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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

(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) <u>Case</u>: **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) <u>(Pro)nominality</u>: **pronoun** (*hún* 'she' 3p.nom.sg, *öllum* 'all' dat.pl), or full **NP** (*fullorðnum* 'adults' dat.pl, *nokkrar flöskur* 'some bottles' nom.pl).

(3) <u>Pronoun type</u>: **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) <u>Referentiality</u>: **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) <u>Case</u>: **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) <u>(Pro)nominality</u>: **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) <u>Pronoun type</u>: **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) <u>Referentiality</u>: **referential**, **correlate**, or **expletive**. Expletives are semantically void pronouns that are used to fill a syntactically mandatory slot, as in *Manchen graut <u>es</u> regelrecht davor* 'Many people are utterly appalled by that'. Correlates are pronouns used coreferentially with a subclause, e.g. *<u>Es</u> 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; $p_{two-tailed} < 0.001$). 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 *lika*-verbs with *gefallen*-verbs is also statistically meaningful, as shown by a chi-squared goodness-of-fit test (X^2 = 659.95; df = 1; $p_{two\text{-}tailed}$ < 0.001). The effect size is moderately strong (Cramér's V = 0.58). Thus, instead of adopting the same case frame, *lika*-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 *lika-* and *gefallen*-verbs in the double-NP configuration. The results for Icelandic *lika*-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*
         our.DAT seven.year.old.DAT son pleases.3SG   the.NOM book also   very
         gut.
         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; $p_{two-tailed} < 0.001$), 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; $p_{two-tailed} = 0.76$). 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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Swedish *så* and the narrative domain

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Abstract

The Swedish particle *så* is attested in different usages. In one of these, *så* introduces assertive clauses forming the foreground, or the skeleton, of a narrative. It is argued that, if the distribution of this particular particle is to be captured in a theory of syntax, such a theory needs to incorporate notions relating to narrative discourse or, in other words, a theory in which grammatical statements can be made about a unit larger than what is traditionally understood as a clause. A locality domain is defined on the assumption that the clauses of a narrative sequence share features of Force, Topic, and Finiteness.

1   Introduction

A long-standing tradition assumes a principled distinction between the sentence and the discourse. Such an intuition has been spelled out in a variety of ways, as for instance in the manner of (1)-(3):

(1)   [the sentence is] an independent linguistic form, not included by virtue of any grammatical construction in any larger linguistic form (Bloomfield, 1933: 170)
(2)   'sentence' is the name given to the largest unit about which grammatical statements are to be made. (Halliday 1956: 182)
(3)   the sentence is the largest unit of grammatical description (Lyons 1968: 172)

Nevertheless, phenomena at the interface of syntax and discourse have attracted increasing interest in generative grammar in the last decades. This article is dedicated to one set of data which presumably can shed some light on such an interface, namely the Swedish narrative particle *så* which evidently is incorporated in the sentence structure while, at the same time, it relates to narrative discourse. It is argued that an adequate grammatical account of *så* needs to consider a locality domain larger than the sentence.

This article is structured as follows: In section 2, four different usages of *så* are defined. In section 3, it is shown that one of these, labelled SÅ4, occurs in narrative discourse, as once identified in seminal work on narrative, and in particular Reinhardt (1984). In section 4, it is argued that the central properties of the narrative, and hence the distribution of SÅ4, can be accounted for in a cartographic approach to the left periphery, as proposed in Rizzi (1997) and much subsequent work. The discussion leads us to define a local domain overarching the

boundary between the clause and the discourse, that is larger than the sentence, which is defined the "narrative domain". In section 5, it is argued that SÅ4 is to be analyzed as a syntactic head. The sections 6 and 7 are concerned with some consequences of the analysis for verb second patterns and coordination, respectively. In section 8, the discussion is extended to the remaining occurrences of SÅ. It is shown that their distribution, as well, can be captured on the assumption that such elements are realized at different heights of sentence structure in the left periphery. Finally, in section 9, it is argued that the narrative domain, as here defined, provides a locality domain for two different classes of discourse adverbials, referred to as *switch adverbials* and *linkage adverbials* by Klein & von Stutterheim (1991).

2   The four usages of Swedish SÅ

Modern Swedish *så*, deriving from Old Nordic *svá*, is attested with its original lexical meaning (4), equivalent to that of English *so*, *thus*, or *in such a way*. Moreover, it represents what has been defined a "weak consequential" interpretation in a case such as (5).[1] In (6), where *så* introduces the main clause after a preposed adverbial element, as for instance a subordinate clause, it has been defined a V3 particle (Holmberg 2018). Lastly, it introduces the main clause in a narrative sequence (7):

(4)   Lexical SÅ (**SÅ1**)

       Så   har   vi   alltid   gjort och   *så*   måste   vi   alltid   göra.

       SÅ   have   we   always   done and   SÅ   must   we   always   do

       'thus we have always done and thus will we always do'

(5)   "Weak consequential" SÅ + Subject + Verb (**SÅ2**)

       Hon mådde dåligt *så* hon gick och la sig.

       She felt bad SÅ she went and lay self

       'She felt ill, so she went to bed'

(6)   Preposed element + SÅ + Verb + Subject (**SÅ3**)

       Om de vill det *så* gör vi det.

       if they want it SÅ do we it

       'if they want it, we'll do it'

---

[1] The term *weak consequential* is suggested in Salvi's (2002) work on Old Romance. In Teleman *et al*. (1999, vol. II: 730) the usage of *så* illustrated in (5) is labelled a "conclusive conjunction". However, it appears from the treatment of Teleman et al. (1999) that such an element is in fact ambiguous between a coordinating and a subordinating function (as is obvious from the term "conclusive subjunction" (Teleman et al. 1999: 737). In the same work, the third usage of *så* in (6) is defined "adjunct *så*" (Teleman et al. 1999: 670), and the fourth one, exemplified in (7), is taken to be akin to "ordinative adverbs" (Teleman et al. 1999: 669).

