like the cars.'

Nom-Dat

b.	***Die Autos***	*haben*	***den Kunden***	*nicht*	*gefallen.*
	the.NOM cars	have.3PL	the.DAT customers.DAT	not	liked

'The cars were not to the customers' liking.'

Observe that the nominative in the Dat-Nom construction in Faroese has changed into accusative during the course of time, but this has only taken place in the Dat-Nom construction and not in the Nom-Dat construction; there the nominative in first position is intact. That nominative objects change to accusative objects is a well-known change in the syntax and argument structure of Modern Faroese (cf. Barnes 1986, Petersen 2002, Thráinsson et al. 2012: 229, 314).

For Modern Icelandic and Faroese there is a consensus in the literature that it is the dative that is the syntactic subject in Dat-Nom constructions, while the nominative is the subject in Nom-Dat constructions. This has been shown with a range of syntactic tests teasing apart subjects from objects (Barnes 1986, Barðdal 1999, 2001, 2023: Ch. 3, Rott 2016, Barðdal, Eythórsson & Dewey 2014, 2019). We have identified alternating predicates on the basis of the acceptability of the two word orders in the sample pairs above; that is, native speakers have evaluated both word orders as equally neutral.

For German, however, there is no such consensus in the field. The traditional view claims that the relevant verbs are Nom-Dat verbs with the Dat-Nom surface order turning up due to a topicalization of the dative to initial position (Haspelmath 2001, Kempen & Harbusch 2005, Bader & Häussler 2010, Verhoeven 2015, among many others). According to the most recent approach, these verbs are indeed assumed to be Dat-Nom verbs, in the sense that the dative is the first argument of the argument structure and the nominative the second argument (Bayer 2004, Haider 2005, Schlesewsky & Bornkessel 2006, Wunderlich 2009). Despite acknowledging the dative as the first argument of the argument structure, the reasoning is still that the nominative is the subject in such structures in German (Bayer 2004: 70, Haider 2005: 23–24, Wunderlich 2009: 592). Contra these approaches, it has been argued by Barðdal, Eythórsson & Dewey (2014, 2019) and Barðdal (2023: Ch. 6) that the relevant German verbs, corresponding to the Icelandic and Faroese verbs above, also alternate between two diametrically opposed argument structure constructions. The analysis is based on the following subject tests:

- First position in declarative clauses
- Subject-verb inversion
- First position in subordinate clauses
- Conjunction reduction
- Clause-bound reflexivization
- Raising-to-subject
- Raising-to-object
- Control infinitives

For an overview of how the two arguments, the dative and the nominative, fare with regard to the subject tests in both Icelandic and German, see the references cited immediately above.

In addition, the two linear word orders in (1–3) above appear to be equally neutral in the sense that speakers do not view either one as being an instance of contrastive focus or topicalisation. Therefore, given the apparent systematic alternation between these two argument structure constructions, Dat-Nom and Nom-Dat, the question arises which factors decide on why speakers choose to use one of the constructions over the other. That is, when do speakers use the Dat-Nom construction and when do they prefer to use the Nom-Dat construction in their language? To our knowledge, the only explanation found in the literature so far is that the Dat-Nom construction is used when the dative is the more topical argument, while the Nom-Dat construction is used when the nominative is the more topical argument (cf. Barðdal 1999, 2001, Rott 2013, Barðdal, Eythórsson & Dewey 2014, 2019).

In this paper, we focus on German data of the type shown in (3a–b) above, comparing it with corresponding data from Icelandic, with the aim to a) document statistically the word order variation shown above for a set of candidate verbs, and b) uncover the factors motivating the choice of the two word orders by analysing an extracted set of corpus data involving the relevant candidate verbs. In Section 2, we describe our methodology, including how the dataset was extracted, cleaned and annotated. In Section 3 we, introduce the three verb classes, established by Somers & Barðdal (2022) for Icelandic, namely i) ordinary Nom-Dat verbs, ii) non-alternating Dat-Nom verbs and iii) alternating Dat-Nom/Nom-Dat verbs. We then compare the argument structure of these Icelandic verbs with their German counterparts. We also discuss similarities and differences in the behaviour of nominative correlates in the two languages, as well as which word order is preferred when the two arguments are referential personal pronouns. We show that the tendencies we documented for Icelandic in Somers & Barðdal (2022) are also valid for German. Section 4 summarises and concludes our discussion.

2 Methodology

2.1 Dataset

The point of departure for this study is a set of fifteen Icelandic verbs first explored by Somers & Barðdal (2022). These verbs crucially divide into one of three classes: (1) ordinary Nom-Dat verbs, (2) non-alternating Dat-Nom verbs, and (3) alternating Dat-Nom/Nom-Dat verbs. Each class comprises five verbal types:

(1) Ordinary Nom-Dat verbs: *hjálpa* ‘help’, *líkjast* ‘resemble’, *mótmæla* ‘contradict’, *treysta* ‘trust’, and *þakka* ‘thank’
(2) Non-alternating Dat-Nom verbs: *áskotnast* ‘receive’, *blöskra* ‘be shocked, be horrified’, *leiðast* ‘be bored’, *líka* ‘like’, and *þykja* ‘think, find, seem’
(3) Alternating Dat-Nom/Nom-Dat verbs: *duga* ‘suffice, be enough’, *dyljast* ‘be hidden to sby, be aware’, *endast* ‘last’, *henta* ‘suit, befit’; and *nægja* ‘be enough, be sufficient’

The current study takes the analysis by Somers & Barðdal (2022) one step further by matching each of the fifteen Icelandic verbs to a German cognate or (near-)synonym, which allows us to adopt a cross-Germanic approach to a set of syntactically and semantically highly similar verbs.

For the selection of the German verbs, we bank on Somers's (2021) study of Dat-Nom verbs in Present-Day German, which takes stock of all verbs that licence a subject-like dative and an object-like nominative in one or more of their senses. From Somers's dataset, we have selected the best semantic and/or etymological fits to the Icelandic verbs cited above. Table 1 reiterates the Icelandic verbs that served as our starting point (column 1), their respective argument structures (column 2), the German verbs matched to the Icelandic input verbs (column 3), a gloss for each German verb (column 4), and a description of the relationship holding between each cross-linguistic pair, i.e. cognate or synonym (column 5).

Table 1. Icelandic source verbs, their argument structures, their German correspondences, and the criterion according to which the German verbs were matched to the Icelandic types

Icelandic verb	**Argument structure**	**German match**	**Gloss**	**Matching criterion**
hjálpa	Nom-Dat	*helfen*	'help'	*cognate*
líkjast	Nom-Dat	*ähneln*	'resemble'	*synonym*
mótmæla	Nom-Dat	*widersprechen*	'contradict'	*synonym*
treysta	Nom-Dat	*vertrauen*	'trust'	*cognate*
þakka	Nom-Dat	*danken*	'thank'	*cognate*
áskotnast	Dat-Nom	*zufallen*	'fall to, receive (lit.); fall to, receive (fig.)'	*synonym*
blöskra	Dat-Nom	*grauen*	'dread, be afraid of'	*synonym*
leiðast	Dat-Nom	*leidtun*	'take pity; be sorry'	*cognate*
líka	Dat-Nom	*gefallen*	'please, like'	*synonym*
þykja	Dat-Nom	*dünken*	'seem, appear'	*cognate*
duga	Dat-Nom/Nom-Dat	*nützen*	'be of use'	*synonym*
dyljast	Dat-Nom/Nom-Dat	*entgehen*	'miss out on; fail to notice'	*synonym*
endast	Dat-Nom/Nom-Dat	*reichen*	'suffice'	*synonym*
henta	Dat-Nom/Nom-Dat	*geziemen*	'befit'	*synonym*
nægja	Dat-Nom/Nom-Dat	*genügen*	'be enough, be sufficient'	*cognate*

The German types have been selected as follows. First, an etymological link between an Icelandic verb and a German candidate verb has been prioritised over a semantic link. Nevertheless, we only managed to garner cognates in six out of fifteen cases: *hjálpa* and *helfen*, *treysta* and *vertrauen*, *þakka* and *danken*, *leiðast* and *leidtun*, *þykja* and *dünken*, and *nægja* and *genügen*. This means that the remaining nine verbs share a semantic link with their Icelandic counterparts. The semantic pairs are *líkjast* and *ähneln*, *mótmæla* and *widersprechen*, *áskotnast* and *zufallen*, *blöskra* and *grauen*, *líka and gefallen*, *duga* and *nützen*, *dyljast* and *entgehen*, *endast* and *reichen*, and *henta* and *geziemen*.

