

ARTICLE

# Adverbial V3 in Early New High German? Construction(s) with So

Barthe Bloom 

Institut für Germanistik, Universität Potsdam, Am Neuen Palais 10, 14469 Potsdam, Germany  
Email: [barthe.bloom@fau.de](mailto:barthe.bloom@fau.de)

## Abstract

This article presents a constructional analysis of the uses of left-peripheral *so* in Early New High German. This element is known as a resumptive element, which takes up an adverbial clause and integrates it into a main clause. While this seems a valid analysis for constructions with preposed adverbial clauses, it is not compatible when *so* is preceded by adverbs or main clauses.

First, a quantitatively informed picture is presented. A network is proposed that centers around a prototype in which *so* connects a protasis and apodosis when *so* follows verb-final and verb-initial clauses. Second, it is argued that *so* following verb-second clauses is loosely connected to this network. Finally, it is considered whether and to what degree the use of *so* following adverbs should be analyzed in the same way as *so* following adverbial clauses. It is argued that patterns with adverbs are not in paradigmatic relation with adverbial clauses. Moreover, their function is different, as they are backward-oriented and take up earlier constituents.\*

**Keywords:** Early New High German; preposed adverbials; V3; resumption; construction grammar

## 1 Introduction

Early New High German, like other Germanic verb-second languages, exhibits a special type of verb- third pattern in which a preverbal adjunctive clause or phrase is seemingly taken up by a resumptive element (e.g., Thim-Mabrey 1987, Axel 2004, Meklenborg 2020, Catasso 2021a, 2021b, and the contributions in De Clercq et al. 2023). This is exemplified for Early New High German (henceforth ENHG) in (1).

- (1) a. Ist is sin wille **so** sterben wir.  
is it his wish so die we  
'If it is his wish, we will die.' (Pontus, 4rb)

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- b. *wiewol sye sich kunlich vnd herlich bewijseten so musten sye doch wichen*  
 although they REFL courageous and noble proved so must they still yield  
 ‘Although they proved to be courageous and noble, they still had to yield.’  
 (Huge Scheppel, 40)
- c. *Do nun der dritte morgen vergieng, so kommt die schöne iunkfraw in einem*  
 then now the third morning passed so comes the beautiful lady in a  
 grünen kleyde  
 green dress  
 ‘When the third morning passed, the beautiful lady came in a green dress.’  
 (Melusine, 160)

In (1a), a prototypical verb-first (V1) adverbial clause is followed by a left-peripheral *so* (henceforth: LP *so*). This clause functions as the protasis to the proposition expressed by the following clause, and as such has a clear conditional function: The speaker makes the prediction that his companions will die in a space in which ‘it is his wish’ holds (Dancygier & Sweetser 2000:114). In the alternative space where ‘it is his wish’ does not hold, ‘we will die’ likewise does not follow.

In (1b), the preposed adverbial clause introduced by *wiewol* precedes LP *so*. The speaker commits to the proposition of the main clause despite the contents of the adverbial clause, that is, it is concessive. While each of the propositions can be individually asserted, they are not fully independent. As with the conditional clause in (1a), the proposition in the concessive clause sets up a frame in which the following proposition is claimed to hold. In addition, an alternative space is activated. The difference is that here, unlike with the conditional, the alternative space still commits to the proposition expressed by the adverbial clause, but the proposition expressed by the second clause does not follow (Verhagen 2000a). In this example, the alternative space ‘they proved to be courageous and noble’ holds and ‘they did have to yield’ does not.

In (1c), the introduced adverbial clause specifies the temporal setting of the following clause and is introduced by *da* ‘then’.<sup>1</sup> Like the conditional and concessive, the adverbial clause limits the applicability of the second clause, in this case to a temporal space. Unlike in Present-Day German, even nonconditional and non-concessive clauses regularly preceded LP *so* in Early New High German.

The examples in (1) illustrate a use of *so* which has been called its correlative use (Thim-Mabrey 1987, Pittner 1999), or its use as a (generalized) adverbial resumptive particle (Meklenborg 2020:105–106), also as a resumptive adverb (Catasso 2021a, 2021b). Resumptives have been defined as placeholders or pronouns that take up constituents of the previous discourse (De Clercq & Haegeman 2021, Haegeman et al. 2023). In the context of adverbial resumptives, the constituent that is taken up is restricted to adjunctives, as is the case with ENHG *so*.

In a larger scheme, this use of *so* has been discussed in relation to the syntactic integration of preposed subordinate clauses. Constructions with a resumptive, like *so*, have been considered as an intermediate step between nonintegration and integration (e.g., König & van der Auwera 1988, Axel 2004, Van den Nest 2010). For *so* specifically, it has been argued that it serves to semantically and structurally, or

<sup>1</sup> *Do* is in ENHG a variant of *da*, which is multicategorical and used as both conjunction and adverb.

solely structurally, integrate a preceding element into the following clause (Thim-Mabrey 1987:211–214).<sup>2</sup>

In ENHG, *so* does not only occur with adverbial clauses as in (1), but may additionally follow nonclausal adverbials, like the simple adverb in (2).

- (2) Vnd **darumb** so wil ich dir mein landt eingeben zû behûten.  
 and therefore so want I you my country give to keep  
 ‘And therefore, I want to give you my country to keep.’ (Melusine, 149)

In (2), the adverb *darumb* is the element that precedes *so*. Structures like this have been analyzed on a par with those in (1a) and (1b) (e.g., Meklenborg 2020, Catasso 2021a). That is, *so* is thought to resume the adverb. There are, however, considerable differences between (1a), (1b), and (1c) on the one hand and (2) on the other. *Darumb* is short, refers back to the previous discourse, and should not strain the working memory if *so* is left out. Adverbial clauses are longer on average, do not themselves refer to the previous discourse, and may strain working memory if they have to be processed in their entirety within the following clause (Hawkins 2004). This makes it worthwhile to take a deeper dive into such cases and verify whether they should indeed be seen as instances of the same construction(s) as the patterns in (1a) and (1b), or not.

There is one more structure I would like to introduce. *So* may follow declarative V2 clauses. In this context, it cannot be analyzed as an adverbial resumptive, as there is no adverbial clause to be taken up. Yet the functional relation between the *so*-clause and the preceding main clause shows similarities with the ones found between adverbial clauses and *so*-clauses. Consider the examples in (3a) and (3b). Both sentences have an adversative relation: The propositions in the adverbial clauses and in the main clauses are claimed to hold, but they set different expectations.