(7)   Narrative SÅ + Verb + Subject (**SÅ4**)

Vi	kom fram och	*så*	tog	vi	in på hotell	och	*så*	gick vi	ut …
We	came forth and	SÅ	took	we	in at hotel	and	SÅ	went we	out …

'we arrived and (then) we went to a hotel and (then) we went out …'

Some semantic and grammatical differences between these four instances of *så* are obvious from the examples in (4)-(7). In particular, consider that, in (4) and (5), Swedish *så* can be translated with English *so* or *thus*, while in (6) no direct equivalent is available in English.[2] In example (7), *så* is not structurally equivalent to English *then,* but can be approximately glossed as *then* for present purposes. I return to this issue in section 9.

Such a distinction suggests that (5) is closer to the original lexical usage of (4), while (6) and (7) are the result of a grammaticalization process. The issue of diachronic change, however, is not at the heart of this study. Henceforth, the four usages illustrated in (4)-(7) are referred to as SÅ1 - SÅ4 in the text as well as in the glosses.

Several studies have been dedicated to such elements in Scandinavian, as for instance Ekerot (1988), Teleman *et al.* (1999, vol. II: 667-670, 730, 737-738), Nordström (2010), Eide (2011), Salvesen (2013, 2020), Holmberg (2018). While most of these studies have been dedicated to SÅ3, that is the "V3 particle", the purpose of this paper is to shed light on the distribution of SÅ4, which I define as "narrative" for reasons which will become obvious as we proceed. [3]

3   The distribution of SÅ4

The fourth usage of SÅ is attested in narrative contexts such as that of (8):

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[2] Note that a sentence such as English *if they want to, then we'll do it*, is not strictly equivalent to Swedish (6). One difference lies in the fact that Swedish *så* is obligatorily unstressed in such a context (Eide 2011), while *then* can be focused (see section 5). Following the analysis of Salvesen (2020), English *then* is a specific resumptive while Swedish *så* in (6) rather is to be understood as a general resumptive.

[3] There is an extensive literature on the Old Romance continuations of Latin *sic*, including van Reenen & Schøsler (1992), Salvi (2002, 2010), Borchi (2004), Poletto (2005), Ledgeway (2008), De Caprio (2010), Benincà (1995, 2010), and Wolfe (2018). The studies on Old Romance, too, have focused on the distribution of the equivalent of SÅ3 and its implications for the analysis of Old Romance V2. The comparison between Old Romance and Modern Scandinavian is discussed in Egerland & Falk (2010), Egerland (2012, 2021), Salvesen (2013, 2020). In Egerland (2021), a three-way distinction of *sic* is assumed, in the sense that what is here called SÅ1 and SÅ2 are taken to be instantiations of the same usage. The classification is a matter of definition.

(8)   [He woke up early …]

och	*så*	gick	han	ut	med	hunden
and	SÅ	went	he	out	with	dog.the
och	*så*	läste	han	dagstidningen		
and	SÅ	read	he	newspaper.the		
och	*så*	vattnade	han	blommorna		
and	SÅ	watered	he	flowers.the		
och	*så*	gjorde	han	kaffe		
and	SÅ	made	he	coffee		

'he woke up, and (then) he walked the dog, and (then) he read the newspaper, and (then) he watered the flowers, and (then) he made coffee.'

What makes the sequence of clauses in (8) a *narrative* sequence is the fact that each new clause describes an event following in time on the immediately preceding one. The example (8) illustrates what has been called the *narrative skeleton*, the *foreground*, or the *main event line* in numerous studies on narrative discourse (e.g. Labov & Waletsky 1967; Labov 1972, 1997; Hopper 1979; Hopper and Thompson 1980; Reinhart 1984; Tomlin 1985). One way of defining the sequence is that of Dahl (1985):

(9)   … a sentence occurs in a narrative context if the temporal point of reference (in Reichenbach's sense) is determined by the point in time at which the last event related in the preceding discourse took place. (Dahl 1985: 112)

The properties of the narrative sequence strictly relevant to the present discussion are listed under **3.1**-**3.4**. A summary follows in **3.5**.

3.1   A chain of reference points

The definition of (9) amounts to saying that, for each event in the sequence, a reference point is established in relation to which the subsequent event is interpreted. Crucially, then, the clauses in such a narrative sequence are not interchangeable: it is understood that the events took place in the order they are referred to, and switching the respective order of the clause will affect the truth conditions of the narrative: it is possible to object to (8) by saying *no, he didn't walk the dog until after he made coffee*.

Moreover, consider that SÅ4 is spelled out from the second clause onwards in the narrative sequence. If, in fact, an utterance is introduced by SÅ4, we get the impression that the narration starts, so to speak, in medias res:

(10) *Så*   vaknade   han.
     så   woke   he
     'and then he woke up'

In other words, (10) is naturally interpreted as the continuation of a narrative sequence in which a temporal point of reference has already been established. In this sense, an occurrence of SÅ4 is anaphoric in relation to the previous Event.

3.2 Assertion

The literature on this topic concurs on the fact that clauses included in a narrative context are assertive: interrogative clauses or imperatives do not make part of the narrative sequence.