Monosemous verbs have been prioritised over polysemous verbs, so that the results would not be obscured by a potential effect of verb sense. In fact, only two of the German types that are not cognates turn out to be polysemous verbs, i.e. *entgehen* and *zufallen*. As for *entgehen*, it can mean both 'fail to notice', which is congruent with Ice. *dyljast*, as well as 'miss out on', which is incongruent with Ice. *dyljast*. Likewise, *zufallen* can mean both 'fall to,

receive' in its literal sense, as well as 'fall to, receive' in its metaphorical sense. Only the former dovetails with Ice. *áskotnast*, but not the latter.

The decision to include a German verb for study also depends on the frequency with which it occurs in either the Nom-V-Dat or the Dat-V-Nom word order pattern in the corpus we employ (cf. below). More specifically, if the first 300 randomised tokens for any given verb yield fewer than seven eligible tokens, the verb was excluded. That is the reason why certain types, like *passen* 'suit', have not been examined any further.

In order to ensure maximal comparability with Somers & Barðdal's (2022) dataset, the German data were retrieved from the German Web 2013 corpus, also referred to as deTenTen13 (Jakubíček et al. 2013), which is the German counterpart of the Icelandic Web 2020 corpus, also referred to as isTenTen20. The deTenTen13 corpus comprises more than 16.5 billion words and has been accessed through the Sketch Engine interface. For each of the German verbs, we have run lemmatized search queries.

Subsequently, and also in accordance with Somers & Barðdal (2022), we have downloaded one or more files of 10,000 randomised tokens per verb, depending on how abundant the data are. The first 200 eligible tokens of each verb type have been retained. Hence, the total number of tokens for German equals 3,000, which is identical to the 3,000 tokens Somers & Barðdal (2022) retrieved for Icelandic. How exactly the data have been cleaned is accounted for in the next section.

2.2 Data cleaning

It has already been mentioned that the data for the present study have been retrieved through lemmatized corpus queries. All tokens have subsequently been cleaned manually. Which tokens have been retained, and which ones were barred from study is outlined in the rest of the present section.

First, only tokens in which the main verb is flanked by either a nominal or a pronominal element have been included for study. Thus, all eligible tokens correspond to a template of the type [Nom-V-Dat], or [Dat-V-Nom], as opposed to strings in which both (pro)nominal arguments follow the finite verb. The reason for this approach is twofold. First, by restricting our study to prefield structures we avoid mixing different conditions. At least in German, word order preferences in the so-called middle field may deviate significantly from the canonical order of constituents. Moreover, the templates in question capture a word order pattern that is common to both Icelandic and German. Thus, we ensure maximal comparability between the two datasets, both within languages as well as between languages.

Secondly, both argument slots are required to be filled by either a pronoun or a full NP. Tokens containing clausal constituents have been excluded because they cannot bear case marking, and because clausal arguments are usually considerably longer than (pro)nominal arguments, which, in turn, makes them more prone to occupying the post-verbal position. Somers & Barðdal (2022) point out that the high number of clausal constituents in Rott (2013) is probably the reason why he manages to collect such a high number of Dat-Nom attestations for Icelandic alternating Dat-Nom/Nom-Dat verbs, since 82 out of 94 Dat-Nom attestations for that verb class contain clausal nominatives.

It is also worth mentioning that two German verbs in our dataset, viz. *grauen* ‘dread’ and *dünken* ‘seem, appear’, allow for their oblique argument to be realised either in the dative or the accusative. For these verbs, all tokens with accusative obliques have been excluded, as well as tokens with oblique arguments that are structurally ambiguous between accusative and dative case marking, such as personal names, or pronouns that only employ one levelled oblique form, like *uns* ‘us’ 1p.acc/dat.pl or *euch* ‘you’ 2p.acc/dat.pl.

Finally, we only decided to include tokens that, at least theoretically, allow for alternation. This means that questions introduced by question words or interrogative phrases have been considered non-eligible (cf. also Bader & Häussler 2010: 717). The same goes for reflexive pronouns, which are amongst the few linguistic units that cannot occupy preverbal position (see Duden 2016: 893–894 for German, and Thráinsson 2007: 461–465 for Icelandic). Following Verhoeven (2015), tokens containing elided constituents have equally been excluded.

2.3 Data annotation

All tokens have been annotated for the following variables: case, (pro)nominality, pronoun type (if applicable), referentiality, person, number, definiteness, animacy, and length. The current paper mainly focuses on the first four. Each of these is discussed per language below, starting with Icelandic, and then moving on to German.

2.3.1 Icelandic

In this subsection, we briefly reiterate Somers & Barðdal’s (2022) annotation process for the variables case, (pro)nominality, and pronoun type. Additionally, we have annotated that dataset for a fourth variable, i.e. referentiality. All values are illustrated using examples from the dataset in question.

(1) Case: **nominative** (*þessi sími* ‘this phone’ nom.sg, *mín eigin föt* ‘my own clothes’ nom.pl), or **dative** (*hundinum* ‘the dog’ dat.sg, *unglingunum* ‘the youngsters’ dat.pl).
(2) (Pro)nominality: **pronoun** (*hún* ‘she’ 3p.nom.sg, *öllum* ‘all’ dat.pl), or full **NP** (*fullorðnum* ‘adults’ dat.pl, *nokkrar flöskur* ‘some bottles’ nom.pl).
(3) Pronoun type: **personal** (*mér* ‘me’ 1p.dat.sg, *okkur* ‘us’ 1p.dat.pl, *þær* ‘they’ 3p.nom.pl.f), **demonstrative** (*þetta* ‘that’ nom.sg.n, *hinni* ‘the other’ dat.sg.f, *slíkt* ‘such’ nom.sg.n), **indefinite** (*einhverjum* ‘someone’ dat.sg, *maður* ‘one’ nom.sg, *sumir* ‘some’ nom.pl), or **reciprocal** (*hverjir öðrum* ‘each other’ dat.pl, *hver annarri* ‘each other’ dat.sg). Conjoined pronouns have been excluded, as they arguably lose their pronominal status (cf. Heylen 2005: 103).
(4) Referentiality: **referential** or **correlate**. The latter singles out all instances of personal *það* ‘it’ 3p.nom.sg.n or *því* ‘it’ 3p.dat.sg.n which serve as placeholders for a subclause, e.g. *Mér er farið að leiðast það að allt sem ég geri er litið hornauga* ‘I am starting to get annoyed by the fact that everything I do is viewed with suspicion’. All other instances of personal *það* or *því*, including all other pronouns and full NPs, are tagged **referential**. In line with Siewierska (1993: 831), it is hypothesised that correlates, given

their impoverished semantic status, are inclined to occupy the less prominent postverbal slot.