- (3) a. wiewol proviant gnûg im leger war, **so** hat er doch kein gelt, daß ers  
 although provision enough in.the camp was so had he still no money that he.it  
 kauffet  
 bought  
 ‘Even though there were enough provisions in the camp, he had no money to buy any.’ (Rollwagen, 32)
- b. sy wâr vor sechs jaren groß genug gewesen **so** haben wir nit gehebt  
 she was.SBJ for six years big enough been so have we not raised  
 darmitt wir sy haben mûgen außsteûren  
 there.with we her have may insure  
 ‘She would have been old enough for six years, but we have not collected enough to pay her dowry.’ (Fortunatus, 72)

In the context of (3a), there is a hungry servant. The adverbial clause activates a seemingly alternative space, in which it logically follows that the servant can be fed and thus should no longer be hungry. What follows intervenes, as this clause leads to a

<sup>2</sup> Pittner (1999:215–225) argues for Present-Day German that resumptives in general function to focus and prosodically integrate adverbial clauses. Though Catasso (2021a) has noted that *so* was not associated with focus in Middle High German.

different prediction: Not having enough money to buy food prevents the servant from being fed, and thus he remains hungry. While both clauses are claimed to hold, they seemingly, but do not actually, imply contradicting scenarios.

In (3b), both clauses predict something different for the marital status of the daughter. The daughter is not married. As with (3a), a space is activated, in which the daughter has been old enough to marry for six years. In this space, it is predicted that she is married. But there is something that prevents this: Her parents do not have enough money for her dowry. Thus, the daughter remains unwed. Due to the potential functional overlap between such patterns and those with initial adverbial clauses (see also Thim-Mabrey 1987:208–209), it is important to consider the role of *so* in these contexts as well.

Patterns with two main clauses are different from those in (1), because of the independent status of both clauses. They are both asserted independently and neither one of them exhibits a word order that is associated with dependency (i.e., a verb-final position) nor is it otherwise deranked (Cristofaro 2003). This structure thus does not seem to be a step towards syntactic integration. It has been suggested that in this context *so* functions as a pronoun that is coreferential with the proposition of the preceding main clause (Paul 2002:918), facilitating the semantic incorporation of the first main clause into the second. In function, *so* following main clauses can be similar to *so* following adverbial clauses, and therefore may give valuable insights into the phenomenon under investigation.

To briefly sum up, the four examples above illustrate the different patterns in which LP *so* is used:

- (i) verb-initial clause + *so*
- (ii) verb-final clause + *so*
- (iii) nonclausal constituent + *so*
- (iv) verb-second clause + *so*

The main aim of the current study is to present a quantitatively informed picture of the uses of LP *so* in ENHG. Frequency information is missing for ENHG, though it has been provided for Middle High German (Catasso 2021a). As this article is concerned with multiple patterns, some of which have disappeared over time, frequency information may, for example, give us insight into why the use of LP *so* has been preserved marginally following concessive and conditional clauses in Present-Day German, but not in other contexts, such as following temporal adverbial clauses and adverbs. The study proposes a constructional network analysis of the various uses of LP *so*. The discussion focuses mainly on adverbial clauses that are followed by *so* as they are the most frequent pattern, but makes reference to minor patterns as well. How patterns in which main clauses and adverbs precede *so* connect to the network is evaluated as well.

As mentioned above, the study adopts a usage-based construction grammar approach. Very briefly, the main idea of usage-based approaches is that a speaker's

knowledge of language is emergent and grounded in one's experience with it (Kemmer & Barlow 2000:2, Bybee 2006:711). The linguistic system is thought of as a network. Constructions are nodes in this network, and these nodes are connected to each other via various relations (Croft & Cruse 2004, Bybee 2006, Traugott & Trousdale 2013, Diessel 2019), through which they may interact with each other (Verhagen 2000b:276, Petré & Cuyckens 2009:360). These constructions are the fundamental building blocks of language. Following Diessel (2019), a construction is here seen as a network itself, defined primarily, but not solely, by its form–function association.

In this article, a construction is represented as a form between square brackets. Whenever relevant, it is presented as a form–meaning pairing. The meaning (in the sense of Croft 2001:19) is notated after the form, separated by a vertical bar, for example, [*buzz* | high]. Restrictions on a particular slot or schema are represented in subscript when needed.

In constructional terms, this article proposes a network analysis of the patterns with LP *so*. The network is argued to be characterized by the following: Verb-final adverbial clauses followed by *so* are primarily considered as a network of interconnected lower-level constructions, which are defined by the element introducing the adverbial clause. Verb-initial clauses that occur with *so* center around a prototype of conditional adverbial clauses and do form a rather consistent form–meaning pairing. This construction connects to verb-final adverbials with a conditional meaning. V2 clauses followed by *so* are loosely connected to the network of adverbial clause + *so*: On the one hand, it links to V1 clauses via hybrid constructs and on the other via functional similarity to VF clauses. Finally, patterns in which *so* occurs after adverbs cannot simply be analyzed as a paradigmatic expansion from adverbial clauses to adverbs, as these adverbs function as connectives themselves and occupy a different position.

Somewhat unexpectedly, while V2 clauses are only loosely associated to the network, the data indicate that *so* is not necessarily an element that structurally integrates adverbial clauses into a main clause. Instead, it prototypically connects two clauses – which are often, but not always, an adverbial and a declarative main clause – to express that the initial element functions as the protasis to the following proposition, or more vaguely sets up or evokes a frame in which the following proposition is to be interpreted.

The article is structured as follows: In section 2, I provide the relevant background to the study. The theoretical framework is presented in more depth and I discuss some central previous studies of *so* in ENHG, Middle High German, and the Scandinavian languages. Section 3 introduces the methodology. Specifically, it discusses the data used for the present study and explains how this data was annotated. Section 4 presents a general frequency overview of the findings and identifies intertextual variation. The main analysis of the clausal constituents that occur with *so* in section 5 follows, and the core of the network is proposed, with a central role for conditional adverbial clauses. Sections 6 and 7 consider potential expansions of the initial slot of the *so*-construction: To V2 clauses in section 6 and to adverbs in section 7. Finally, the article ends with a conclusion in section 8.

## 2 Background

### 2.1 Theoretical Framework

This study adopts a usage-based construction grammar approach. As a consequence of the view that language is emergent and grounded in experience (Kemmer & Barlow 2000:2, Bybee 2006:711), both the linguistic system of an individual speaker and the linguistic systems of speech communities are viewed as inherently dynamic (Schmid 2015:10) and variation is considered to be intrinsic to the system.

A linguistic system, a so-called *constructicon* (Jurafsky 1991:8), can be best viewed as a structured and dynamic nested network (Diessel 2019), which is defined by the associations between the different linguistic elements. In this network, constructions are the nodes. They are not atomic units, but constitute networks themselves, which are defined by associations, or relations, between the various aspects of constructions. This includes, but is not limited to, the association between form and meaning (symbolic relations) and associations between co-occurring forms (syntagmatic relations). In addition, constructions are connected to each other as well, via various relations (e.g., Croft & Cruse 2004, Bybee 2006, Traugott & Trousdale 2013) forming a higher-level network (Diessel 2019). The relations and the nested network in its entirety are emergent and are built upon input, meaning that individual speakers have experiences with language, which are stored, connected with each other, and abstracted over. The constructicon of a speech community, or the communal constructicon, is the result of conservative generalizations and abstractions over the cumulative output of individual members of this speech community. That is, it is the grammar based on the collection of *constructs* – utterance tokens (Fried 2008) – that a given speech community has uttered. The study in this article investigates a relatively small population, which means that the chances that some findings are direct reflections of the constructicon of an individual speaker are rather high. This is kept in mind throughout the analysis.

