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# **Linearization and unaccusativity: The relative order of dative and nominative arguments with five German verbs of success and failure\***

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The present study maps out the word order distributions in verb-second clauses of five German verbs of success and failure: *gelingen* ‘to succeed’, *glücken* ‘to succeed’, *missglücken* ‘to fail’, *misslingen* ‘to fail’, and *missraten* ‘to fail’. Given their status as unaccusatives, they display an asymmetric mapping between case marking and thematic roles. As a consequence, several researchers have argued that they sanction an inversion of the canonical nominative-before-dative word order pattern. Two positions emerge: those scholars who associate these verbs with a dative-before-nominative order and those who claim that they license both a dative-before-nominative order as well as a nominative-before-dative order. A corpus study of 982 tokens principally shows the latter claim to be true in that, in a configuration with double NPs, the Nom-Dat order is attested 200 times (or 40%), and the Dat-Nom order 299 times (or 60%). Remarkably, when both arguments are realised as pronouns, the variation in word order is neutralised almost entirely in favour of the nominative-before-dative order.

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## 1. Introduction

Scholars of German have long been intrigued by the interplay between verbal syntax and semantics, on the one hand, and their influence on word order patterns, on the other. With regard to predicates licensing both a nominative and a dative argument, it has been argued that not all of them are associated with a nominative-before-dative base order. Among these are verbs of success and failure: as unaccusative verbs, they display an asymmetric mapping between case marking and thematic roles. This is because with these verbs it is the dative, and not the nominative, that takes on the thematic role normally associated with the subject. It is precisely this mismatch that facilitates an inversion of the canonical word order pattern. Examples (1a–b) below illustrate this phenomenon for the verbs *gelingen* ‘to succeed’ and *missraten* ‘to fail’:

- (1) a. WhatsApp            gelang            der Durchbruch.  
WhatsApp-DAT    succeeded    the-NOM breakthrough  
‘WhatsApp managed to break through.’
- b. Einem minderbegabten Schriftsteller    wäre    der Roman  
a-DAT less.talented-DAT author    were    the-NOM novel  
missraten.  
failed  
‘A less talented writer would have failed (with) the novel.’

The aim of this paper is to lend corpus-based support to the above-mentioned claim that verbs of success and failure allow for the canonical order of constituents to be inverted. I do this by mapping out the word order distributions of five relevant verbs: *gelingen* ‘to succeed’, *glücken* ‘to succeed’, *missglücken* ‘to fail’, *misslingen* ‘to fail’, and *missraten* ‘to fail’. These verbs are either synonyms or antonyms to one another, which in turn means that there is a high degree of internal semantic coherence between the members of the dataset. The idea behind this method is that verbs that are highly similar in meaning may be assumed to also select for the same argument structure (cf. Barðdal 2001a, 2004: 114, 2008, 2012, Barðdal & Eythórssón 2020: 211–216, 223–229).

This paper is organised as follows. In Section 2, I present the two positions that scholars of German have taken regarding linearization with verbs of success and failure. Several researchers have claimed that these are associated with a dative-before-nominative base order, but others have argued that they license two base orders: a dative-before-nominative order and a nominative-before-dative

order. I also discuss previous corpus work tying in with either of these positions. Section 3 formulates the hypotheses which build the foundations of this study. Section 4 lays out the methodological background, detailing the processes of verb selection, data cleaning, and data annotation. The analysis and the discussion of the obtained results are jointly subsumed under Section 5. Section 6 concludes this paper and provides a brief outlook for future work.

## 2. Word order patterns with verbs of success and failure

In this section, I review the two positions the German scholarship has taken regarding word order preferences with verbs of success and failure. On the one hand, there are those researchers who have associated this class of verbs with a dative-before-nominative base order. Their work is discussed in Section 2.1. Others have argued that verbs of success and failure correlate with two base orders: a dative-before-nominative order and a nominative-before-dative order. This position is outlined in Section 2.2.

### 2.1. *Dative-before-nominative*

First, there are those researchers who assume verbs of success and failure to be associated with a dative-before-nominative base order. This claim is sustained by syntactic as well as by semantic observations, even though these partially imply each other.