2.3.2 German

We now turn to the annotation procedure of the German data. The different values each variable may take show a considerable degree of overlap with the Icelandic annotation procedure, but there are nevertheless notable differences.

(1) Case: **nominative** (*das Ergebnis* 'the result' nom.sg, *Schimpansen* 'chimpanzees' nom.pl) or **dative** (*einem Konzert* 'a concert' dat.sg, *mir* 'me' 1p.dat.sg).
(2) (Pro)nominality: **pronoun** (*er* 'he' 3p.nom.sg, *niemandem* 'nobody' 3p.dat.sg), or full **NP** (*ihre Freundschaft* 'their friendship' nom.sg, *Spanien* 'Spain' dat.sg).
(3) Pronoun type: **personal** (*ich* 'I' 1p.nom.sg, *dir* 'you' 2p.dat.sg), **demonstrative** (*diese* 'these' nom.pl, *dem* 'this' dat.sg), **indefinite** (*man* 'one', *nichts* 'nothing'), or **reciprocal** (*einander* 'each other').
(4) Referentiality: **referential**, **correlate**, or **expletive**. Expletives are semantically void pronouns that are used to fill a syntactically mandatory slot, as in *Manchen graut es regelrecht davor* 'Many people are utterly appalled by that'. Correlates are pronouns used coreferentially with a subclause, e.g. *Es genügt uns schon vollkommen, einfach bessere Menschen zu sein* 'It is already enough for us to simply be better people'. As in Icelandic, we hypothesise expletives and correlates to be realised postverbally. All other instances of personal *es* 'it', as well as all other pronouns and full NPs, are tagged **referential**.

The term *expletive* is sometimes also used to refer to presentative pronouns in existential constructions, as in ***Es*** *steht ein Mann vor der Tür* 'There is a man at the door'. However, such pronouns are excluded from the present study, as they are not syntactically mandatory, i.e. they are not a part of the verb's argument structure. This is evident from the fact that they do not show up when the word order is inverted: *Ein Mann steht vor der Tür*. This is true for both German and Icelandic.

3 Findings

The current section discusses the results for *hjálpa*- and *helfen*-verbs (Section 3.1), *líka*- and *gefallen*-verbs (Section 3.2), and *nægja*- and *genügen*-verbs (Section 3.3). Each subsection first examines word order patterns across configurations, after which the double-NP configuration is singled out. Tables always reiterate the word order statistics Somers & Barðdal (2022) obtained for Icelandic, while also introducing the present counts for German. In order to facilitate a between-language comparison, all verbs are presented alongside their semantic or etymological counterparts.

3.1 *Hjálpa*-verbs and *helfen*-verbs

Subsection 3.1 compares Icelandic *hjálpa*-verbs to German *helfen*-verbs. We first examine word order variation across configurations (Section 3.1.1), after which we cross-check the observed tendencies in the double-NP configuration (Section 3.1.2).

3.1.1 General findings

Table 2 presents an overview of word order distributions for Icelandic *hjálpa*-verbs and German *helfen*-verbs across configurations. For Icelandic, as many as 989 tokens (or 99%) assign the preverbal slot to the nominative, which Somers & Barðdal (2022) have taken as robust evidence for the established fact that *hjálpa*-verbs select for a nominative subject and a dative object, i.e. the Nom-Dat argument structure construction. The only quasi-outlier in the Icelandic dataset is *mótmæla* 'contradict', as it is more prone to dative fronting than the four remaining verbs.

Table 2. *Hjálpa*- and *helfen*-verbs across configurations

	Nom-Dat		**Dat-Nom**			**Nom-Dat**		**Dat-Nom**	
	N	**f**	**N**	**f**		**N**	**f**	**N**	**f**
hjálpa	199	99.5%	1	0.5%	*helfen*	189	94.5%	11	5.5%
líkjast	200	100%	0	0%	*ähneln*	200	100%	0	0%
mótmæla	190	95%	10	5%	*widersprechen*	171	85.5%	29	14.5%
treysta	200	100%	0	0%	*vertrauen*	184	92%	16	8%
þakka	200	100%	0	0%	*danken*	184	92%	16	8%
Total	989	99%	11	1%	**Total**	928	93%	72	7%

The results for Icelandic align remarkably well with those obtained for German. First, the German dataset contains 928 tokens (or 93%) instantiating the Nom-Dat order and 72 tokens (or 7%) instantiating the Dat-Nom order. The overwhelming preference of these verbs for the Nom-Dat linear order confirms their status as Nom-Dat verbs, exactly like their Icelandic counterparts. Still, dative fronting in German is six to seven times more common than in Icelandic (72 tokens vs. 11 tokens). This is confirmed by a chi-squared goodness-of-fit test comparing the total number of Nom-Dat and Dat-Nom attestations of 'help' verbs in both languages, as it yields a significant result ($X^2 = 45.25$; df = 1; $p_{two\text{-}tailed} < 0.001$). However, the effect size is weak (Cramér's V = 0.15).

Another remarkable result is that *widersprechen*, the German verb most strongly tending towards the Dat-Nom order, is in fact the semantic counterpart of *mótmæla*, which is the quasi-outlier in the Icelandic dataset. For *mótmæla*, Somers & Barðdal (2022: 92) have shown that the Dat-Nom order mostly occurs with definite datives, which are either realised as demonstrative pronouns (six out of ten tokens) or as full NPs (three out of ten tokens). For German *widersprechen*, the results are surprisingly similar. As many as 25 out of 29 Dat-Nom tokens contain a definite dative, of which 11 are demonstrative pronouns (as in 4b), and 12 are full NPs (as in 5b). Corresponding examples from Icelandic are given in (4a) and (5a) below:

Icelandic

(4) a. ***Því*** *mótmælti Sigurður á framkvæmdastjórnarfundi.*
this.DAT contradicted.3SG Sigurður.NOM on executive.board.meeting
'To that, Sigurður objected at an executive board meeting.'

German

b. ***Dem*** *widersprachen die Richter.*
this.DAT contradicted.3PL the.NOM judges
'This, the judges contradicted.'

Icelandic

(5) a. ***Þessari frásögn*** *mótmælti annar sjónarvottur.*
this.DAT narration.DAT contradicted.3SG another.NOM eyewitness.NOM
'To this narration, another eyewitness objected.'

German

b. ***Dieser Ansicht*** *widersprach das OLG Köln*
this.DAT view contradicted.3SG the.NOM Cologne Higher Regional Court
nun in einem Berufsurteil deutlich.
now in an appeal verdict clearly
'This view, the Cologne Higher Regional Court now clearly contradicted in an appeal verdict.'

The verbs *danken*, *helfen*, and *vertrauen*, also generate a good number of Dat-Nom tokens. Again, most of these are definite (14 out of 16 for *danken*, eight out of 11 for *helfen*, and 11 out of 16 for *vertrauen*), but so are most datives with these verbs. In any case, the number of Dat-Nom attestations with *helfen*-verbs show that German is generally more permissive of topicalisation than Icelandic. This, in itself, does not come as a surprise, as it is the second author's intuition that topicalisation is not very common in, at least, spoken Icelandic and much less common than in languages like Swedish or German (cf. also our discussion in Somers & Barðdal 2022).