In this study, two types of relations that exist between constructions are in focus: lateral and taxonomic relations. Lateral relations are connections between constructions at the same level of abstraction. Being defined in terms of similarity and contrast (Diessel 2019:200), they are in essence analogical relations (Bloom 2021). Of course, similarity and contrast go hand in hand: Two constructions can only be viewed as contrastive if they are similar in some way or another, otherwise one would not posit a relation of any kind between the two elements. Likewise, constructions can only be seen as similar if they are distinct in some way, otherwise they would simply be seen as the same entity (Diessel 2023).

Given this, two constructions can be posited to be laterally connected when they show structural similarity to each other without one of them being an instance of the other. It is important to be somewhat conservative in the generalizations and abstractions made, and not posit a relationship on a single observation of structural similarity and contrast between two constructions, but only when these patterns are repeated in the community.

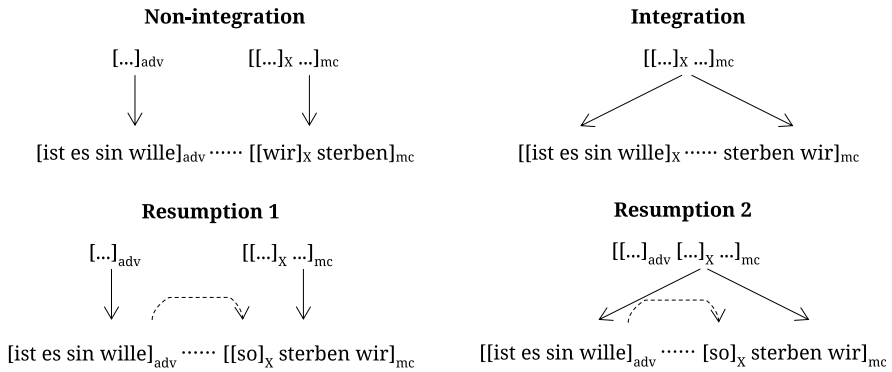


Figure 1. Taxonomic representation of syntactic nonintegration, integration, and resumption.

Taxonomic relations are connections between different levels of abstraction and schematicity of one construction (Croft 2001, Croft & Cruse 2004, Diessel 2019). These relations emerge when multiple constructs or constructions are experienced as similar to such a degree that they are perceived as instances of one common, more abstract, and typically more schematic construction. In addition, they may emerge when syntagmatically associated constructions are repeatedly processed and become seen as one linguistic unit at a higher level of abstraction (Bybee 2002). Once this overarching construction is established and specifies commonalities and constraints, it often keeps its connections to the lower-level constructions that instantiate it. This allows the lower-level constructions to be motivated by and inherit properties from the overarching construction, which is here represented by instance links (Goldberg 1995:79).

Now we can frame integration, nonintegration, and resumption in constructional terms. Nonintegration of, for example, adverbials in a main clause means that both the adverbial and main clause are motivated by two separate constructions. The adverbial and main clause are only syntagmatically associated with each other, and this association is not reflected at a higher level of abstraction.

Conversely, full syntactic integration means that the adverbial component is motivated by the same abstract construction as the main clause. That is, the adverbial fills a slot in the clausal construction. The syntagmatic association is taxonomically reflected.

The corresponding taxonomic structures are illustrated in figure 1, with an example construct based on the example encountered in (1a). The dotted lines stand for a syntagmatic association and the arrows for instance links. The square brackets indicate the perceived boundaries of the most relevant constructions, namely, that of the main clause (marked by *mc*), that of the adverbial (*adv*), and that of the initial slot of the main clause (*x*).

Recall that resumption has been argued to lie on a continuum between integration and nonintegration. With resumption, the two clauses are syntagmatically associated. This is similar to nonintegration, in which the cohesion between the constructs is based primarily on adjacency. This syntagmatic association is, unlike with

nonintegration, encoded within the main clause in the case of resumption: *so* takes up the adverbial and represents it within the main clause. This is visualized by the dashed arrow. In this way, the adverbial is resumed in the main clause structure. As a consequence, the connection of the clauses is no longer merely pragmatically cohesive, but it is explicitly signaled that the contents of the first clause play a role in the interpretation of the second.

At this stage, multiple configurations are possible, illustrated by Resumption 1 and Resumption 2 in figure 1. The clause boundary before *so* may stay in place; with the two constructions still being individually represented on a higher level of abstraction with the adverbial not (yet) being a part of the taxonomic network of the main clause construction. This is illustrated with Resumption 1. Alternatively, the clause boundary may shift to before the adverbial and there is an abstraction, namely, a construction with an additional slot before X. This is illustrated in Resumption 2. The functional difference between the two configurations is that in Resumption 1, the two clauses are motivated by two individual clause constructions, whereas in Resumption 2, the two clauses instantiate one complex clause. A consequence for the interpretation of the initial clause is that the clause in Resumption 1 has a more independent character and as such is more likely to be read as being independently assertable and more foregrounded, being supported in the network by other independent clauses. By contrast, the initial clause in Resumption 2 is stored as one of the components of an assertion and tends therefore to be construed as conveying more backgrounded information. Structurally, they differ in that Resumption 2 places the verb in third position, thereby deviating from the canonical word order in declarative clauses, while Resumption 1 has it in second position.

## 2.2 *LP so in Early New High German, Middle High German, and Scandinavian*

In this section, I give a brief overview of some central studies of the uses of LP *so* in ENHG and the period before that, namely, Middle High German (MHG). Swedish and Norwegian have been claimed to exhibit a use of *so* that is very similar to the use in ENHG. Therefore, the relevant literature concerning this topic is also discussed. Thereafter, the development of *so* into a resumptive as proposed by previous literature is presented.

The most thorough study of the ENHG use of *so* is by Thim-Mabrey (1987). She investigates the functions of LP *so* based on data from seven manuscripts – “Sibille,” “Fortunatus,” “Pamphlets of the Peasants’ War,” “Correspondence between Balthasar Paumgart junior and his wife Magdalena,” “Die schöne Magelone,” “Die schön Magelona,” and the first 80 pages of the translations by Niclas von Wyle – encompassing a wide variety of genres. Thim-Mabrey (1987) finds that *so* combines with a larger variety of clauses than nowadays: In addition to co-occurrence with conditionals (1a) and concessives (1b), *so* collocates with adverbial clauses with temporal, locative, causal, comparative, and final meaning as well. With V1 clauses and with (free) relatives, a conditional and concessive meaning is most prevalent. Additionally, Thim-Mabrey (1987:200–214) illustrates that *so* is attested following nonclausal adverbials, as example (2) in the introduction illustrated. Specifically, she notes, “Fortunatus” has a relatively large number of such nonclausal adverbials with *so*.