3.3 Anchoring to the Speech Time

The clauses of the narrative sequence share the same anchoring to the Speech Time. This observation is formulated by Reinhart (1984):

(11) A crucial property of narrative sequences … is that they are not evaluated directly with respect to the speech time. While the first narrative clause of an oral narrative might be related to the speech time, subsequent events are related to the previous reference point. (Reinhart 1984: 786)

What moves the narration ahead temporally, then, is a sequence of reference times: if each clause is anchored independently in its own speech time, the narrative sequence reading would not be achieved.

3.4 Restriction on topicalization

The clauses included in the narrative sequence cannot host elements which are overtly topicalized, dislocated or otherwise preposed to the main verb. To illustrate this restriction, consider a sequence of SÅ3-clauses introduced by a preposed element, yielding the surface order XP + SÅ + Verb + Subject, as in example (12):

(12) [He woke up early …]
      Som alltid *så* gick han ut   med hunden.
      as   always SÅ   went he   out   with dog.the
      Säkerligen *så*   läste han dagstidningen.
      certainly SÅ   read he   newspaper.the
      Förvånansvärt nog   *så* vattnade han   blommorna
      surprisingly   enough SÅ   watered   he   flowers.the
      Sin vana trogen *så* gjorde han kaffe.
      his habit faithful SÅ   made   he   coffee
      'As always, he went out with the dog. Certainly, he read the newspaper. Surprisingly, he watered the flowers. Faithful to his habit, he made coffee.'

In an example such as (12), the narrative sequence does not emerge as clearly as in (8), suggesting that the anteposition of overt elements somehow "disturbs" sequencing. The list of

events described by the main clauses in (12) tend to be chronologically unordered in the sense that the events did not have to have occurred in the sequence indicated by the surface ordering of the clauses. Of course, it could be the case that the subject watered the flowers after reading the newspaper and before making coffee, but (12) does not imply any such ordering. Rather, (12) is interpreted as a list of events having taken place in the past, without implications concerning their relative ordering. In other words, rearranging the order between the clauses in (12) will not affect truth conditions. This observation is captured by the generalization in (13):

(13) **Generalization on word order and narrative sequence**
    If, in a sequence of assertive clauses introduced by SÅ, an element is overtly preposed to the SÅ + verb complex, the narrative sequence reading does not obtain.

The generalization in (13) captures the difference between the V3-particle, SÅ3, and the narrative particle, SÅ4. Following Reinhart's (1984) insight, I assume that in the SÅ3-structure in (12) each event is linked to its own speech time, unlike what we have seen for the narrative sequence in (8).

Things of course change if the introducing adverbial expression is itself of a kind that imposes a sequence reading, as in (14), where the preposed element *sedan* means 'subsequently', or 'then' as indicated in the English gloss. Henceforth, the colloquial short form *sen* will be used in the examples. As is obvious from example (14), *sen* can cooccur with *så*. We return to this fact in section 5.

(14) [He woke up early …]

sen	*så*	gick	han	ut	med	hunden
then	SÅ	went	he	out	with	dog.the
sen	*så*	läste	han	dagstidningen
then	SÅ	read	he	newspaper.the
sen	*så*	vattnade	han	blommorna
then	SÅ	watered	he	flowers.the
sen	*så*	gjorde	han	kaffe.
then	SÅ	made	he	coffee

Clearly, in a narrative such as (14), the clauses are indeed chronologically ordered. In this sense, (14) has the temporal properties of a SÅ4-structure. Therefore, example (14) is an apparent exception to the generalization stated in (13). However, I will assume that the narrative sequence instantiating SÅ4, as in (8), actually equals the structure in (14). In other words, the clauses of the narrative sequence are introduced by adverbs such as *sen* 'then', 'later', which can be spelled out, as in (14), or remain covert, as in (8).

3.5 Summary

We are now in a position to summarize the properties of the narrative sequence as in (15):

(15) A narrative sequence is a sequence of clauses such that
  i. each clause introduces an event providing a reference point for the subsequent event, creating a chain of reference points,
  ii. all of the clauses in the sequence have assertive Force,
  iii. the anchoring to speech time is common for all of the clauses in the sequence, and
  iv. no element can be overtly topicalized, left dislocated or otherwise preposed to the finite verb within the sequence.

This definition of a narrative sequence is not exhaustive but will suffice for present purposes.[4]

Intuitively speaking, the observations summarized in (15) suggest that the narrative sequence amounts to a series of clauses that share the same left periphery in the sense of Rizzi (1997). In the following section this intuition is spelled out in detail.

4   The narrative domain

Consider that, in spoken style at least, the clauses of a narrative sequence are typically introduced by the conjunction. Suppose, then, that the narrative sequence is what it superficially looks like, namely an instance of coordination. The conjunction is not obligatorily spelled out, though in spoken style narration it often is. Assuming an antisymmetric approach to coordination (e.g. Kayne 1994; Wilder 1997; Johannessen 1998), the structure of a narrative sequence would be that of (16):[5]

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[4] In particular, the aspectual properties of the verbs included in the sequence should be made more precise. Generally speaking, the sequence reading hinges on the fact that the verbs describe events rather than processes or states. If the verbs of the sequence describe states, we achieve a description: *she was 30 years old, and (then) she lived in Stockholm, and (then) she had three kids*. Moreover, the narrative sequence as defined in (15), in Swedish as well as in other languages, is associated with a particular intonational contour, which will not be discussed in the present article.
[5] Following Kayne (1994), I assume two levels of representation, heads and phrases. In (16) and the following structures there is no X' level.