Finally, we wish to draw attention to the statistics obtained for *ähneln*, which displays a categorical preference for the Nom-Dat order (200 tokens, or 100%). This result confirms beyond any doubt its status as a non-alternating Nom-Dat verb. However, in his seminal work on word order variation in Modern German, Lenerz (1977: 114) argues that *ähneln* is a verb correlating with a dative-before-nominative order. The current study incontrovertibly disconfirms that claim.

3.1.2 Word order variation in the [NP-V-NP] configuration

The results for *hjálpa*- and *helfen*-verbs in the double-NP configuration are presented in Table 3. which allows for two observations. First, it may be observed that all verbs in either language show a clear preference for the Nom-Dat order. In fact, the share of Nom-Dat tokens in the present configuration is even larger than it is across configurations (cf. Table 2). This means that most deviations from the Nom-Dat order in Table 2 may be attributed to pronominal influence.

Table 3. *Hjálpa-* and *helfen*-verbs in the [NP-V-NP] configuration

	Nom-Dat		**Dat-Nom**			**Nom-Dat**		**Dat-Nom**	
	N	**f**	**N**	**f**		**N**	**f**	**N**	**f**
hjálpa	25	100%	0	0%	*helfen*	53	96%	2	4%
líkjast	125	100%	0	0%	*ähneln*	132	100%	0	0%
mótmæla	98	98%	2	2%	*widersprechen*	95	90%	10	10%
treysta	31	100%	0	0%	*vertrauen*	46	98%	1	2%
þakka	55	100%	0	0%	*danken*	49	96%	2	4%
Total	334	99%	2	1%	**Total**	375	96%	15	4%

As for the two Dat-Nom tokens with *mótmæla* in the present configuration, Somers & Barðdal (2022) have observed that they contain a definite dative and an indefinite nominative, and that the conflict in definiteness between the constituents enhances an inversion of the canonical word order pattern. However, Dat-Nom tokens with a definite dative and an indefinite nominative are much rarer in German than they are in Icelandic: our dataset contains only one such example, which is presented under (6b), with a corresponding Icelandic example in (6a).

Icelandic

(6) a. ***Þeirri fyrirhuguðu málsmeðferð*** *mótmæltu* *ýmsir*
the.DAT intended.DAT procedure.DAT opposed some.NOM
þingmenn ...
parliamentarians.NOM
'This intended procedure, some parliamentarians objected to ...'

German

b. ***Dieser*** ***Aussage*** *widersprachen* *jedoch*
this.DAT statement contradicted.3PL however
Vertreter *der* *Zivilgesellschaft*
representatives.NOM the.GEN civil.society
'This statement, however, representatives of civil society contradicted.'

Secondly, it is striking that the total number of observations in the [NP-V-NP] configuration across languages is highly similar, as the Icelandic dataset contains 336 double-NP tokens, and the German dataset contains 390 double-NP tokens. Moreover, the number of tokens in the present configuration generated by each German–Icelandic pair is highly comparable as well. The only verb type that yields considerably more [NP-V-NP] tokens in German is *helfen* (55 tokens, compared to a mere 25 for Icelandic). The four remaining verbs all show very similar token counts: 125 for *líkjast* compared to 132 for *ähneln*, 100 for *mótmæla* compared to 105 for *widersprechen*, 31 for *treysta* compared to 47 for *vertrauen*, and 55 for *þakka* compared to 51 for *danken*.

3.1.3 Interim conclusion

The current section has shown that Modern German, like Modern Icelandic, possesses a class of non-alternating Nom-Dat verbs, since all ten verbs across both languages show a very clear preference for the Nom-Dat order regardless of lexical specifications. This means that the effect of (pro)nominality is fairly limited, as both *hjálpa-* and *helfen*-verbs already show an

overwhelming preference for the Nom-Dat order across different (pro)nominal configurations (cf. Table 2). Nevertheless, each verb's natural inclination towards the Nom-Dat order is boosted even further in the double-NP-configuration. This, of course, comes as no surprise since it is generally assumed in the literature that verbs like 'help' in German and Icelandic take a nominative subject and a dative object. For our purposes, however, it is important to establish this with frequency counts of the type we have presented above, as these counts will now serve as a baseline for our comparison with non-alternating Dat-Nom verbs and alternating Dat-Nom/Nom-Dat verbs below.

The most salient difference between the languages under study is the extent to which they licence topicalisation. For Icelandic, topicalisation only affects 1% of the tokens, both across configurations as well as in the NP-V-NP configuration. For German, dative fronting is somewhat more frequent, affecting 7% of the tokens across configurations and 4% of the tokens when both arguments are full NPs. We now continue to take a closer look at the word order distributions with *líka*- and *gefallen*-verbs.

3.2 *Líka*-verbs and *gefallen*-verbs

Section 3.2 investigates word order variation with *líka*- and *gefallen*-verbs. Somers & Barðdal (2022) have shown that the Icelandic verb types are principally associated with a Dat-Nom case frame and do not alternate systematically between Dat-Nom and Nom-Dat. This raises the question whether the German verb types behave similarly.

3.2.1 General findings

Our findings for *líka*- and *gefallen*-verbs across configurations are presented in Table 4. Starting with the results for Icelandic, it may be observed that all five verbs show a very solid preference for the Dat-Nom order. The only verb that behaves as somewhat of an outlier is *þykja* 'think, find, seem', since 51 observations with this verb (or 25.5%) instantiate the Nom-Dat order. Somers & Barðdal (2022: 96) have attributed this result to a topicalisation effect. The lion's share of fronted nominatives with *þykja* are also mostly definite pronouns (41 tokens) or, to a lesser extent, definite full NPs (eight tokens).

Table 4. *Líka*- and *gefallen*-verbs across configurations

	Nom-Dat		**Dat-Nom**			**Nom-Dat**		**Dat-Nom**	
	N	**f**	**N**	**f**		**N**	**f**	**N**	**f**
áskotnast	3	1.5%	197	98.5%	*zufallen*	123	61.5%	77	38.5%
blöskra	1	0.5%	199	99.5%	*grauen*	33	16.5%	167	83.5%
leiðast	7	3.5%	193	96.5%	*leidtun*	187	93.5%	13	6.5%
líka	7	3.5%	193	96.5%	*gefallen*	122	61%	78	39%
þykja	51	25.5%	149	74.5%	*dünken*	150	75%	50	25%
Total	69	7%	931	93%	**Total**	615	61.5%	385	38.5%

The results for German, by contrast, show a radically different picture. First, the statistics across verbs are much more evenly distributed than in Icelandic, as 615 tokens (or 61.5%) attest the Nom-Dat order, and the remaining 385 tokens (or 38.5%) attest the Dat-Nom order. This principally shows that the German counterparts of Icelandic Dat-Nom verbs are not non-

alternating Dat-Nom verbs, but appear instead to alternate between the two, Dat-Nom and the Nom-Dat argument structure. A comparison of *líka*-verbs with *gefallen*-verbs is also statistically meaningful, as shown by a chi-squared goodness-of-fit test ($X^2 = 659.95$; df = 1; $p_{\text{two-tailed}} < 0.001$). The effect size is moderately strong (Cramér's V = 0.58). Thus, instead of adopting the same case frame, *líka*-verbs and *gefallen*-verbs each constitute their own verb class with regard to argument structure

Nevertheless, the variation within the class of *gefallen*-verbs is quite substantial: some verbs, like *grauen* 'dread, be afraid of', have a particular proclivity for the Dat-Nom order, whereas other verbs, like *leidtun* 'take pity; be sorry', almost uniquely tend towards the Nom-Dat order. The three remaining verbs, i.e. *zufallen* 'fall to, receive (lit.); fall to, receive (fig.)', *gefallen* 'please, like', and *dünken* 'seem, appear', show a relatively even distribution across word order patterns. In the remainder of this section, we will have a closer look at the German outliers *grauen* and *leidtun*.