For Middle High German, Catasso (2021a) discusses the use of the originally referential-deictic adverbs *dô* ‘there, then’ and *sô* ‘so’. He proposes that resumption with these elements “is the non-pronominal counterpart of German left dislocation,” based on a quantitative and qualitative analysis of data from 13 prose texts. His data set contains 563 sentences with *dô* (316) and *sô* (247) in noninitial, but still left-peripheral position. His study thus disregards cases in which *so* is used following a main clause.

Catasso (2021a) reports that 66% of the elements preceding *sô* are clausal constituents, 16% are prepositional phrases, 13% adverbs, and 6% determiner phrases (Catasso 2021a:17). Semantically, *sô* tends to follow conditionals (38%) and temporal (38%) elements, but is found with constituents that have a causal (11%), locative (4%), manner (4%), concessive (2%), and instrumental (1%) meaning as well. In addition, he reports one instance of *so* following an argumental prepositional phrase (Catasso 2021a:17). It should be noted that his study also finds that there is variation per text regarding the frequency of both elements.

*So*’s cognates in other Germanic languages have also been discussed in the literature. Meklenborg (2020) classifies *so* and the Scandinavian *så* as generalized adverbial resumptives, which she contrasts with specialized resumptives. While specialized resumptives (like Middle High German *dô* and its descendants) “have retained their original meaning and . . . may only follow an initial element expressing the same semantics” (Meklenborg 2020:95), generalized resumptives such as *so* are semantically bleached and may resume an element that semantically or categorically does not match. Both resumptives are rather remarkable, as they seem to be restricted to V2 languages despite the fact that their use results in an apparent V3 word order.

In contrast to the studies on German, Nordström (2010) focuses on the use of *så* after nonclausal constituents in modern Swedish, what she calls adjunctive *så*. An example can be found in (4).

- (4) Och **sen så** frös jag in det  
 and then so froze I in it  
 ‘And then I froze it in.’ (Nordström 2010:47)

Nordström (2010) argues that this use of *så* signals a new point of departure. This term can be understood as the landmark (Langacker 1987, 2008) or ground (Talmy 1975), that is, the reference point “with respect to which the figure’s path or site receives characterization” (Talmy 1975:419). Crucially, the idea is that *så* is used in contexts where the ground for the following proposition is not the same as the one in which the former utterance should be understood. As such, *så* marks a shift in ground.

Sollid & Eide (2008) and Eide (2011) present a similar analysis for Norwegian *så*. They argue that *så* signals a new topic in such contexts, or returns to a previously abandoned topic. Following Bianchi & Frascarelli (2010), Eide (2011) analyzes *så* as an Aboutness-shift marker. This is not to be understood as the element the clause is about, but is more closely related, or perhaps even identical, to the notion of frame-setting (Eide 2011:192–193). Frame-setters are elements that “limit the applicability of the main predication to a certain domain” (Chafe 1976:50). Following the literature on mental spaces (Fauconnier 1994, Fauconnier & Sweetser 1996, Dancygier & Sweetser

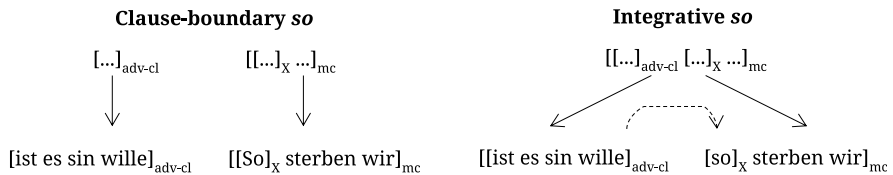


Figure 2. *so* from clause boundary to resumptive.

2005), I will refer to these domains as spaces, in which propositions are predicted or claimed to hold.

Prototypically, frame-setters provide temporal information. However, other adverbials can also be used as frame-setters. They serve as so-called guideposts and provide an orientation, or ground, for the information that is presented in the following clause (Chafe 1984:444). For example, a conditional clause may activate a space in which a certain proposition holds. The contents of the clause following a conditional are claimed to apply in this specified space.

Besides a description of the distribution of *so*, Thim-Mabrey (1987:208–215) also sketches a diachronic picture. I first summarize her account in the terminology used in this article, and then point out some issues with the scenario.

Thim-Mabrey (1987) argues that *so* initially introduced an independent clause, separating it from the antecedent structure. A V1 clause or an introduced adverbial clause (which may be hosted by a preceding main clause) is then reinterpreted as part of the structure of the following sentence. The function of *so* changes in the new structure: From being a clause-boundary marker, it starts to serve as an element that structurally integrates the antecedent, that is, as a resumptive. This is illustrated in figure 2.

In ENHG, these two stages are visible in a set of structures, in which the V1 clause can be analyzed as both nonintegrated and resumed. These structures rely on other internal cues or the larger discourse for disambiguation. This is exemplified in (5).

- (5) wolt der künig das Anndolosia des graffen tochter tzu der Ee het  
 wanted the king that Andolosia of.the count daughter to the marriage had  
 genommen **so** wolt er yn tzu ainem graffen gemacht haben  
 taken so wanted he him to a count made have  
 ‘If the king had wanted Andolosia to marry the count’s daughter, he would have  
 made him a count.’/‘The king wanted Andolosia to marry the count’s daughter. Thus  
 he wanted to make him a count.’ (Fortunatus, 130)

In example (5), the sentence may either be a complex sentence, containing a subordinate V1 clause and a main clause, or it may illustrate a combination of an independent V1 declarative clause (e.g., Coniglio & Schlachter 2013), followed by another declarative (Thim-Mabrey 1987:210) (i.e., nonintegration and resumption). *So* may be used to mark that both clauses are independent. Alternatively, it is used to signal that the V1 clause is to be interpreted as a part of the main clause, so that the

proposition of the main clause is understood as being contingent on the proposition in the V1 clause.

While *so* does not signal the (in)dependence of the preceding adverbial, it does help to reduce ambiguity concerning the independence of the second clause: This could be interpreted as a postposed conditional clause in the absence of *so*, yielding a reading like ‘The king would have wanted Andolosa to marry the count’s daughter, if he had wanted to make him a count.’ This postposed conditional function is found elsewhere in the language, for example in the sentence *vnd sprach das er yme sinen hart wolde scheren were es das er yne vnderstynde zu slagen* ‘and said that he would hit him hard, if he thought to beat him’ (Pontus, 86va). This supports the idea that *so* has served as a clause boundary marker.

The stage of ambiguity of the dependency of the adverbial clause is also mentioned by Meklenborg (2020), who suggests that German (and Swedish) initially had clause-external adverbial clauses. Full adverbial resumptives, like *so*, could be used to fulfill the V2 requirement as expletives (Resumption 1). This is supported by the existence of sentences in which a preverbal adverbial clause is followed by a subject (nonintegration), in which *so* is unattested. This structure with preverbal adverbials and subjects is lost when adverbial clauses become clause-internal (Resumption 2 and integration) (see e.g., Axel 2002, 2004).<sup>3</sup> Thim-Mabrey (1987) argues that once LP *so* is used to structurally integrate adverbial clauses, its use can expand into the domain of predicate-less adverbials.