Syntactically speaking, verbs of success and failure are so-called ‘unaccusative’ verbs. Unaccusatives are a special class of intransitives which encode a prototypical patient in their subject slot. In some languages, like German, they build perfect tenses with the verb *sein* ‘to be’ (Duden 2016: 419, Eisenberg 2013: 75, inter alia). The oblique argument, which invariably bears dative case marking, is ranked thematically higher than the nominative and due to this thematic asymmetry, the dative is assumed to precede the nominative in the linear order. This view is adopted by Fanselow (2002: 231; 2003: 38), Bader & Häussler (2010: 751), Haider (2010: 254, 260), Eisenberg (2013: 74), and Bader (2020: 1088), inter alia.

One source that has lent corpus-based support to the claim that unaccusative verbs indeed prefer the dative-before-nominative order is Bader (2020). His study on linearization in the middlefield with dative pronouns and nominative full NPs

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has shown that, with unaccusatives, the dative precedes the nominative 91% of the time (out of a total of 636 tokens). Note that the German middlefield spans all nominal arguments following the finite verb in verb-first and verb-second clauses. In verb-final clauses, the middlefield begins after the complementizer.

Bader's findings are very convincing, although these should nevertheless be taken with caution, as object pronouns are inclined to precede full NPs in the middlefield anyway. Disregarding reflexives, research has also shown that this tendency is even stronger for dative pronouns than it is for accusative pronouns (Shannon 2000, Heylen 2005). An example of object-fronting in the middlefield is given under (2):

- (2) Nun sieht er ein, dass **ihm** kein Lehrer helfen konnte.  
now sees he in that him-DAT no-NOM teacher help.INF could  
'Now he realises that no teacher could help him.'

Another study worth mentioning is Kurz (2000). She, too, investigates word order variation in the middlefield, but her study only comprises tokens containing two full NPs. For the verb *gelingen*, she finds that the dative-before-nominative order is attested 257 times out of a total of 260 observations (or 99%), of the type shown in (3):

- (3) Im Februar gelang Evelyn der Berufseinstieg.  
in February succeeded Evelyn-DAT the-NOM career.start  
'In February, Evelyn managed to start her career.'

Kurz's results convincingly show that *gelingen* indeed instantiates a dative-before-nominative order in the middlefield, but it remains to be seen whether this tendency is equally strong in verb-second clauses, i.e. when one constituent is in the prefield and the other is in the middlefield.

Other scholars have a broader conception of verbs correlating with a dative-before-nominative base order. Lenerz (1977: 112–120), for instance, states that this order typically occurs with psychological verbs, like *gefallen* 'to please' or *auffallen* 'to strike'. Nevertheless, he observes that a dative-before-nominative order may also occur with verbs not necessarily referring to emotion or cognition, like *fehlen* 'to lack' or *gelingen* 'to succeed'. Hoberg (1981: 75), too, lists *gelingen* as a verb with a dative-before-nominative base order. Neither Lenerz nor Hoberg mention any other verbs of success and failure, but given the shared syntactic and semantic nature of these verbs, I assume that their observations also hold for the verbs *glücken* 'to succeed', *missglücken* 'to fail', *misslingen* 'to fail', and *missraten* 'to fail'.

The synchronic position outlined above finds a diachronic counterpart in Johnson et al. (2019), who reconstruct a dative-subject construction for verbs of success and failure not only in Proto-Germanic, but also in Proto-Indo-European. These scholars define the notion of subject as the first argument in the argument structure, which means that they essentially agree with the aforementioned sources that the default position of the dative for verbs of success and failure is, at least historically, to the left of the nominative (Johnson et al. 2019: 487).