As for *grauen*, it is worth mentioning that its nominative slot is almost invariably filled by a dummy *es* 'it' (198/200 tokens). Dummy pronouns, or 'expletives', are mere slot fillers that lack any semantic content. Leaving aside tokens with two referential arguments, *grauen* occurs in one of two configurations: the double-pronoun configuration (172 tokens), and a configuration in which a nominative expletive enters into competition with a dative full NP (26 tokens).

As is shown by example (7), a dative NP competing with a nominative expletive invariably takes preverbal position (26 tokens, vs. 0 in the reverse order). Thus, in the current configuration, the referentiality hierarchy (referential > non-referential) clearly trumps the pronominality hierarchy (pronoun > full NP).

German

(7) *Vielen Schülern graut* ***es*** *vor dem Physikunterricht.*
many.DAT pupils.DAT dreads.3SG it.NOM before the physics.lessons
'Many pupils dread physics lessons.'

In a study of five German verbs of success and failure, Somers (2023) has also identified referentiality as a factor guiding word order variation. Somers has shown that, in configurations with nominative pronouns and dative full NPs, the dative precedes the nominative 83% of the time if the nominative is realised as a clause-anticipating pronoun *es* 'it', as is illustrated by example (8). Clause-anticipating pronouns are evidently not identical in status to expletives, as they have a linguistic referent, but they do have in common with expletives the fact that they are semantically light (although expletives are definitely lighter than correlates).

German

(8) *Diabetes-Patienten gelingt* ***es*** *oft nicht,*
diabetes-patients.DAT succeeds.3SG it.NOM often not
bedeutsame Glukoseabweichungen selbst zu entdecken.
significant.NOM glucose.abnormalities self to discover
'Diabetes patients often fail to detect significant glucose abnormalities themselves.'

The remaining 172 tokens with *grauen* instantiate the double-pronoun configuration. Of these, 33 display the Nom-Dat order, and 139 the Dat-Nom order. Remarkably, when the dative is a local (i.e. first or second person) pronoun, as in (9a), it regularly takes first position (129 out of 144 tokens, or 90%), and very seldom second position (15 out of 144 tokens, or 10%). However, when the dative is realised as a non-local (i.e. third person) pronoun, as in (9b), frequencies tend more towards the Nom-Dat order (18 out of 28 tokens, or 64%) than towards the Dat-Nom order (10 out of 28 tokens, or 36%).

German

(9) a. ***Mir*** *graut* *es* *vor* *morgen.*
me.DAT dreads.3SG it.NOM before tomorrow
'I am dreading tomorrow.'

b. *Es* *graute* ***ihm*** *vor* *sich* *selbst.*
it.NOM dreaded.3SG him.DAT before him.REFL self
'He was dreading himself.'

The second outlier in the sample of *gefallen*-verbs is *leidtun* 'take pity; be sorry', which leans very strongly towards the Nom-Dat order: as many as 187 tokens (or 93.5%) realise the nominative in preverbal position. This is a remarkable finding, as *leidtun* is commonly considered a verb that allows for alternation (Barðdal 2004: 137; Somers 2021: 219, 225, 237). Verhoeven (2015) also includes *leidtun* in a sample of ten so-called 'dative-experiencer verbs' which were shown to alternate between an object-subject and subject-object order, or in our terminology, Dat-Nom and Nom-Dat argument structure: out of a total of 1,164 tokens with both arguments realised as full NPs in Verhoeven's study, 38.5% opt for the Dat-Nom order, with the remaining 61.5% opting for the Nom-Dat order. However, Verhoeven does not break down the obtained frequencies per verb, which means that it is impossible to tell how word order distributions differ between individual verbs. Furthermore, it is not inconceivable that the number of double-NP tokens for *leidtun* in her study is very low, as *leidtun* does not yield a single NP-V-NP token in our own study (cf. Section 3.2.2 below). As a consequence, its influence on Verhoeven's statistics is presumably limited as well.

Still, the question remains why *leidtun* is so rare in the Dat-Nom order across configurations to begin with (cf. Table 4). One explanation could lie in the fact that it is exceptionally common with dative indefinite pronouns: no less than 136 out of 200 dative constituents are indefinite pronouns, as is shown in (10). Of these, not a single one occupies the preverbal slot, as may be expected on the basis of the definiteness hierarchy (cf. Croft 2003: 130).

German

(10) *Charlotte* *kann* ***einem*** *wirklich* *leidtun.*
Charlotte.NOM can.3SG one.DAT really take.pity.on.INF
'One could really take pity on Charlotte'

As soon as dative indefinite pronouns are excluded from the statistics, the Dat-Nom ratio goes up to 20% (13 out of 64 tokens). Of these, 11 contain a dative local pronoun. One last point

worth mentioning is that *leidtun* is etymologically a causative verb: the verb literally means ‘do sorrow’. Perhaps *leidtun*’s original causative semantics persist in its preference for the Nom-Dat order. A comparison with two dative-experiencer verbs in *-tun*, i.e. *wohltun* ‘do good’ and *wehtun* ‘hurt’, could help shed light on this question. This, however, is outside the scope of this paper.

3.2.2 Word order variation in the [NP-V-NP] configuration

Table 5 presents the results for *líka*- and *gefallen*-verbs in the double-NP configuration. The results for Icelandic *líka*-verbs convincingly confirm their status as non-alternating Dat-Nom verbs: out of 194 observations, only one token (or 1%) instantiates the Nom-Dat order. The remaining 193 tokens (or 99%) all instantiate the Dat-Nom order.

Table 5. *Líka*- and *gefallen*-verbs in the [NP-V-NP] configuration

	Nom-Dat		**Dat-Nom**			**Nom-Dat**		**Dat-Nom**	
	N	**f**	**N**	**f**		**N**	**f**	**N**	**f**
áskotnast	0	0%	48	100%	*zufallen*	71	62%	44	38%
blöskra	0	0%	68	100%	*grauen*	–	–	–	–
leiðast	0	0%	26	100%	*leidtun*	–	–	–	–
líka	0	0%	28	100%	*gefallen*	7	47%	8	53%
þykja	1	4%	23	96%	*dünken*	10	45%	12	55%
Total	1	1%	193	99%	**Total**	88	58%	64	42%

For German, it may first and foremost be observed that the verbs *grauen* and *leidtun* do not yield a single token with double NPs. For *grauen*, the lack of double NPs is hardly surprising, as its nominative slot is nearly always filled by an expletive, which is pronominal by definition (cf. Section 3.2.1 above). For *leidtun*, however, the lack of double NPs seems to be an epiphenomenon of the verb’s prototypical usage, which strongly favours pronominal constituents. This especially applies to the dative, which is realised as a full NP only once (or 0.5%), with the remaining 199 tokens (or 99.5%) all instantiating pronominal datives.

The results for the three remaining verbs in the current configuration further confirm the trend seen in Table 4, namely that these appear to be alternating verbs. For *gefallen* and *dünken*, the obtained frequencies for Nom-Dat and Dat-Nom order approximate a 50–50 distribution, but it should be mentioned that the total number of tokens for both of these verbs in the present configuration with two full NPs is quite low, i.e. 15 for *gefallen* and 22 for *dünken*. Examples (11a–b) illustrate both word order patterns for the verb *gefallen*:

German

(11) a. *Unserem 7-jährigen Sohn gefällt das Buch auch sehr gut.*
our.DAT seven.year.old.DAT son pleases.3SG the.NOM book also very well
‘Our seven-year-old son also likes the book a lot.’

b. *Negative* *Publicity* *für* *Anwälte* *scheint* *zumindest*
negative publicity.NOM for lawyers seems.3SG at.least
den *Lesern* *zu gefallen.*
the.DAT readers.DAT to please
'Negative publicity for lawyers seems at least to be likeable to the readers.'