(6) a. vnd **zum dritten so** wurde ich auch gestrafft werdenn  
and to third so would.SBJ I also punished become  
‘And thirdly, I would also get punished.’ (Magelone, 627)

b. Vnd **darumb so** wil ich dir mein landt eingeben zû behüten.  
and therefore so want I you my country give to keep  
‘And therefore, I want to give you my country to keep.’ (Melusine, 149)

At first, *so* integrates phrases that are independently motivated, like *zum dritten* in (6a), and once such adverbials are themselves seen as integrated constituents of the main clause, *so* could expand to adverbials that are closer related to the predicate that are themselves already an integral part of the clause (2) repeated in (6b). The issue with this diachronic scenario is that the timing does not fully add up. Sequences with adverb + *so* are attested *before* adverbial clauses are generally considered to be integrated or clause-internal.

Axel (2004) identifies the frequency of three different word order patterns that can be found in roughly 2,700 sentences with a preposed adverbial clause:

- I. Nonintegration: adverbial clause + XP + finite verb, e.g., *ist is sin wille wir sterben.*
- II. Resumption: adverbial clause + resumptive + finite verb, e.g., *ist is sin wille so sterben wir.*
- III. Integration: adverbial clause + finite verb, e.g., *ist is sin wille sterben wir.*

<sup>3</sup> Although König & van der Auwera (1988) and more recent studies have shown that adverbial clauses and subjects may occur preverbally in Present-Day German, given an epistemic function of the adverbial (Scheffler 2008, Csipak 2019).

She shows that both V3 patterns (I and II) decline over time, while V2 (III) increases. Specifically, in the period 1450–1500, resumption (II) was prevalent. Its use decreased between 1550 and 1600, while the frequency of the V2 pattern (III) simultaneously increased dramatically (Axel 2004:40). This increase of V2 is taken as an indication of the increasing syntactic integration of preposed adverbial clauses in the sentence, which it has been argued did not happen before the sixteenth century. What is more, Axel & Wöllstein (2009) have argued that V1 conditionals were nonintegrated clauses in Old High German and Middle High German. In ENHG, they were found more and more often immediately preceding the finite verb, but still not to the same degree as introduced conditionals (Axel & Wöllstein 2009:24). Moreover, it has recently been argued that at least a subset of adverbial clauses are not fully integrated to this day. Specifically, temporal and factual conditionals and clauses with a causal use of *weil* are central adverbials that are integrated, while adversative and concessive clauses and those with causal *da* are not (Haegeman 2010, Frey 2020).

Despite this prevalence of nonintegrated adverbial clauses, the combination of predicate-less adverbials + *so* has been attested at least since Middle High German, as is illustrated by example (7).

- (7) vnderdes           so qam der slag  
     in.the.meantime so came the punishment  
     ‘In the meantime, God’s punishment came.’ (Leipzig 134ra, 41 cited from  
     Catasso 2021a:4)

The structure is thus not a recent innovation in ENHG that points towards an expansion of *so*’s integrating function. This casts doubt on the idea that *so* following adverbs and prepositional phrases is an extension of the constructions with adverbial clauses.

### 3 Methodology

#### 3.1 The Data

The corpus used in this study consists of ten digitized narrative texts that were written between 1450 and 1555, namely the complete texts of “Pontus und Sidonia,” “Melusine,” “Wigalois vom Rade,” “Wilhelm von Österreich,” “Tristrant und Isalde,” “Fortunatus,” “Die Schöne Magelone,” and “Das Rollwagenbüchlein,” and excerpts of a little over 20,000 words from “Huge Scheppel” and “Der Goldene Esel.”<sup>4</sup> The corpus keeps the genre consistent, as it is well known that this has a strong effect on language use (e.g., Biber & Finegan 1989, Cichosz 2010).

The texts originate from three different narrative traditions: First are the Middle High German verses that are reworked into prose texts, namely “Wilhelm von Österreich,” “Tristrant und Isalde,” and “Wigalois vom Rade.” Second are the adaptations from French, namely, “Huge Scheppel,” “Melusine,” “Pontus und Sidonia,” and “Die Schöne Magelone,” and one text translated from Latin, “Der Goldene Esel.” Thirdly, the corpus contains two texts that are not modeled on

<sup>4</sup> The texts have been digitized as a part of the DFG project DE 677/8 “Wortstellung und Diskursstruktur in der Frühen Neuzeit.”

Table 1. ENHG narratives

Abbreviation	Short text name	Year	Dialect	Origin	Size
E	Esel	1538	East Upper	Latin	21,500
F	Fortunatus	1509	East Upper	ENHG	55,400
H	Huge Scheppel	betw. 1455 and 1472	West Middle	French	22,200
M	Melusine	1474	West Upper	French	40,200
O	Wilhelm	1481 and 1491	East Upper	MHG	40,100
P	Pontus	2nd half 15th c.	West Middle	French	76,900
R	Rollwagen	1555	West Upper	ENHG	46,900
S	Magelone	1535	West Upper	French	23,800
T	Tristrant	1484	East Upper	MHG	53,100
W	Wigalois	1519	East Upper	MHG	25,100

another: “Fortunatus” was originally written in ENHG and is, like the other texts, a long-running narration, while “Das Rollwagenbüchlein” is a collection of farces and modeled on a spoken tradition.

The majority of the texts come from the Upper German dialect area; “Melusine,” “Magelone,” and “Das Rollwagenbüchlein” are West Upper German, and “Wigalois,” “Fortunatus,” and “Der Goldene Esel” were written in East Upper German. This is likely also the case for “Tristrant” and “Wilhelm.” “Pontus” and “Huge Scheppel” were written in West Middle German (Rhine Franconian).

For convenience, I have summarized the short text name and its abbreviation, the year of publication,<sup>5</sup> the origin, the dialect, and the rough word count for each text in Table 1.

To extract potential contexts of LP *so*, the texts were searched for instances of *so*. After cleaning up the data, the search resulted in 4,371 observations. I manually annotated the part-of-speech of the token following *so* to easily identify the instances of LP *so*. These were extracted and stored separately. After clean-up, the data set contains 1,508 observations.

### 3.2 Annotation and Methods

The data set was annotated for the following variables: CLAUSALITY, VERB POSITION, TYPE, FUNCTION, ORIGIN, YEAR, DIALECT, and SOURCE. These are introduced below. Thereafter, the statistical methods used are explained.

The variable CLAUSALITY marks whether the constituent preceding *so* is clausal or nonclausal. It has three levels: “clausal,” “nonclausal,” and “other.” A constituent is considered to be clausal if it contains a verbal predicate, and nonclausal whenever it lacks one. An exception is made for *afinite* constructions (Breitbarth 2005, Demske 2021). These are classified as clausal constituents. Constituents that are headed by a

<sup>5</sup> Specifically, this represents the year of publication of the edition that underlies the transcription.

prepositional phrase or a noun phrase, but do contain a clausal element, such as a relative clause, are categorized as clausal as well. “Other” marks cases in which there is a change in who is speaking, for example one character starts to speak. This is illustrated by (8), where there is a transition from the main story to direct speech.