(16)

&P
- CP¹
  - He walked the dog
- &P
  - &
  - &P
    - CP²
      - He read the newspaper
    - &P
      - &
      - &P
        - CP³
          - He watered the flowers
        - &P
          - &
          - …
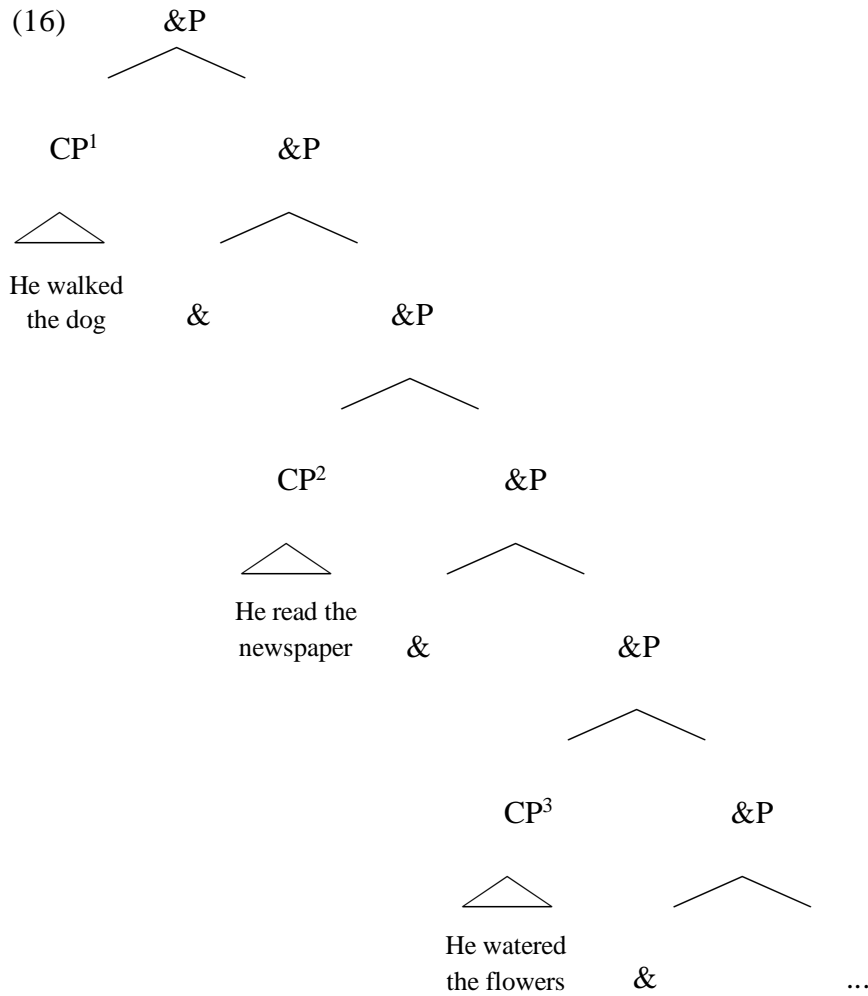
However, following our previous intuition, these clauses share the same left periphery. In particular, suppose that speech act anchoring (understood as the *logophoric center* of the clause, as in e.g. Williams 1994) is established in a Finiteness Projection, following the suggestion of Bianchi (2003). If so, the FinP is projected on top of the structure in (16), given that such anchoring is common for the whole domain. Assuming the ordering of functional projections proposed in Rizzi (1997), TopicP and ForceP are higher in the structure than FinP. Such an assumption gives us the structure in (17):