As for *zufallen*, there is also considerable word order variation, with the Nom-Dat order being attested 71 times, or 62%, and the Dat-Nom order 44 times, or 38%. As will become evident in the next section, this kind of variation is quite common with alternating Dat-Nom/Nom-Dat verbs in general.

3.2.3 Interim conclusion

In this section we have shown that Icelandic *líka*-verbs and German *gefallen*-verbs do not behave in the same manner with regard to argument structure. The Icelandic *líka*-verbs are unmistakably non-alternating Dat-Nom verbs, as the statistics exactly mirror the statistics presented for *hjálpa*-verbs in the previous section; the Nom-Dat linear order is maximally found in 4% of the cases with two full NPs, while the Dat-Nom word order is found in 96–100% of the cases. This supports our analysis that the Nom-Dat word order is a topicalization, while the Dat-Nom linear order represents the default word order for these verbs, and hence that these are non-alternating Dat-Nom verbs.

The situation with the "corresponding" German verbs is radically different, as *gefallen*-verbs appear to be alternating Dat-Nom/Nom-Dat verbs. This is evident from the statistics, which range from 45–62% Nom-Dat to 38–55% Dat-Nom, depending on the verb. This finding is perhaps not altogether unexpected, as it has been argued that German Dat-Nom verbs are in fact alternating Dat-Nom/Nom-Dat verbs, and not non-alternating Dat-Nom verbs (Eythórsson & Barðdal 2005: 868; Barðdal, Eythórsson & Dewey 2014, 2019: 131–148; Rott 2016: 239–249; Barðdal 2023: Ch. 6). We have found two outliers in the German dataset, *grauen* and *leidtun*, but their behaviour appears to be explained by secondary factors: *grauen* is nearly always attested with non-referential expletive nominatives, and *leidtun* with dative indefinite pronouns.

3.3 *Nægja*-verbs and *genügen*-verbs

We now turn to a comparison of Icelandic *nægja*- and German *genügen*-verbs. The results across configurations are presented in Section 3.3.1, whereas double NPs are discussed in Section 3.3.2. In Section 3.3.3, we investigate the effect of nominative correlative pronouns on word order variation, as they behave radically differently in Icelandic compared to German.

3.3.1 General findings

Word order frequencies for *nægja*- and *genügen*-verbs across configurations are presented in Table 6, which reveals that both Icelandic *nægja*-verbs as well as German *genügen*-verbs principally alternate between two case frames: a Nom-Dat case frame and Dat-Nom case frame.

Table 6. *Nægja*- and *genügen*-verbs across configurations

	Nom-Dat		Dat-Nom			Nom-Dat		Dat-Nom	
	N	**f**	**N**	**f**		**N**	**f**	**N**	**f**
duga	180	90%	20	10%	*nützen*	180	90%	20	10%
dyljast	150	75%	50	25%	*entgehen*	97	48.5%	103	51.5%
endast	78	39%	122	61%	*reichen*	114	57%	86	43%
henta	200	100%	0	0%	*geziemen*	118	59%	82	41%
nægja	139	69.5%	61	30.5%	*genügen*	109	54.5%	91	45.5%
Total	1	99%	193	1%	**Total**	88	58%	64	42%

Note that the distributional frequencies of two Icelandic verbs, *duga* 'suffice' and *henta* 'suit', do not confirm their status as alternating verbs, although native speakers agree that both word orders are equally neutral. Demonstrating the behaviour of the two arguments relative to the subject tests would take us too far afield, thus we refer the reader to Barðdal (1999, 2001) for a systematic overview of either argument of the verb *henta's* 'suit' ability to pass the subject tests in Icelandic.

Turning to German, the relevant German verbs alternate more easily than their Icelandic counterparts: in total, the Nom-Dat order is attested 747 times, or 75%, in Icelandic compared to 618 times, or 62%, in German, whereas the competing Dat-Nom order is attested 253 times, or 25%, in Icelandic, as opposed to 382 times, or 38%, in German. The between-language effect is statistically meaningful ($X^2 = 37.8$; df = 1; $p_{two\text{-}tailed} < 0.001$), but its size of effect is weak (Cramér's V = 0.14). Still, it should be mentioned that the test in question does not take into account any within-language variation, which, especially for Icelandic, is quite substantial.

Furthermore, it is notable that the within-class variation in German is relatively limited: with the exception of *nützen*, the obtained statistics for the remaining *genügen*-verbs all approximate a 50–50% distribution, whereas *nægja*-verbs in Icelandic show considerably more internal variation.

3.3.2 Word order variation in the [NP-V-NP] configuration

Table 7 shows the results for *nægja*- and *genügen*-verbs for tokens with two full NPs. A first trend, and one that holds both for Icelandic *nægja*-verbs as well as for German *genügen*-verbs, is that the Dat-Nom order is consistently more felicitous when the two arguments are full NPs, as opposed to across the two configurations. The only verb that is at variance with this trend is *henta* 'suit, befit', as it does not yield a single Dat-Nom token across configurations (cf. Table 6), and consequently does not yield any Dat-Nom tokens in the double-NP configuration either. For a more in-depth discussion of this verb as an outlier, the reader is referred to Somers & Barðdal (2022: 105–107). Still, it should be mentioned here that, once *henta* is removed from the analysis, the summed frequencies for the remaining four Icelandic verbs display a much more even distribution, i.e. 54% Nom-Dat and 46% Dat-Nom (Somers & Barðdal 2022: 105).

The German dataset reveals that, across verbs, the Nom-Dat order is attested 147 times, or 56%, and the Dat-Nom order 116 times (or 44%). These frequencies are very much in line with the counts obtained for *gefallen*-verbs in the double-NP configuration, as described in Section 3.2.2 above. Recall that these occur in the Nom-Dat order 58% of the time, and in the Dat-Nom order 42% of the time. Interestingly, a statistical comparison of *gefallen*-verbs with *genügen*-verbs is not informative ($X^2 = 0.09$; df = 1; $p_{two\text{-}tailed} = 0.76$). As such, there is no

statistical evidence to consider *gefallen*- and *genügen*-verbs two separate classes. Instead, these frequencies and statistical tests confirm the conjecture expressed in Section 3.2.2 above, that *gefallen*-verbs are also alternating Dat-Nom/Nom-Dat verbs in German.

Table 7. *Nægja*- and *genügen*-verbs in the [NP-V-NP] configuration

	Nom-Dat		**Dat-Nom**			**Nom-Dat**		**Dat-Nom**	
	N	**f**	**N**	**f**		**N**	**f**	**N**	**f**
duga	33	79%	9	21%	*nützen*	53	83%	11	17%
dyljast	2	25%	6	75%	*entgehen*	23	39%	36	61%
endast	9	30%	22	70%	*reichen*	15	38%	24	62%
henta	86	100%	0	0%	*geziemen*	20	56%	16	44%
nægja	27	54%	23	46%	*genügen*	36	55%	29	45%
Total	157	72%	60	28%	**Total**	147	56%	116	44%

All of this means that the three-part distinction in Icelandic between Nom-Dat verbs, Dat-Nom verbs, and Dat-Nom/Nom-Dat verbs corresponds to a two-part distinction in German, as the latter language only seems to be endowed with ordinary Nom-Dat verbs of the 'help' type and alternating Dat-Nom/Nom-Dat verbs, but not with non-alternating Dat-Nom verbs. Future research will have to confirm whether or not non-alternating Dat-Nom verbs are indeed non-existent in Present-Day German.