## 2.2. *Dative-before-nominative and nominative-before-dative*

There are also researchers who associate verbs of success and failure with two base orders: a dative-before-nominative order and a nominative-before-dative order. One of the first to put forward this argument, albeit indirectly, were Belletti & Rizzi (1988), as they famously introduced the distinction between three classes of experiencer verbs in Present-Day Italian: *temere* verbs, *preoccupare* verbs, and *piacere* verbs. *Piacere* verbs bear a striking resemblance to the verbs under study here: they code the experiencer in the dative case, they select for the perfect tense with *essere* ‘to be’, thus confirming their status as unaccusatives, and, crucially, they allow both verbal arguments to take clause-initial position without one order being more marked than the other (Belletti & Rizzi 1988: 334). According to Belletti & Rizzi, such unmarked inversion of the dative and the nominative in unaccusative verbs is by no means a peculiarity of Italian, as it can also be found in other languages (Belletti & Rizzi: 1988: 292).

Among the first researchers to claim that German is one such language was Primus (1999: 156). She maintains that, whenever the case hierarchy, presented under (4), and the thematic hierarchy, presented under (5), are in conflict with one another, both the dative and the nominative may take initial position, because speakers cannot possibly comply with both hierarchies at the same time.

(4) **Case hierarchy:** nominative > accusative > dative

(5) **Thematic hierarchy:** proto-agent > proto-recipient > proto-patient

As mentioned above, verbs of success and failure, being unaccusative verbs, exhibit an asymmetric mapping between case marking and thematic roles. For the proponents of the unaccusative approach, the thematic hierarchy clearly trumps the case hierarchy, so that unaccusative verbs are argued to correlate with a dative-before-nominative base order only (cf. Section 2.1). For Primus, by contrast, both hierarchies balance each other out, thus facilitating two base orders: a dative-

before-nominative order and a nominative-before-dative order. Nevertheless, Primus concludes that (5) is somewhat stronger than (4) for many German speakers and that dative-before-nominative order is therefore slightly, but not significantly, more acceptable than nominative-before-dative order (Primus 1999: 157).

Another scholar who has claimed that verbs of success and failure exhibit two base orders is Haspelmath (2001: 67). He argues that they share this property with other verbs displaying non-canonical case marking, like verbs of emotion (e.g. *gefallen* ‘to please’), verbs of possession (e.g. *fehlen* ‘to lack’), and happenstance verbs (e.g. *passieren* ‘to happen to’).

The same reasoning may be found in Barðdal (2004, 2023: Ch 3), Eythórsson & Barðdal (2005), and Barðdal et al. (2019). Couching their work in a Construction Grammar framework, they argue that German verbs with subject-like datives and object-like nominatives (which includes verbs of success and failure) may be used in two diametrically opposed case frames: a Dat-Nom case frame and a Nom-Dat case frame. This is a property they share with certain Dat-Nom verbs in Icelandic, which also select for two different argument structure constructions and have therefore been termed ‘alternating predicates’ or Dat-Nom/Nom-Dat predicates in the literature (cf. Barðdal 2001b, Rott 2016).

Two studies that have been able to lend corpus-based support to the positions discussed above are Bader & Häussler (2010) and Verhoeven (2015). In contexts with double NPs in which either argument is adjacent to the conjugated verb, Bader & Häussler have found verbs with a nominative and a dative argument to attest the dative-before-nominative order and the nominative-before-dative order approximately equally often; that is, out of 42 attestations, the dative precedes the nominative 19 times (or 45%), and the nominative precedes the dative 23 times (or 55%). However, there are two reasons for why these results should be received with caution. First, Bader & Häussler’s dataset is not limited to unaccusatives alone: it also contains an unknown number of observations with verbs that strongly correlate with a nominative-before-dative order, like *gehören* ‘to obey’ or *vertrauen* ‘to trust’. As a result, the number of tokens attesting the nominative-before-dative order is potentially greatly inflated. Second, as an artefact of the data collection process, Bader & Häussler’s dataset only contains tokens with definite datives. The nominative, by contrast, is not subject to any such limitations, which means that it may or may not be definite. The dative-before-nominative order is thus facilitated by a potential asymmetry in definiteness.