(17)   ForceP
       /   \
   Force   TopicP
            /   \
        Topic   FinP
                   /   \
                 Fin   &P
                        /   \
                    XP¹   &P
                    (He walked   /   \
                     the dog)   &   &P
                                      /   \
                                   XP²   &P
                                (He read the /   \
                                 newspaper) &   &P
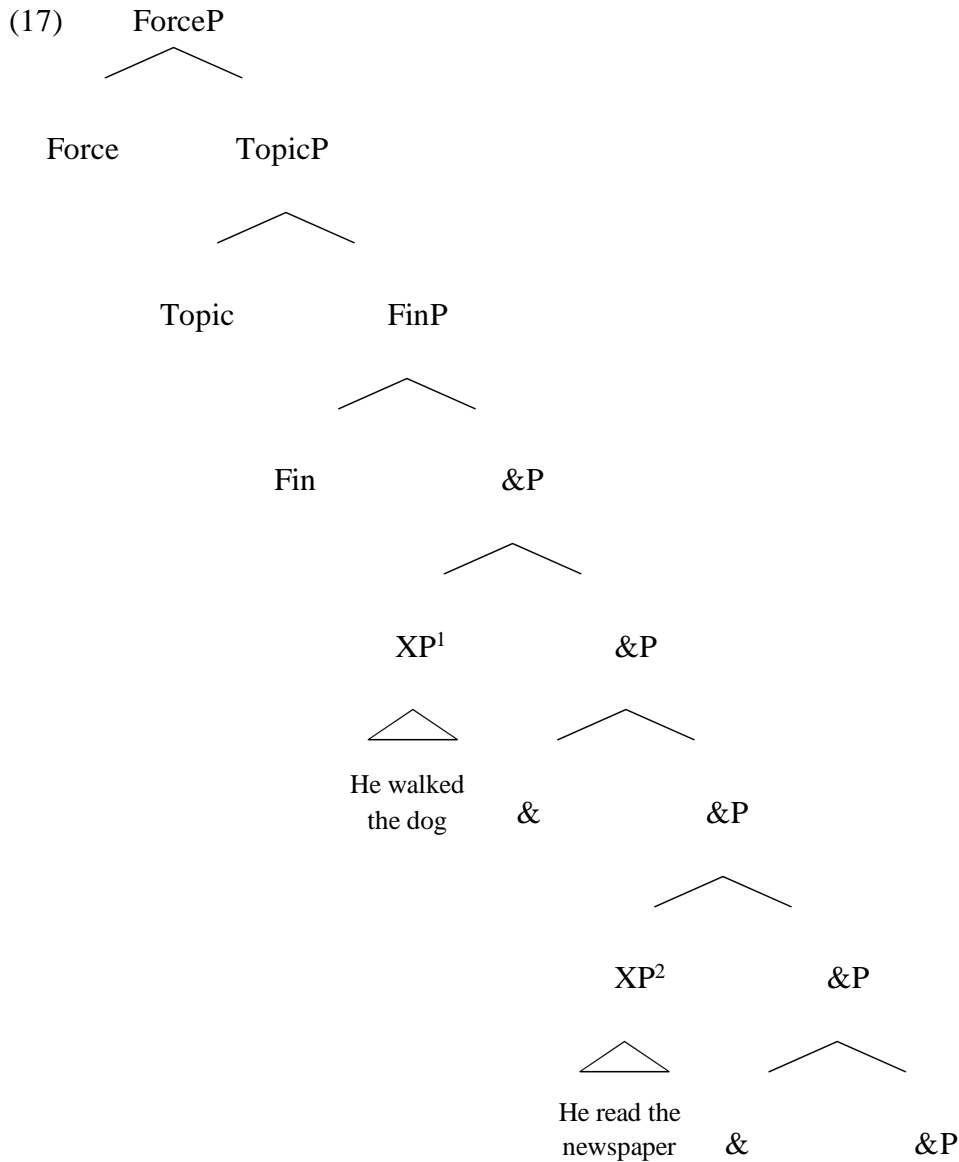
The structure in (17) is simplified as it disregards FocusP as well as multiple Topic Phrases, which can be assumed but are not directly relevant for the present discussion.[6] The single clauses in (17) are no longer assumed to be CPs but are marked as XP. The exact nature of this label remains to be defined.

With reference to the definition in (15), the structure in (17) captures the facts that
a. the speech time anchoring is common for all of the events in the domain, given the assumption that such anchoring is provided by the Fin head,
b. the clauses of the narrative domain share the same assertive Force, and
c. anteposition of any kind of element, argumental or adverbial, is not possible within the domain, given that TopicP is projected higher than the narrative sequence.

---

[6] Furthermore, the term "Topic" here is used to indicate the position of various preposed elements, not only topicalized ones in the pragmatic sense.

Moreover, the structure expresses the intuition that the narrative domain is endowed with a truth value relating to sequencing, which is realized in ForceP common for the whole sequence. Such a truth value goes beyond those of the single clauses it contains.[7]

At this point, the structural status of SÅ4 needs to be established. That is the topic of the following section 5.

5   The structural properties of SÅ4

Following the previous way of reasoning, SÅ4 is narrative particle of sorts (whereas SÅ3 was defined a Topic marker in Eide 2011). In the narrative domain, SÅ4 is the morphological spell out of a feature relating to the Reference point, anchored in the preceding event and to which the subsequent event is anchored (restating the observation of Dahl 1986 in (9))[8]. More precisely, I suggest that SÅ4 is realized in proclisis on the X head hosting the finite Verb in the structure (18):

(18) $[_{ForceP}$ Force $[_{TopicP}$ Topic $[_{FinP}$ Fin $[_{\&P}$ XP^1 $[_{\&P}$ & $[_{\&P}$ [XP^2 SÅ^4 V ...] & ...]]]]]]

A head analysis of SÅ (defended in e.g. Egerland & Falk 2010, Nordström 2010), is supported by the fact that SÅ can cooccur with time adverbials such as *sen* 'then', 'subsequently/later', as in example (14) in the previous section. The order is obligatorily *sen* > SÅ, that is, SÅ has to be adjacent to the verb:[9]

(19) Jag   anlände till Rom   och   *sen*   *så*   tog   jag   in på   hotell.
      I   arrived to   Rome and   then   SÅ   took I   in at   hotel

'I arrived in Rome and then I went to a hotel'

---

[7] From this viewpoint, the narrative kind of coordination could be considered a particular instance of so-called unbalanced coordination (Goodall 1987, Johannessen 1998: 52).

[8] The present analysis, hence, turns SÅ4 into a narrative particle of sorts. In the literature on text and discourse, there are several analyses of morpho-syntactic markers relating to narrative. Many of these are attested in languages typologically quite distant from Swedish, as for instance the *jííta* morpheme in Yagua (Payne 1992), signaling that the verb belongs to the main event line, the narrative particles in Hocąk (Burley 1999), as well as the "developmental markers" *kat* in Ida'an (Moody 1991), and *jhanda* in Kisi (Nicolle *et al.* 2018). I ignore to what extent the analysis of the present paper can be extended to other languages.

[9] The example (20) is marginally acceptable with a different reading of SÅ, rather corresponding to SÅ2. We will return to this issue in section 8.