3.3.3 On nominative correlates

The current section investigates the effect of Icelandic correlative *það* 'it' and German correlative *es* 'it' on word order distributions in *nægja*- and *genügen*-verbs. In total, nominative correlates are attested 296 times in the whole of the Icelandic dataset and 310 times in the German dataset. As many as 164 Icelandic correlates, or 55%, occur with *nægja*-verbs and 209 German correlates, or 67%, occur with *genügen*-verbs. Thus, correlative nominatives are especially common with verbs in this verb class. Table 8 presents a breakdown of their occurrence per verb and per word order pattern.

Table 8. The effect of nominative correlates on word order distributions with *nægja*- and *genügen*-verbs

	Nom-Dat		**Dat-Nom**			**Nom-Dat**		**Dat-Nom**	
	N	**f**	**N**	**f**		**N**	**f**	**N**	**f**
duga	13	100%	0	0%	*nützen*	22	92%	2	8%
dyljast	108	94%	7	6%	*entgehen*	9	69%	4	31%
endast	–	–	–	–	*reichen*	8	44%	10	56%
henta	16	100%	0	0%	*geziemen*	69	59%	47	41%
nægja	19	95%	1	5%	*genügen*	13	34%	25	66%
Total	156	95%	8	5%	**Total**	121	58%	88	42%

Inspection of Table 8 reveals that Icelandic and German are each prone to their own trend. For Icelandic, nominative correlates swing word order preferences almost entirely towards the Nom-Dat order: out of 164 tokens, 156, or 95%, allocate the correlate to the preverbal slot. One example of this is given in (12) below. This is remarkable, as correlates are mere placeholders for subclauses and thus semantically light. As such, one would expect them to occupy the less

prominent postverbal slot, rather than the more prominent preverbal slot (Siewierska 1993: 831). Yet, at the same time, light pronouns are also prone to precede heavier material. For Icelandic, it appears that the second tendency clearly overrules the first, while in German there appears to be a competition between light material preceding heavier material and referential material preceding non-referential material.

Icelandic

(12) ***Það*** *dylst engum að krefjandi verkefni bíða nýs árs.*
it.NOM is.hidden.to nobody.DAT that demanding tasks await new year
'It is not hidden for anybody that demanding tasks will await the new year.'

Nevertheless, the Icelandic numbers presented in Table 8 should be interpreted with caution. Somers & Barðdal (2022: 104) have shown that Icelandic alternating verbs in the double-pronoun configuration behave much like Nom-Dat verbs: when both arguments are realised as pronouns, as many as 318 out of 337 tokens (or 94%) opt for the Nom-Dat order, rather than the reverse Dat-Nom order. This begs the question whether the frequencies for Icelandic presented in Table 8 are in fact an epiphenomenon of double pronominality. As it turns out, the majority of these tokens indeed instantiates the Pro-V-Pro configuration: as many as 139 out of 164 tokens with a nominative correlate occur in combination with a dative pronoun. Of these, 133 tokens attribute the preverbal slot to the (correlative) nominative, and a mere six to the dative. However, the remaining 25 tokens also tend very heavily towards the Nom-Dat order, even though their dative argument is a full NP: as many as 23 realise the nominative correlate to the left of the dative full NP, and two instantiate the reverse order. Thus, the tendency observed in Table 8 clearly exists independently of pronominality. In other words, with alternating verbs in Icelandic, it seems as though light arguments precede heavier, non-referential pronouns precede referential, and nominative pronouns precede dative pronouns.

For German, the results in Table 8 show that nominative correlates are much more permissive of alternation: as many as 121 tokens, or 58%, have the correlative *es* 'it' precede the dative, whereas 88 tokens, or 42%, realise the correlate in postverbal position. The only German verb that goes against this trend is *nützen*, which, interestingly, is also the verb most strongly attracted to the Nom-Dat order in general. For the remaining verbs, the existing alternation between Dat-Nom and Nom-Dat is also found with nominative correlatives.

In contexts where dative full NPs enter into competition with nominative correlates, the likelihood of Dat-Nom order is further boosted: out of 79 tokens, 33 or 42% realise the nominative correlate to the left of the dative NP, as in (13a), whereas the remaining 46 tokens (or 58%) realise the nominative correlate to the right of the dative NP, as in (13b).

German

(13) a. ***Es*** *geziemet der Jugend das Alter zu achten!*
it.NOM befits.3SG the.DAT youth the age to consider
'It befits youth to respect old age!'

b. *Den Herrschern der Welt genügte* ***es*** *nicht,*
the.DAT rulers.DAT the.GEN world be.enough.3SG it.NOM not
dass ihnen Europa zu Füßen liegt.
that them.DAT Europe.NOM at feet lies.3SG
'It was not enough for the rulers of the world that Europe lay at their feet.'

What sets full NPs apart from correlative pronouns is that the former are referential, whereas the latter refer cataphorically to a subclause. As such, full NPs are higher in referentiality and may thus be expected to occupy the preverbal slot. As such, our findings suggest that the referentiality hierarchy (referential > less referential > non-referential) is more forceful in German than it is Icelandic. However, the extent to which it plays out seems to be subject to an additional verb effect. Recall that Somers's (2023) study of verbs of success and failure has found nominative correlates to follow dative full NPs in 83% of cases. This result further confirms that referential elements in German take precedence over non-referential ones, but it is remarkable that verbs of success and failure are 25% more inclined to the Dat-Nom order than the verbs under study here. We leave it to future research to shed additional light on the interplay between referentiality and verb semantics.

3.3.4 Interim conclusion

In this section, we have shown that German *genügen*-verbs, exactly like Icelandic *nægja*-verbs, are, as a matter of fact, alternating predicates, i.e. they vacillate between the two argument structures, Dat-Nom and Nom-Dat, in both languages. At first blush, alternation seems to be more pervasive in German than it is in Icelandic, as the results for *genügen*-verbs in the double-NP configuration are much closer to a 50–50 distribution than they are for *nægja*-verbs. However, as soon as the outlier verb *henta* is excluded from the statistical analysis, the resulting frequencies for the remaining four Icelandic verbs included in the investigation, reveal a considerably more even distribution.

Yet another result our analysis has brought to light relates to the effect of correlative *es* and *það* on word order distributions in German and Icelandic. As it turns out, nominative correlates radically swing Icelandic alternating verbs towards the Nom-Dat order, even if the dative is a full NP. Alternating verbs in German, by contrast, retain their alternating behaviour. This shows that referentiality is a factor steering word order variation in German, but not in Icelandic. Why exactly German *nützen* goes against the general trend uncovered for that language remains at present unknown.

3.4 Personal pronouns

In her work on case marking and grammatical relations in Old and Early Middle English, Allen (1995: 109) observes that when the two arguments, the dative and the nominative, are full NPs, their word order distributions are relatively even, i.e. 19 examples show the Dat-Nom order and 21 examples the Nom-Dat order. However, in cases where both arguments are personal pronouns, only the Nom-Dat word order is found. Allen documents this with 48 examples. This suggests a major asymmetry between the two argument structures when pronouns are involved.