The second limitation is inherent to the data retrieval process, but the first is not. In order to make up for it, Bader & Häussler zoom in on the word order distributions of four subsets of verbs that favour an oblique-before-nominative order: verbs in the passive voice (dative before nominative), unaccusative verbs (dative before nominative), so-called “active dative *haben* verbs” like *gefallen* ‘to

please' (dative before nominative), and so-called "active accusative *haben* verbs" like *interessieren* 'to interest' (accusative before nominative). However, these results, too, should be taken with caution, since Bader & Häussler amalgamate all four subsets into one, thereby obscuring the case information. Bearing this limitation in mind, Bader & Häussler find that, in contexts where both arguments are adjacent to the conjugated verb, the oblique argument precedes the nominative 16 times (or 47%), and the nominative precedes the oblique argument 18 times (or 53%). This distribution ties in well with the studies reviewed above.

One final study to be mentioned in this context is Verhoeven (2015). She collects data for ten so-called 'dative-experiencer' verbs in verb-second clauses in which both arguments are realised as full NPs. As many as 448 tokens (or 38%) have the dative preceding the nominative, whereas 716 tokens (or 62%) attest the reverse order. Unfortunately, Verhoeven's sample does not contain any verbs of success and failure, but her results do show that thematic asymmetries in general indeed bring about an inversion of the canonical order of constituents.

### 3. Hypotheses

The positions outlined in the previous section give rise to two linearization hypotheses for German verbs of success and failure. Hypothesis 1, which is inspired by the scholarly work discussed in Section 2.1, may be formulated as follows:

- H1** German verbs of success and failure are associated with a dative-before-nominative base order. Hence, they are hypothesised to overwhelmingly realise the dative in initial position in declarative clauses.

The second hypothesis, which builds on the work discussed in Section 2.2, reads thus:

- H2** German verbs of success and failure are associated with two base orders: a dative-before-nominative order and a nominative-before-dative order. In declarative clauses, they are consequently hypothesised to realise either nominal argument in initial position approximately equally often.

I now turn to the methodology of this study before analysing and discussing the obtained results.

#### 4. Methodology

The present section introduces the methodology of this study. The first subsection discusses which verbs have been included in this study and the criteria for doing so. The second subsection outlines the data harvesting and cleaning process. The third subsection deals with the annotation variables.

##### 4.1. *Verb selection*

As is already stated above, this paper zooms in on five German verbs of success and failure: *gelingen* ‘to succeed’, *glücken* ‘to succeed’, *missglücken* ‘to fail’, *misslingen* ‘to fail’, and *missraten* ‘to fail’. As is documented in Somers (2021), Present-Day German possesses more dative-nominative verbs than these five to express success and failure, but these have not been retained for the following reasons.

First, the verbs under study all license a dative as part of the main verb’s subcategorization frame. Potential candidate verbs like *danebengehen* ‘to miss’, *fehlschlagen* ‘to go wrong, to fail’, or *schiefgehen* ‘to go wrong’ may also occur with a dative, but theirs is arguably a so-called free dative: neither the *Duden* dictionary nor the *Digitales Wörterbuch der deutschen Sprache* explicitly acknowledge these datives as being part of the verbal case frame. Hence, these verbs have not been included for study.

Second, every verb type has to yield a sufficient number of hits in the deTenTen13 corpus (Kilgarriff et al. 2004, 2014; 16.5 billion words), which is the corpus selected for the present study. In order to gauge the prevalence of the [Nom-V-Dat] order and the [Dat-V-Nom] order, I have scrutinised the first 300 randomised tokens per verb type. As soon as this 300-word sample returned seven or more eligible tokens for both configurations combined, the verb in question was retained. If it did not yield seven or more eligible tokens the verb was discarded. Both *geraten* ‘to succeed’ and the particle verb *danebengeraten* ‘to fail’ failed to reach this threshold and were consequently eliminated from the study. The main reason for introducing this threshold was to safeguard the study’s feasibility: in case a sample returned six (or fewer) eligible tokens, more than 10,000 tokens

would have had to be cleaned in order to reach the aim of 200 eligible tokens per type, and that was deemed unmanageable.