(20) *Jag anlände till Rom och *så* *sen* tog jag in på hotell.
     I arrived to Rome and SÅ then took I in at hotel

Furthermore, *sen* can be stressed, as in (21), and can appear in a cleft as in (22). SÅ4, on the contrary, cannot be stressed (23). In the cleft (24), the only available reading is the lexical one, which we have defined as SÅ1 (and which is slightly marginal in the given context):

(21) Jag anlände till Rom och SEN tog jag in på hotell.
     I arrived to Rome and then[focus] took I in at hotel
     'I arrived in Rome and THEN I went to a hotel'

(22) Det var först SEN hon insåg vad som hade hänt
     it was first then she realized what that had happened
     'it was only then that she realized what had happened'

(23) *Jag anlände till Rom och SÅ tog jag in på hotell.
     I arrived to Rome and SÅ[focus] took I in at hotel

(24) ?Det var bara SÅ hon insåg vad som hade hänt
     it was only so she realized what that had happened
     'it was only in that way she realized what had happened'

If, then, SÅ4 is indeed realized in proclisis on the Verb, I assume that the adverb *sen* is situated in the corresponding Specifier. As I stated about example (14), the phonological realization of *sen* is optional: when *sen* is not spelled out, I assume a null copy is still present in the relevant Specifier. Moreover, considering that the complex *sen-så* provides the sequence reading, I assume that XP in the structure in (17), is in fact a high Tense Projection, hosting the time adverbial in its Specifier. [10] The relevant portion of structure is given in (25):

---

[10] If a split IP structure of some kind is assumed, it remains to establish specifically which projection of TP hosts such an adverbial. For Cinque (1999: 106), the adverb *then* is situated in the Tense *Future* Projection, though the data underlying such a hypothesis are different from those discussed in this article. It is true, of course, that the event introduced by *sen* lies in the future with respect to the preceding one, but I will not pursue this line of reasoning here.

(25) FinP

```
        FinP
       /    \
     Fin    &P
           /   \
        TP¹      &P
        /\      /  \
  He walked    &    &P
   the dog         /  \
              TP²      &P
             /   \    /  \
           sen   TP  &P
                /  \
               T
              /\
            så4  V
```
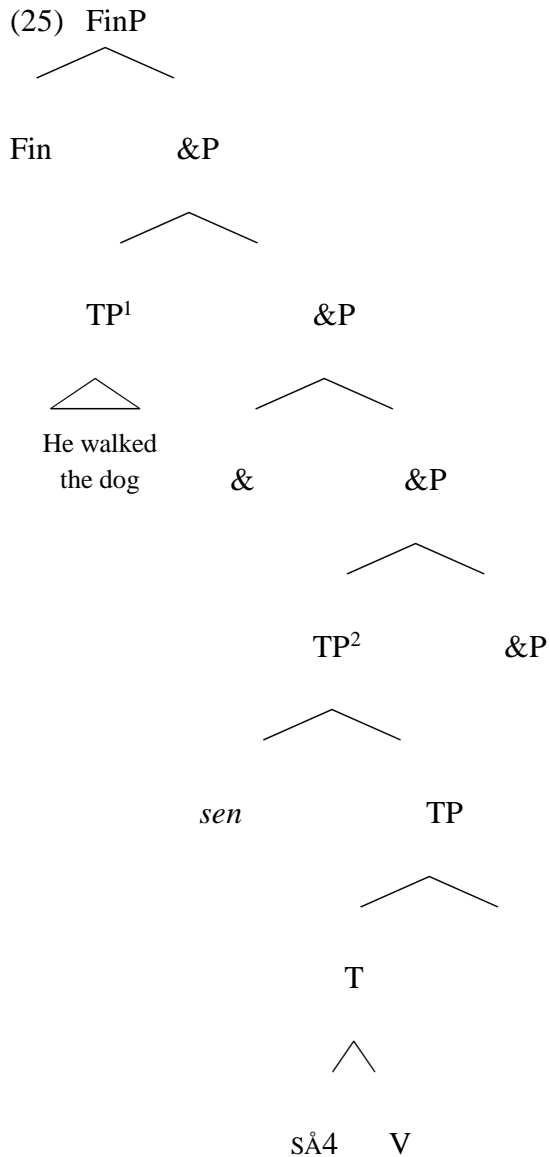
Several issues arise from this proposal. I will address two of them in the following sections. First, the V2 patterns attested in the narrative sequence need to be accounted for (section 6). Second, the coordinative nature of the narrative domain should be put in relation to previous studies concerning coordination (section 7).

6 On V2 in the narrative domain

On this analysis, the word order patterns of a V2 language such as Swedish follow: the subject of the clauses embedded in the narrative domain is found in the inverted position because the subject position is blocked by the Time adverb regardless of whether such an adverb is overt or silent.

Importantly, however, such a line of reasoning is not compatible with a *symmetrical* approach to V2 (as in e.g. den Besten 1983, Thráinsson 1986, Holmberg & Platzack 1995, and much subsequent research). That is to say, the above analysis cannot be pursued under the assumption that the verb in a V2 language such as Swedish raises to Comp in all finite main clauses. On the other hand, the analysis is clearly compatible with the *asymmetrical* approach to V2, as in Travis (1984) and Zwart (1994): The verb raises to Comp only if the initial constituent is a non-subject, otherwise the verb raises to a lower functional projection which is here identified with (a high recursion of) TP.

Also, the present line of thought is compatible with recent cartographic approaches to V2. According to the Peripheral Criterion of Samo (2018: 87), elaborating on a suggestion by Poletto (2000), the V2 restriction follows from the requirement that the verb target the highest projection hosting an operator belonging to a given set. In (25), it is the time adverb *sen* which triggers overt movement of the verb to the matching head T.

7   On the coordination analysis of narrative

The question arises whether narrative sequences are actually instances of coordination. Certain properties of coordinated structures, which have been extensively discussed in the literature on coordination, are not attested in the narrative domain (e.g. Wilder 1997, Johannesen 1998).