- (8) die red gevielen ir wol und sprach **so** sagen niemant darvon  
 the speeches pleased her well and said so tell.IMP no one thereof  
 ‘The speeches pleased her and she said, “Don’t tell anyone about that.”’  
 (Fortunatus, 157)

These cases are treated differently from the others as simply considering the preceding clause would present a muddled picture, as *so* is used at the beginning of a discourse segment.

Whenever *so* was preceded by a clausal element, the position of the verb, VERB POSITION, within this clause was annotated. I have used the labels verb-initial (V1), verb-second (V2), and verb-final (VF) for the corresponding positions, and combined the cases in which the verb is in third position or nonfinite as “other” due to their low frequency. In addition, the variable contains the category “ambiguous,” which is used for those clauses that are potentially V2, that is, clauses that may be considered as either V1 or V2 or either as V2 or V3.

Ambiguity arises whenever the clause is initiated by a discourse marker which may be analyzed as an adverb and thus counts as either a constituent or a particle. Particles, but not full adverbs, may be excluded from the count. The ambiguity is illustrated with the sentence in (9) with the element *nu* ‘now’ (Wolf 1978:41–42), which may function as an adverb or as a discourse particle (Paul 2002:714–715).

- (9) wol her Ir lieben kint Ir wyssent nu wol wie der konig vch mir geben hait  
 PRT PRT you sweet children you know now well how the king you me given has  
**Nu** sollent Ir glauben an den heyligen machamet **so** wil ich vch zu grossen eren  
 now must you believe in the holy Machamet so want I you to great honor  
 vnd gude helffen Dan wo Ir des nit mit willen thunt so sint ir nit sichers  
 and goods help then if you this not with willingness do so are you not more.sure  
 dan des dotis  
 than the death

‘Well, dear children, you know well how the king has given you to me. Now you must believe in the holy Machamet./Now, should you believe in the holy Machamet, I want to help you to great honor and goods. But if you do not do it willingly, your death is imminent.’ (Pontus, 4ra)

At least since Middle High German, but likely much longer, *nu(n)* has been used not only as a temporal adverbial, but also as a discourse marker to introduce an unexpected outcome (Rehbock 2009:238). Both functions are compatible with the context in (9). In the former case, the clause preceding *so* is a declarative V2 clause that is introduced by a temporal adverb. The speaker deems it inevitable that *ir lieben kint* ‘you, dear children’ (=Pontus and his companions) will believe in Machamet. The *so*-clause then presents a promise. Alternatively, *nu* may be taken as a particle that signals that the speaker deems it unlikely that Pontus will believe in Machamet. The

clause that follows may then be analyzed as an adverbial V1 clause that functions as the protasis.

I have chosen not to decide between V1 or V2 in those cases, as they form bridging contexts (Traugott 2012) between V1 conditionals and V2 main clauses and as such may bring to light insights into the extensibility of LP *so* (Barðdal & Gildea 2015). In other words, the constructs are hybrid: They may be interpreted as either V1 or V2 by an addressee, and thus either one or both of the networks may be activated, that is, the network of V1 constructions and/or the network of V2. As a consequence, they may show features that are associated with both V1 and V2 structures if one looks at the communal construction.

- (10) Wöllen ihr mir folgen, **so** sollen ihr hie pleiben, **So** will Jch in Burgundien zum  
 want.SBJ you me follow so must you here stay so want I in Burgundy to.the  
 König reitten, Vnd Jm alle sachen sagen.  
 king ride and him all things tell  
 'If you want to follow me, you must stay here. I intend to go to the king in Burgundy and tell  
 him about everything.' (Huge Scheppe, 97:33–36)

Other instances of ambiguous word orders are clauses that themselves contain a preposed adverbial clause, as in (10), in which the clause preceding the bold *so* is itself preceded by adverbial V1. These may be excluded from the count (as in Burridge 1993), or included (e.g., Axel 2004). Choosing one or the other option for all adverbial clauses may be problematic, as there is good indication that at least a subset of dependent clauses are not fully integrated even in Present-Day German, as was discussed in section 2.2. What is more, Coussé (2004:236, 238) has illustrated that the inclusion or exclusion of adverbial clauses as clause-internal constituents has a far-reaching effect on whether a language is analyzed as primarily exhibiting V2 word order or not. For example, she shows for thirteenth-century Dutch that the exclusion of such elements results in 97 percent of the main clauses being V2 (Burridge 1993:26), whereas their inclusion decreases the amount of V2 to a mere 52 percent. Noticing this discrepancy, I have chosen to consider these clauses as potentially V2, and thus coded them as ambiguous.

For the nonclausal constituents that precede *so*, I have annotated whether the constituent was a prepositional phrase (PP), a noun phrase (NP), or an adverb (adv). This is captured under the variable name *TYPE*. I use the term *adverb* to refer to a wide range of elements that are not clauses, prepositional phrases or noun phrases, but in one way or another modify either the verbal predicate or an entire proposition. Therefore, this category also includes elements like *nu* 'now'. See also the discussion on discourse markers in the previous section.

The clausal constituents were annotated accordingly as adverbial clause (adv-cl), complement clause (comp-cl), imperative (imp), polar interrogative (int), and main clause (mc). In addition, there were clauses that were ambiguous, as was discussed and illustrated with example (9) in the previous section. These were labeled as *ambiguous* (amb).

The variable *FUNCTION* encodes the functional-pragmatic relationship between the *so*-clause and the preceding constituent. The main categories that have been annotated are additive, adversative/concessive, cause/reason, comparison, condition,

irrelevance condition, manner, means, purpose, and time. Most of the labels are based on Halliday & Matthiessen's (2014) functional categories. In addition, the categorization includes irrelevance conditionals, as they may be differently encoded (König 1985, König & van der Auwera 1988). No distinction is made between adversative and concessive relations, as they are encoded in the same way (König 1985). Furthermore, it is regularly unclear whether there is an implication of incompatibility or counter-expectation. Consider the following example.

- (11) *Wiewol ich dich von ganzem herczen lieb hab so muß ich doch mir selbs urlob geben*  
 although I you of entire heart love have so must I still my self leave give  
 Concessive: 'Although I love you with all my heart, I still have to give myself leave.'  
 Adversative: 'I love you with all my heart, but I still have to give myself leave.'  
 (Wilhelm, 212)

This segment is compatible with both a concessive and an adversative reading. Loving someone and leaving may be seen as inherently incompatible, and it is to be expected that if one loves someone, one will not leave them, yielding a concessive interpretation. Alternatively, the two propositions may be seen as supporting two contradictory conclusions: Loving someone supports the desire to be 'here', while giving oneself leave implies wanting to be somewhere else. This would be the adversative interpretation. As in this example, the construal of concessives as adversatives is generally possible.

Other clauses also regularly allow for multiple construals, and do not necessarily fall neatly into one of the categories. This is exemplified in (12).