Third, in order to keep the dataset semantically coherent, certain polysemous types were also barred from the study. These include *gutgehen* ‘to thrive (economically); to thrive (emotionally)’, *schlechtgehen* ‘to go badly (economically); to go badly (emotionally)’, and *unterlaufen* ‘to make a mistake; to happen to’. Each of these verbs has exactly two senses, but only the first of these senses is compatible with the semantic field of success and failure. Because the dataset has not been annotated for sense, it was decided to exclude these verbs altogether.

#### 4.2. Data cleaning

The present study endeavours to shed light on word order distribution in German verb-second clauses. All eligible tokens therefore contain (pro)nominal arguments that are situated on either side of the finite verb, as opposed to contexts in which they both follow the finite verb and, thus, occupy the middlefield.

As mentioned earlier, the data have been collected from the deTenTen13 corpus. For each verb, I have run a lemmatized search query using the Sketch Engine interface. The data were subsequently downloaded in sets of 10,000 randomised tokens per type, unless the search returned fewer than 10,000 hits. For each verb, I collected the first 200 eligible tokens per type. Data sparsity was an issue only for *missraten*: for this verb, the corpus only contains 182 instantiations of the two word orders. Thus, the total number of eligible tokens for all verbs combined equals 982, not 1,000.

Table 1 presents an overview of the five verbs under study (column 1), the number of randomised tokens extracted per type (column 2), the number of tokens checked before the target of 200 was reached, or, in case of *missraten*, before the available data ran out (column 3), as well as the number of tokens ultimately included for study (column 4).

Table 1: Overview per verb of the total number of tokens extracted, checked, and retained

Verb	Tokens extracted	Tokens checked	Tokens retained
<i>gelingen</i>	10,000	1,011	200
<i>glücken</i>	10,000	3,871	200

Verb	Tokens extracted	Tokens checked	Tokens retained
<i>missglücken</i>	5,930	2,652	200
<i>misslingen</i>	10,000	3,308	200
<i>missraten</i>	1,896	1,896	182
Total	37,826	12,738	982

As shown in Table 1, some verbs reveal a wide discrepancy between the number of tokens checked and the number of tokens ultimately retained. This is especially relevant for *glücken*, *missglücken*, and *misslingen*. As it turns out, all three are particularly common as intransitives. Moreover, the results for *glücken* are obscured by a number of false positives containing the noun *Glück* ‘luck’, which is homonymous with the stem of the verb.

#### 4.3. Data annotation

All tokens were annotated for the following variables: case, constituent order, (pro)nominality, pronoun type (if applicable), referentiality, person, number, definiteness, animacy, and length. For reasons of space, the present study mainly focuses on the first three variables, which were annotated according to one of two values:

- Case: **nominative** or **dative**
- Constituent order: **nominative-dative** or **dative-nominative**
- (Pro)nominality: **pronoun** or full NP

## 5. Results and discussion

In this section, I first present a general overview of word order distributions across configurations, that is: without distinguishing between pronouns and full NPs (subsection 5.1). The four following subsections each highlight word order patterns in a specific configuration. The competition between two full NPs is the subject of subsection 5.2, whereas word order distributions in the double-pronoun

configuration are discussed in subsection 5.3. Subsections 5.4 and 5.5 deal with the interplay between full NPs and pronouns: they respectively discuss the competition between nominative NPs and dative pronouns (subsection 5.4), and dative NPs and nominative pronouns (subsection 5.5).

### 5.1. General frequencies

Table 2 presents an overview of the word order distributions within the dataset as a whole. It shows that both word order patterns are attested approximately equally often: the Nom-Dat pattern occurs 542 times (or 55%), and the Dat-Nom pattern 440 times (or 45%). The intra-class differences are also relatively small: the two most extreme verbs in the sample, i.e. *gelingen* and *missraten*, only show a 19.5% interval between their preference for the Nom-Dat order and Dat-Nom order, respectively. The three remaining verbs are situated between these two, with *glücken* and *missglücken* approximating a 50–50 distribution.