However, there are independent differences between the narrative kind of coordination assumed here, and other cases of coordination, as for instance the one that creates the premises for ellipsis, or gapping, as in (26a-b):

(26) a. John read the book and Mary read the newspaper.
      b. John read the book and Mary _ the newspaper.

First, consider that the elided verb in (26b) is identical to its antecedent. In narrative sequences, however, the verbs are typically not identical. Second, in an elliptic structure, there is typically a contrast between the two subjects. In a non-contrastive context, when the second subject is a pronoun coreferential with the preceding subject, ellipsis is barred, as in (27b) (Winkler 2005: 193).

(27) a. John read the book and he read the newspaper.
      b. *John read the book and he _ the newspaper.

In brief, ellipsis is typically possible when the verbs are identical and the subjects are not. In a narrative sequence normally the opposite holds: the verbs are not identical while the subjects are.

I conclude that the absence of ellipsis in the narrative domain can be accounted for on independent grounds, and hence does not constitute an argument against the coordination approach to narrative.

8.   The distribution of SÅ2 and SÅ3

At this point, we turn to the analysis of SÅ2, the "weak consequential", and SÅ3, the "V3 particle", which need to be accommodated in the present framework. Beginning with the latter, I assume that SÅ3 is indeed a topic marker as suggested by Eide (2011). We have seen (as in example (12)), that narrative sequencing does not obtain in SÅ3-contexts. This implies that the verb in SÅ3-contexts is realized higher than FinP, given the assumption that Fin represents anchoring to the Speech Time. Since SÅ3 is spelled out after a preposed element, I assume that the landing site of V is in fact Topic, while the preposed element is collocated in [Spec, Topic]. The relevant portion of structure is the one given in (28):

(28)   TopicP
```
          TopicP
         /      \
       XP        TopicP
               /      \
            Topic      FinP
           /    \
        SÅ³      V
```
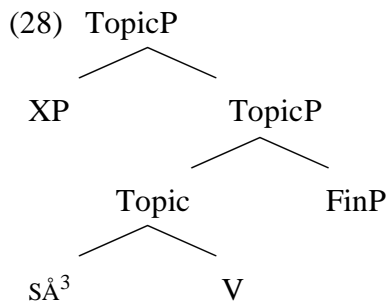
This analysis captures the fact that narrative sequencing is not attested when an element is preposed to the verb, stated as a generalization on word order in (13).

SÅ2, on the other hand, is distinctly different from the functional usages of SÅ3 and SÅ4. Intuitively speaking, it is closer to the lexical SÅ1, as we have seen, and this is evident already from the fact that it can be translated in English 'so' or 'thus' in a fairly uncomplicated fashion. There are several reasons to believe that SÅ2 is realized higher in the structure than the functional instantiations of SÅ.

First, SÅ2 is typically followed by subject-verb word order, as in (29):[11]

(29)   Det   blev   sent,   så   jag   gick.
       it   became late   so   I   went
       'it was late, so I left'

Second, SÅ2 can cooccur with elements preposed to the Verb, which SÅ2 obligatorily precedes:

(30)   Så   den   boken   vill   jag   gärna   läsa.
       SÅ2   that   book   want   I   willingly   read
       'so, that book, I would like to read'

---

[11] This, I take it, is the main reason why traditional treatments assume the SÅ2 is itself a conjunction (Teleman *et al.* 1999, vol. II: 730). In fact, in a case such as (29), SÅ2 cannot felicitously be preceded by the conjunction *och* 'and'.

(i)   *Det   blev   sent,   och   så   jag   gick.
        it   became late   and   so   I   went

Third, SÅ2 can cooccur with SÅ3, as in (31):

(31) Hon kom fram sent   *så*   förmodligen *så*   tog   hon en taxi.
      she arrived late   SÅ   probably   SÅ   took she a   cab

      'she arrived late so probably she got a cab'

Fourth, SÅ2 can introduce a question, as in (32):

(32) Så   när   kom   du   fram?
      SÅ   when   came   you   forth
      'so when did you arrive?'

Such evidence shows that SÅ2 is higher in the structure than the other functional instances of SÅ. In particular, SÅ2 can take ForceP as its complement. The structure in (33) summarizes the positions of SÅ2 and SÅ3.

(33) SÅ^2 [$_{ForceP}$ Force [$_{TopicP}$ [XP] SÅ^3 Topic [$_{FinP}$ Fin [$_{TP}$ TP …]]]]

9   Further speculations on the narrative sequence as a locality domain: switching and linkage adverbials

Returning to our initial claim, the narrative sequence provides a locality domain larger than the single sentence. We have argued that the assumption of such a domain is required to account for the distribution of certain particles and adverbials. In this section, the perspective is broadened to some Germanic and Romance languages.

Consider a short non-authentic narrative such as the one in (34a-e), exemplified in English, French, German, Italian, and Swedish:

(34) a. Eng. Then I arrived, and then I took a cab to the hotel, and then I went to the reception, and then I said I had booked a room.
      b. Fr.   Alors je suis arrivé et *puis* j'ai pris un taxi jusqu'à l'hôtel, *puis* je suis allé à la réception et *puis* j'ai dit que j'avais réservé une chambre.
      c. Ger. Da bin ich angekommen, und *dann* nahm ich ein Taxi zum Hotel, und *dann* ging ich zur Rezeption, und *dann* sagte ich, ich hätte ein Zimmer gebucht.
      d. It.   Allora sono arrivato e *poi* ho preso un taxi per l'hotel e *poi* sono andato alla reception e *poi* ho detto che avevo prenotato una stanza.
      e. Sw.   Då kom jag fram och *sen* tog jag en taxi till hotellet och *sen* gick jag till receptionen och *sen* sa jag att jag hade reserverat ett rum.