- (12) *Raite er auß. so het sy nyemand von mannen bey jr.*  
 rode.SBJ he out so had.SBJ she no.one of men with her  
 'When/if/because he rode out, she had no man with her.' (Tristrant, 163)

The adverbial clause in (12) may present a temporal frame to the following clause: During the time he is out, she is without any man. Or it may be conditional: If he rides out, she is without any man. Finally, it may even express a causal relation: Because he rides out, there is no man left with her. Such constructs are categorized as ambiguous.

Whenever the constituents did not fall into one of these categories, they were classified as "other." This includes the fixed expression *so helfff mir got* 'God help me', and cases like (13), in which there is only an indirect functional relation, if any.

- (13) *Wann daz tier darzû kompt so gand im vier zen auß dem mund*  
 when that animal thereto comes so go him four teeth out the mouth  
 'When the animal comes, it has four tusks.' (Wilhelm, 264)

In addition to the above-discussed variables, the data set was annotated for SOURCE, YEAR, DIALECT, and ORIGIN. SOURCE specifies the name of the text in which the observation appears; YEAR the year in which the text was published in ENHG; DIALECT encodes the larger dialect area in which it was written; and ORIGIN whether the occurrence appears in adaptations from French or Latin, a reworking of a Middle High German poetry, or was originally written in ENHG.



For simple frequency tables, Pearson's chi-squared test was used to confirm significance. This test assumes that all cells in the frequency table have an expected value of one and that 80 percent of the cells or more have an expected value of 5. If these requirements were not met, the Fisher's exact test was used (Levshina 2015:29).

To determine whether certain individual texts stand out in their use of *so*, a conditional inference tree was created, making use of the *partykit* package (Hothorn, Hornik, & Zeileis 2006). This model predicts the outcome of the response variable based on the predictor variable(s). The model splits the data into smaller subsets whenever there is a significant association between predictor and response, selecting the strongest whenever there are multiple significant ones. This process is repeated until there is no significant association between the two. See Tagliamonte & Baayen (2012:159) and Levshina (2015:291) for more details.

#### 4 Overview of Results

LP *so* may follow both clauses and elements that lack a predicate, as illustrated with the adverbial connective *darumb* in example (2) above. Other nonclausal constituents are possible as well, for example, prepositional phrases like *vff den andern dinstag darnach* 'on the second Tuesday after', and modal adverbs like *villeicht* 'perhaps' (see also Thim-Mabrey 1987). Most frequent, with 1,173 observations, are nevertheless the patterns with a clausal constituent. This compares to 245 observations of nonclausal elements preceding *so*, and 90 instances of "other." This is presented in table 2.

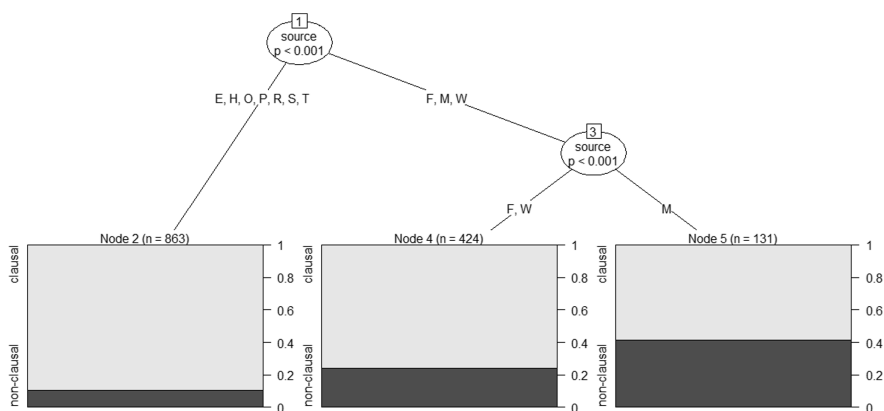
For Middle High German, Catasso (2021a:17) reports that 66 percent of LP *sô* are preceded by a clausal element, which may give the impression that *so* more frequently followed clauses in ENHG than in Middle High German. This cannot be concluded. Catasso's study, contrary to this one, only considers *sô* in noninitial position (Catasso 2021a:14), and thus excludes all cases in which *so* follows main clauses. Consequently, the amount of clausal constituents in his study is by definition lower than in the current study.

As Thim-Mabrey (1987) already noticed for "Fortunatus" and "Die Schöne Magelone," nonclausal constituents preceding *so* may be more or less frequent per text. Since there seems to be intertextual variation, it should be tested whether this is significant. For this purpose, I have modeled a conditional inference tree (see section 3.3), which predicts whether the constituent preceding *so* is or is not clausal on the basis of the source from which the observation comes. The resulting tree is presented in figure 3. It confirms that the intertextual variation is indeed significant. At the top of the tree, one sees a split between "Fortunatus" (F), "Melusine" (M), and "Wigalois" (W) on the one hand, and the other texts on the other hand. The former group contains significantly more cases of nonclausal constituents preceding *so* (28.2% vs. 10.3%). The tree presents another split in the data, separating "Melusine" (M) from "Fortunatus" (F) and "Wigalois" (W), with "Melusine" having a significantly higher proportion of nonclausal constituents than "Fortunatus" and "Wigalois" (41.2% vs. 24.1%).

This intertextual variation cannot be explained by a development over time nor by the different traditions in which the texts were written. While there is a significant distinction between the West Middle German texts (H & P) on the one hand and the West (M, R, & S) and East Upper German ones (E, F, O, T, & W) on the other hand (11.6%

**Table 2.** *The clausality of the element preceding so: frequency*

Clausality	Raw frequency	Percentage
Clausal	1,172	77.7
Nonclausal	246	16.3
Other	90	6.0
Total	1,508	100



**Figure 3.** Clausal versus nonclausal elements before *so*, seed = 2,317; E = “Esel,” P = “Pontus,” R = “Rollwagen,” S = “Magelone,” W = “Wigalois,” F = “Fortunatus,” H = “Huge Scheppel,” M = “Melusine,” O = “Wilhelm,” T = “Tristrant”.

vs. 18.8%,  $p = 0.003$ ), “Fortunatus” (F), “Wigalois” (W), and “Melusine” (M) are fully responsible for this distinction. The other Upper German texts – E, O, R, S, & T – do not contain relatively more instances of nonclausal constituents than the two West Middle German ones. Moreover, no correlation was found between *so* per 1,000 words per text and frequency of nonclausal constituents + *so* per text, and thus it was also not an effect of a higher or lower frequency of *so* in general.

At this point, it cannot be determined whether the variation is due to textual factors, or whether it is the result of individual variation (Petré & Anthonissen 2020). In any case, the intertextual variation should be kept in mind, as it may interfere with the generalizability of the results.

As was exemplified in (1) and (3), *so* may combine with clauses with various word orders. The frequency of each word order is presented in table 3. The majority of the clauses preceding LP *so* have a verb in final position, but both V1 and V2 clauses occur frequently as well. Moreover, in a high number of cases the verb position of a clause is ambiguous. Other patterns, namely V3 and nonfinite clauses, are not very frequent.