Table 2: Word order distributions across configurations

Verb	Nom-Dat		Dat-Nom	
	N	f	N	f
<i>gelingen</i>	91	45.5%	109	54.5%
<i>glücken</i>	98	49%	102	51%
<i>missglücken</i>	106	53%	94	47%
<i>misslingen</i>	128	64%	72	36%
<i>missraten</i>	119	65%	63	35%
Total	542	55%	440	45%

The numbers in Table 2 corroborate Hypothesis 2, which assumes that verbs of success and failure license two base orders: a dative-before-nominative order and a nominative-before-dative order. However, it is important to bear in mind that these frequencies are only rough tallies, and that they disregard any effects of

(pro)nominality. The following subsections therefore explore word order variation in configurations where lexical specifications are held constant.

### 5.2. Word order variation in the [NP-V-NP] configuration

Table 3 shows word order distributions for double NPs. What is especially striking, is that the Dat-Nom order is consistently more felicitous than it is across configurations (cf. Table 2): its prevalence increases from 45% across configurations to 60% when both arguments are realised as full NPs.

Table 3: Word order distributions in the [NP-V-NP] configuration

Verb	Nom-Dat		Dat-Nom	
	N	f	N	f
<i>gelingen</i>	17	28%	43	72%
<i>glücken</i>	42	33%	84	67%
<i>missglücken</i>	55	42%	77	58%
<i>misslingen</i>	34	42%	47	58%
<i>missraten</i>	52	52%	48	48%
Total	200	40%	299	60%

The results presented in Table 3 again confirm the alternating nature of the verbs under scrutiny: word order distributions, both for the class as a whole, as well as for each verb individually, show that either nominal argument may take initial position in declarative clauses approximately equally often. Thus, Hypothesis 2 is once more borne out. An example of each word order pattern, Dat-Nom and Nom-Dat, is given in (6a–b) below:

- (6) a. Dem Spieler            missglückt            ein Eckstoß.  
       The-DAT player        fails                    a-NOM corner.kick  
       ‘The player misses a corner kick.’

- b. Die Revanche ist unserem Team geglückt.  
 the-NOM revenge is our-DAT team succeeded  
 ‘Our team succeeded in taking revenge.’

Furthermore, it is striking that these findings reflect Primus’s (1999: 157) prediction about the interplay between the case hierarchy and the thematic hierarchy. She argues that the latter hierarchy overrules the former, and that many German speakers consequently perceive of the dative-before-nominative order as slightly more felicitous than the nominative-before-dative-order. The fact that 60% of all tokens containing double NPs realise the dative in clause-initial position corroborates this claim.

The numbers in Table 3 also present the mirror image of Verhoeven’s (2015) numbers. In the present study, the dative-before-nominative order outmatches the nominative-before-dative order by 20%, but in Verhoeven’s, the nominative-before-dative order outmatches the dative-before-nominative order by 24%. It has already been mentioned that Verhoeven’s sample comprises different verbs than those presented here, and that she does not include any verbs of success and failure in her dataset. At the same time, Verhoeven does not specify how each individual verb weighs in on the distribution across word order patterns, which means that it is difficult to assess what lies behind her numbers.

Note that the verb *gelingen*, despite its propensity for the dative-before-nominative order (43 tokens, or 72%), still instantiates the nominative-before-dative order with reasonable frequency (17 tokens, or 28%). This is particularly interesting given that Kurz’s (2000) study on word order distributions in the middlefield found this verb to overwhelmingly tend to the dative-before-nominative order (257 tokens out of a total of 260, or 99%). Recall that Kurz only included tokens with full NPs, which makes her numbers perfectly comparable to the ones presented here. Thus, even with full NPs, the topological field seems to exert a major influence on the resulting word order pattern.

Finally, it is striking that the dative-before-nominative order is slightly more felicitous for the two verbs of success (*gelingen* and *glücken*) than it is for the three verbs of failure (*missglücken*, *misslingen*, and *missraten*). The difference between both semantic groups is also statistically informative: comparing each to a chance distribution, the result is significant only for verbs of success ( $X^2 = 24.86$ ;  $df = 1$ ;  $p_{\text{two-tailed}} < 0.0001$ ), but not for verbs of failure ( $X^2 = 3.07$ ;  $df = 1$ ;  $p_{\text{two-tailed}} = 0.08$ ). Thus, the null hypothesis may be refuted for the former, but not for the latter. What this means is that verbs of success have a much stronger preference for the dative-before-nominative order than verbs of failure, whose frequencies are much more evenly distributed across word order patterns.