As can be seen in (34a-e), all languages except for English make a lexical distinction between two different discourse adverbials: Fr. *alors/puis*, Ger. *da/dann*, It. *allora/poi*, Sw. *då/sen*. These elements have distinct and only partially overlapping distribution: Fr. *puis*, Ger. *dann*, It.

poi, and Sw. *sen*, signaled in italics, can introduce each and every main clause of the narrative sequence, as in (34b-e). On the contrary, Fr. *alors*, Ger. *da*, It. *allora*, and Sw. *då*, cannot be felicitously repeated in such a way. In fact, if each and every sentence is introduced by such adverbs, the result is highly marked, as in (35b-e):

(35) a. Eng.   Then I arrived, and then I took a cab to the hotel, and then I went to the reception, and then I said I had booked a room. (=34a)

  b. Fr.   #Alors je suis arrivé et alors j'ai pris un taxi jusqu'à l'hôtel, alors je suis allé à la réception et alors j'ai dit que j'avais réservé une chambre.

  c. Ger.   #Da bin ich angekommen, und da nahm ich ein Taxi zum Hotel, und da ging ich zur Rezeption, und da sagte ich, ich hätte ein Zimmer gebucht.

  d. It.   #Allora sono arrivato e allora ho preso un taxi per l'hotel e allora sono andato alla reception e allora ho detto che avevo prenotato una stanza.

  e. Sw.   #Då kom jag fram och då tog jag en taxi till hotellet och då gick jag till receptionen och då sa jag att jag hade reserverat ett rum.

The distinction between the two classes of discourse adverbials is captured by the terminology proposed by Klein & von Stutterheim (1991: 27): while *alors/da/allora/då* express "switch" from one domain to another, *puis/dann/poi/sen* express "linkage" within the domain.

Such a distinction is not visible in English, where adverbials of both categories are spelled out as *then*.[12] In (35b-e), the repetition of the adverbials yields a deviant sort of narrative, because each occurrence of the adverb creates a "switch reading". Intuitively speaking, the marked effect of the narrative in (35b-e) stems from the impression that the narrative domain starts all over at each occurrence of the switch adverbial.

A distinction is made between these two categories of discourse elements across Romance and Germanic languages, with the exception of English, as summarized in the Table in (36).

(36) **Classification of discourse adverbials**

	Switch between narrative domains	Linkage within the narrative domain
English	**then**	*then*
French	**alors**	*puis*
German	**da**	*dann*
Italian	**allora**	*poi*
Swedish	**då**	*sen*

---

[12] There are independent differences in distribution between these adverbials in different languages which need not concern us here. For analyses of English *then* and Italian *poi*, see Thompson (2005, chapter 5), Cruschina & Cognola (2021).

Again, if we want to account for the difference in distribution between such elements, we need to make reference to a structural unit larger than the single clause. Assuming the narrative domain as defined in sections 3 and 4, the generalization can be expressed as in (37):

(37) **Generalization on the distribution of discourse adverbials (1st version)**
    i. Switch adverbials can only occur initially in the narrative domain.
    ii. Linkage adverbials can introduce each single clause within the narrative domain.

Furthermore, the generalization stated in (37) can follow from binding theory assuming the antisymmetric approach to c-command, as stated in (38) (Kayne 1994: 24)

(38) X c-commands Y iff X and Y are categories and X excludes Y and every category that dominates X dominates Y.

For Kayne (1994: 22-24), only categories enter into c-command relations, whereas segments do not. In a structure such as (39), both of TP and &P are dominated by FinP. However, *då/sen* are not dominated by TP since they are not dominated by every segment of TP1. Furthermore, TP1 is not dominated by &P, given that TP1 is not dominated by every segment of &P. It follows that the adverbials *då/sen* in (39) c-command TP^2, that is, everything contained in the continuation of the narrative domain.

(39)
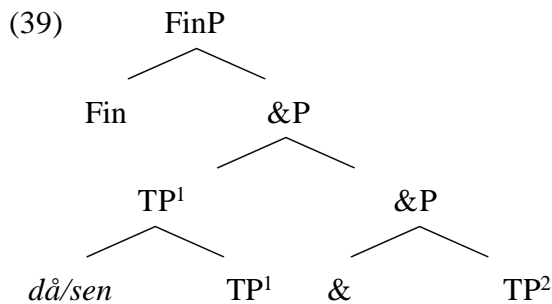
In other words, an occurrence of *då/sen* c-commands all following occurrences of *då/sen*. If so, the crucial restrictions on distribution can be stated in the terms of binding theory as in (40):

(40) **Generalization on the distribution of discourse adverbials (2nd version)**
    i. The linkage adverbial is bound within the narrative domain.
    ii. The switching adverbial is free within the narrative domain.

Further implications of such an analysis are left for future research.

8   Conclusion

The analysis of certain syntactic phenomena requires a theory that overarches clausal boundaries, that is, a theory in which grammatical statements can be made about a unit larger

than what is traditionally understood as a clause. The present proposal achieves this by assuming a syntactic domain which includes sequences of clauses. The distribution of various usages of Swedish *så* can be captured in such an approach. Furthermore, the narrative sequence defines a narrative domain for the distribution of certain discourse adverbials. It has been shown that such a result can be obtained within a cartographic approach to sentence structure.

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