Table 9. *Nægja*-verbs with two referential personal pronouns

	Nom-Dat		**Dat-Nom**	
	N	**f**	**N**	**f**
duga	15	100%	0	0%
dyljast	–	–	–	–
endast	18	95%	1	5%
henta	10	100%	0	0%
nægja	5	71%	2	29%
Total	48	94%	3	6%

The question arises whether this effect of pronominality may also be found in Icelandic and German. Consider, first, Table 9, which shows both the raw frequencies and percentages for four of the Icelandic *nægja*-verbs when occurring with referential personal pronouns. This excludes tokens containing expletives and clause-anticipating correlatives of the type discussed in Section 3.3.3 above. For *duga*, *endast* and *henta*, the percentages are 100% Nom-Dat or close to that. For *nægja*, in contrast, the percentage is 71% Nom-Dat, although the reader should keep in mind that *nægja* only yields seven instances in total. To some degree, therefore, it seems that Allen's findings are also valid for Icelandic, where the total numbers are 94% Nom-Dat and 6% Dat-Nom.

Table 10. *Gefallen*-verbs with two referential personal pronouns

	Nom-Dat		**Dat-Nom**	
	N	**f**	**N**	**f**
zufallen	7	100%	0	0%
grauen	–	–	–	–
leidtun	8	100%	0	0%
gefallen	17	61%	11	39%
dünken	7	78%	2	22%
nützen	16	100%	0	0%
entgehen	2	100%	0	0%
reichen	2	50%	2	50%
geziemen	1	50%	1	50%
genügen	1	33%	2	67%
Total	61	77%	18	23%

Turning to German, four out of ten verbs, *zufallen*, *leidtun*, *nützen* and *entgehen*, show a 100% Nom-Dat distribution, as is evident from Table 10. Three additional verbs, *reichen*, *geziemen* and *genügen*, only occur two, three or four times with two referential personal pronouns; thus, their totals are simply too low to draw any statistical conclusions from. Of the two remaining verbs, *gefallen* and *dünken*, both clearly occur in the Nom-Dat argument structure in the majority of cases, although the numbers are somewhat lower than for *zufallen*, *leidtun*, *nützen* and *entgehen*, or 61 vs. 78% respectively. While it is clear that more research is needed on German to confirm these numbers, there is a clear tendency for alternating verbs to show up with the Nom-Dat word order when the two arguments are referential personal pronouns.

4. Summary and conclusions

In the present paper, we have compared the word order distributions of 30 verbs, 15 for German and 15 for Icelandic, which licence both a nominative and a dative argument. Crucially, the Icelandic verbs divide into one of three classes (cf. Somers & Barðdal 2022): ordinary Nom-Dat verbs, here referred to as *hjálpa*-verbs, non-alternating Dat-Nom verbs, here referred to as *líka*-verbs, and, finally, alternating Dat-Nom/Nom-Dat verbs, which are here referred to as *nægja*-verbs. In this study, we have gathered 15 German verbs, which are semantic and/or etymological corollaries of the Icelandic verbs in the three classes listed above, i.e. *helfen*-, *gefallen*-, and *genügen*-verbs.

The German dataset was extracted in an exactly parallel manner to the Icelandic dataset from 2022, i.e. through a corpus of web texts, the deTenTen13 corpus, which contains more than 16.5 billion words, while the Icelandic dataset was gathered through the more recent isTenTen20 corpus, which contains 520 million words. The two datasets have been annotated in the same way, on the basis of exactly the same variables, i.e. case marking, (pro)nominality, pronoun type, and referentiality. The last variable is included in order to enable a comparison between nominative correlative pronouns in both Dat-Nom and Nom-Dat constructions across the two languages.

We have shown that the similarities and differences between *helfen*- and *hjálpa*-verbs in German and Icelandic are striking in that the Nom-Dat linear word order is found in 96% of the cases in German when both arguments are full NPs, while the corresponding number is 99% for Icelandic. This is of course what one would expect, since it is entirely uncontroversial that 'help' verbs take a nominative subject and a dative object in the Germanic languages which still have morphological case marking. Yet, this is of particular importance here since it aids in establishing a baseline for how frequent topicalisation is in German and Icelandic. Thus, we have here established that for verbs of the 'help' type, topicalisation of the dative object to preverbal position is found in ca. 4% of the cases in German but only in ca. 1% of the cases in the Icelandic dataset.

Turning to *gefallen*- and *líka*-verbs in the two languages, i.e. the subset of verbs in Icelandic which systematically occur in the Dat-Nom argument structure, these were hypothesised to be Dat-Nom verbs, thus showing no inclination towards being alternating Dat-Nom/Nom-Dat verbs. As expected, the frequencies for the Icelandic *líka*-verbs exactly mirror the frequencies for *hjálpa*-verbs in Icelandic in that the Dat-Nom order occurs in 96–100% of the cases when both arguments are full NPs, while the Nom-Dat linear order is found in maximally 4% of the cases. These numbers show unambiguously that *líka*-verbs in Icelandic are non-alternating Dat-Nom verbs. However, our findings for the German *gefallen*-verbs are not in accordance with the behaviour of the Icelandic verbs. Instead, the German *gefallen*-verbs turn out to behave as alternating verbs, systematically instantiating the Dat-Nom and the Nom-Dat argument structure, ranging from 45–55% Nom-Dat vs. Dat-Nom to 62–38% Nom-Dat vs. Dat-Nom, depending on the verb. Future research will have to determine whether or not non-alternating Dat-Nom verbs exist in Present-Day German, as our dataset here only consists of ten potential candidates for this alternation.

Table 11. Distribution of Nom-Dat, Dat-Nom, and Dat-Nom/Nom-Dat argument structures in Icelandic and German across verb classes

	Icelandic	**German**
Nom-Dat	*hjálpa*-verbs	*helfen*-verbs
Dat-Nom	*líka*-verbs	–
Dat-Nom/Nom-Dat	*nægja*-verbs	*gefallen*-verbs
		genügen-verbs

One difference between Icelandic and German that we have detected in our dataset relates to the position of nominative correlates with alternating Dat-Nom/Nom-Dat verbs. These typically appear in preverbal position in Icelandic, thus contributing to a higher number of Nom-Dat tokens in that language, while the statistics appear to be more even in German. We have also briefly addressed the issue of word order with alternating Dat-Nom/Nom-Dat predicates when the two arguments are referential personal pronouns. It has been shown in the literature on Old English that such lexical-syntactic configurations, in fact, favour the Nom-Dat word order. We have found some effect of this for both Icelandic and German, although it appears to be stronger in Icelandic than in German. However, due to how few the relevant verbs are in number, additional research is required to throw further light on this issue.

Finally, the most important result our study has yielded is that German, precisely like Icelandic, possesses a class of alternating verbs. Crucially, and as may be deduced from Table 11, the alternating Dat-Nom/Nom-Dat argument structure is adopted by a larger set of verbs in German. This means that whereas Icelandic shows a three-part distinction between Nom-Dat, Dat-Nom, and Dat-Nom/Nom-Dat verbs, German seems to possess only two verb classes: Nom-Dat verbs, and Dat-Nom/Nom-Dat verbs. In other words, all Dat-Nom verbs in German turn out to be alternating Dat-Nom/Nom-Dat verbs. This rhymes well with what has been argued in recent literature, i.e. that German Dat-Nom predicates are in fact alternating predicates, originally suggested by Eythórsson & Barðdal (2005: 868) and later established by Barðdal, Eythórsson & Dewey (2014, 2019: 131–148), Rott (2016: 239–249) and Barðdal (2023: Ch. 6) on the basis of a series of subject tests available for the two languages.

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