It remains to be investigated whether these differences may indeed be attributed to a semantic effect or whether there are other factors (e.g. definiteness, animacy, or length) that are perhaps unevenly distributed across the dataset, thus steering these frequencies into a particular direction.

### 5.3. Word order variation in the [Pro-V-Pro] configuration

Table 4 presents a radically different picture from Tables 2 and 3. When both arguments are pronouns, linearization almost uniquely tends towards the nominative-before-dative order: in total, 172 tokens (or 91%) instantiate the nominative-before-dative order, as opposed to a mere 16 tokens (or 9%) instantiating the dative-before-nominative order.

Table 4: Word order distributions in the [Pro-V-Pro] configuration

Verb	Nom-Dat		Dat-Nom	
	N	f	N	f
<i>gelingen</i>	53	96%	2	4%
<i>glücken</i>	30	94%	2	6%
<i>missglücken</i>	19	76%	6	24%
<i>misslingen</i>	54	92%	5	8%
<i>missraten</i>	16	94%	1	6%
Total	172	91%	16	9%

Two example sentences containing double pronouns are given in (7a–b):

- (7) a. Das           gelingt           ihm    problemlos.  
           that-NOM   succeeds   him-DAT   effortlessly  
           ‘He succeeds effortlessly.’
- b. Ihr            missglückte   alles.

her-DAT          failed          everything-NOM  
 ‘She failed at everything.’

In light of the hypotheses formulated in Section 3, the obtained findings seem puzzling. However, a synchronic comparison with Icelandic shows that this is not so unexpected after all. As mentioned earlier (cf. Section 2.2), scholars of Icelandic posit the existence of a class of ‘alternating Dat-Nom verbs’. These are a group of two-place predicates which allow both the dative as well as the nominative to take on the role of subject, albeit not at the same time, of course. As a consequence, both arguments are equally likely to occur in clause-initial position. An exploratory corpus study by Somers & Barðdal (2022) shows that four out of five such verbs indeed alternate quite freely between the nominative-dative and the dative-nominative order in the double-NP configuration while in the double-pronoun configuration, the variation in word order is almost entirely neutralised in favour of the nominative-before-dative pattern (see also Allen 1995: 107–109 for similar findings for alternating verbs in Old English). The results in Table 4 therefore lend further (albeit indirect) support to Hypothesis 2.

#### 5.4. *Competition between nominative NPs and dative pronouns*

When a nominative NP enters into competition with a dative pronoun, an interesting picture emerges, which is laid out in Table 5. The general tendency is for the dative pronoun to take postverbal position (126 tokens in total, or 74%), although 45 tokens (or 26%) still prefer the pronoun to occupy the preverbal slot. Two relevant examples, one for each word order pattern, are given in (8a–b):

- (8) a. Ihr Auftrag          misslingt ihr          jedoch          gründlich.  
      her-NOM mission    fails          her-DAT    however          completely  
      ‘However, her mission fails completely.’
- b. Mir          missglückten    zwei weitere Versuche.  
      me-DAT    failed            two further-NOM attempts-NOM  
      ‘I failed at two further attempts.’

Thus, the variation in word order previously observed in the double-NP configuration remains largely intact, even though it is considerably more skewed towards the nominative-before-dative order under the present circumstances.

Table 5: Word order distributions for combinations of nominative NPs and dative pronouns

Verb	NP <sub>nom</sub> -PrO <sub>dat</sub>		PrO <sub>dat</sub> -NP <sub>nom</sub>	
	N	f	N	f
<i>gelingen</i>	4	57%	3	43%
<i>glücken</i>	14	64%	8	36%
<i>missglücken</i>	25	69%	11	31%
<i>misslingen</i>	35	76%	11	24%
<i>missraten</i>	48	80%	12	20%
Total	126	74%	45	26%

The findings presented in Table 5 constitute the mirror image of what Bader (2020) finds in his investigation of word order distributions in German embedded clauses (i.e. middlefield contexts) with nominative full NPs and dative pronouns. Recall that the dative pronoun precedes the nominative full NP in 91% of cases with unaccusative verbs in his study. However, the German middlefield is prone to fronting object pronouns anyway. Thus, once again, the topological field is shown to exert a major influence on word order distributions.

### 5.5. Competition between dative NPs and nominative pronouns

Table 6 shows that dative full NPs generally precede nominative pronouns (80 tokens, or 65%), but nominative pronouns still precede dative NPs with reasonable frequency (44 tokens, or 35%). Again, the variation in word order is largely preserved, but now it is skewed more towards the dative-before-nominative order. The intra-class variation is also rather substantial: some verbs, like *gelingen*, mostly tend towards the dative-before-nominative order, whereas others, like *missglücken*, overwhelmingly prefer the nominative-before-dative order.

Table 6: Word order distributions for combinations of dative NPs and nominative pronouns

Verb	Pro <sub>nom</sub> -NP <sub>dat</sub>		NP <sub>dat</sub> -Pro <sub>nom</sub>	
	N	f	N	f
<i>gelingen</i>	17	22%	61	78%
<i>glücken</i>	12	60%	8	40%
<i>missglücken</i>	7	100%	0	0%
<i>misslingen</i>	5	36%	9	64%
<i>missraten</i>	3	60%	2	40%
Total	44	35%	80	65%

One factor with considerable explanatory power is the referential status of the personal pronoun *es* 'it'. Out of a total of 124 observations in the present configuration, 77 tokens contain *es* as a clause-anticipating pronoun. Of these, 13 clause-anticipating pronouns (or 17%) occur preverbally, but 64 (or 83%) occupy the postverbal slot. An example of such a postverbal clause-anticipating pronoun is given in (9):

- (9) Den Bewohnern gelang es, die Kleinstadt  
the-DAT inhabitants-DAT succeeded it-NOM the small.town  
gegen einen übermächtigen Gegner zu verteidigen.  
against a far.superior opponent to defend  
'The inhabitants succeeded in defending the small town against a far superior  
opponent.'

Thus, in competition with a dative NP, clause-anticipating pronouns overwhelmingly tend to follow the dative NP. The logic behind this behaviour no doubt lies in the impoverished semantic status of the correlative pronoun, which merely functions as a placeholder for a subclause, rather than as a referential element. Still, it is remarkable that this inherently light, pronominal constituent so consistently gives way to a full NP.

## 6. Conclusions and outlook

In this paper, I have presented corpus-based support for the claim that German verbs of success and failure in verb-second clauses are associated with two base orders: a dative-before-nominative order and a nominative-before-dative order. Word order variation has been shown to be greatest in the double-NP configuration and smallest in the double-pronoun configuration, as the latter almost uniquely tends towards the nominative-before-dative order. However, a comparison with Icelandic shows that such a swing towards nominative-first may be an epiphenomenon of pronominality.

The main question prompted by this study is how to further interpret the alternating numbers that have been found. A multivariate analysis factoring in all variables mentioned in Section 4.3 might aid in uncovering some tendencies that currently remain hidden. One factor that is particularly promising is definiteness, as it may serve as a proxy for topicality. As argued by Barðdal (1999, 2001b) and Barðdal, Eythórsson & Dewey (2014, 2019), it is the discourse-prominence of either the dative or the nominative that steers the word order variation. A comparison with other unaccusative verbs as well as with other verbs generally displaying a thematic asymmetry between the dative and the nominative would also be instructive.

Another question is how topological fields may influence word order preferences. Kurz's (2000) numbers for *gelingen* indicate that double NPs show an almost absolute tendency towards a dative-before-nominative order if both nominal arguments are placed in the middlefield. A comparison of word order patterns in contexts where both arguments flank the finite verb with contexts in which both arguments are in the middlefield for the remaining four verbs in this study only including double NPs might help shed light on this issue.

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