For both V1 and VF clauses, the vast majority of the clauses are adverbial (77.8% and 74.6% respectively); the lion’s share of V2 clauses are declarative main clauses

**Table 3.** Word order of the clause preceding *so*: frequency

Word order	Raw frequency	Percentage
VF	504	43.0
V1	329	28.1
V2	188	16.0
Ambiguous	128	10.9
Other	23	2.0
Total	1,172	100

**Table 4.** Types of nonclausal elements preceding *so*: frequency

Type	Raw frequency	Percentage
Adverb	200	81.3
PP	28	11.4
Adverb + XP	15	6.1
NP	3	1.2
Total	246	100

(91.5%). Besides the adverbials, the data shows other types of V1 and VF clauses. Specifically, V1 clauses may also be interrogatives, imperatives, and V1 declaratives (Reis 2012, Coniglio & Schlachter 2013). VF clauses may also instantiate a complement clause, a free relative clause, a prepositional phrase or noun phrase with a relative clause, and sporadically a noun phrase with an adverbial clause or a verb-final main clauses preceding LP *so* (Demske 2018). V2 clauses are also occasionally complement clauses (Reis 1997, Petrova 2020), or imperatives, in which case the preverbal position is filled by *so*. Other adverbs that may occur preverbally in imperatives are *darumb* and *nun*, yielding an ambiguous V1/V2 verb position.

When it comes to the nonclausal constituents, one finds adverbs, prepositional phrases (PP), and noun phrases (NP). The most frequent type of nonclausal constituents are adverbs, as can be seen in table 4.

Adverbs either occur on their own in front of *so* or they may be followed by another phrase. Besides adverbs, the most frequent nonpredicative constituents are prepositional phrases. Sporadically, *so* follows a nonargumental noun phrase (1%). These results are quite different from Catasso's (2021a:17) results for Middle High German. He reports a higher number of prepositional phrases (40) compared to adverbs (31), whereas prepositional phrases in this ENHG data set are considerably less frequent than adverbs. This is at least partially due to his inclusion of originally prepositional constituents like *indem* 'with that', which are considered to be grammaticalized as adverbs in ENHG, and his exclusion of adverbs with particle status

(Catasso 2021a:16), but it may also be indicative of a relative increase of the adverb + so pattern as compared to PP + so.

## 5 The Central Network: Adverbial Clauses and LP so

In this section, I consider first the VF adverbial clauses and focus on the constructions at a lower level of abstraction, that is, those with lexically specified conjunctions. Then, it is argued that V1 clauses center around a prototype with a conditional function. This analysis is supported by the function of nonadverbial V1 clauses. Thereafter, it is considered whether one overarching construction should be posited for these adverbials. Finally, the connection of V2 main clauses before LP so to the other patterns is evaluated.

### 5.1 VF Adverbials Form a Lower-Level Network

The current data confirms a wide range of functional relations for adverbial clauses that have a verb-final position. This is presented in table 5.

A conditional relation in which the adverbial clause functions as the protasis to the apodosis in the so-clause is the most frequent function. Furthermore, there are a large number of cases in which more than one relation may exist between the two clauses. About half of those, 49.3 percent, are ambiguous between conditional and temporal meaning exemplified in (14), 12.0 percent between a temporal and a causal relation, and 6.7 percent between a conditional and causal relation.

- (14) Wenn es die sicht so lauft es zũ ir  
 if/when it that sees so walks it to her  
 'If/when it (= a unicorn) sees her (= a lady), it walks towards her.'  
 (Wilhelm, 281–282)

Naturally, conjunctions are indicative of the functional relationship between the adverbial clause and the following clause. As such, it is likely that the variance presented in table 5 can be accounted for at a lower level of abstraction, that is, at the level of a construction with a lexically filled conjunction. The most common conjunction to collocate with LP so is *wann* 'if, when'; see (14). Besides *wann*, *ob* 'if' and *so* 'so, as, thus' are frequent as well. *Wo* 'where, when, if, how', *wiewol* 'although', *als* 'when, while, as', *seid* 'since', *wie* 'how', and *dieweil* 'since, while' occur more than ten times in the data set.<sup>6</sup> Less frequent are *da* 'then', *seid das* 'since', *seidmal* 'because', *ee* 'before', and *so bald* 'as soon as'.

Most of these conjunctions are polysemous. *Wann*, for example, typically occurs in constructs in which there is ambiguity between a conditional and a temporal functional relation (23.6%), or it may express more convincingly either a conditional (32.6%) or a temporal relation (19.1%).<sup>7</sup> It is also sporadically encountered with adverbial clauses expressing reason (2.2%), as in (15).

<sup>6</sup> These lexemes are the represented in the form that is most frequently used in the investigated texts; spelling variations are included.

<sup>7</sup> Similar ambiguity is attested in Present-Day German (Auer 2000).

Table 5. Functions of VF adverbials resumed by so

Function	Raw frequency	Percentage
Condition	117	31.1
Time	61	16.2
Cause/reason	55	14.6
Adversative/concessive	32	8.5
Irrelevance	21	5.6
Comparison	7	1.9
Ambiguous	75	19.9
Other	8	2.1
Total	376	100

- (15) **wann** ich sôlicher ding von einer sprach in ein andere ze machen vnd zû  
 when I such things from one language in an other to do and to  
 translätieren nicht ain meyster bin **so** will ich darumb den obgenanten meinen  
 translate not a master am so want I therefore the above.mentioned my  
 genâdigen herren den Marggraffen zû Rötteln demütiklich vnd gar ernstlich bitten ...  
 merciful lord the margrave of Rötteln humbly and quite seriously ask ...  
 'Since I am not a master in putting such things from one language into another nor in  
 translation, I want to therefore<sup>8</sup> ask the above mentioned, my merciful lord the  
 margrave of Rötteln, humbly and quite seriously ...' (Melusine, 175:17–21)

Another case in point is *als*, which specializes in temporal relations (45.0%), as in (16a), but is used with a comparative meaning that highlights similarity between two situations as well (10.0%). This is exemplified in (16b).

- (16) a. Und **als** sy also stünden **so** kommpt der schalck geloffen und sach greulich.  
 and conj they also stood like that, the rogue came walking and looked horrible.  
 'And when they stood there like that, the rogue came walking and looked horrible.'  
 (Fortunatus, 30)
- b. **als** du heüt erfreüwet bist worden von mir **so** erfrew du alle jar ain arme jungfraw  
 conj you today delighted am became from me so delight you all year a poor lady  
 'And as you have been delighted by me today, you will delight a poor lady all year.'  
 (Fortunatus, 47)

For a more systematic approach, I have analyzed the functions associated with the most frequent conjunctions. The results are visualized in figure 4. Each unambiguous form–function pairing that occurs in multiple texts and is responsible for at least 10 percent of the functions of the specified conjunction in the data set is represented. This is to ensure that the relation between the constructions is not just created as a one-off analogical relation, nor as an artifact of one text, but is reflective of a broader generalization.

<sup>8</sup> Alternatively, *darumb* may refer cataphorically to the complement clause of *bitten*.



- (17) a. Und **als** sy also stünden **so** kommpt der schalck geloffen und sach greulich.  
and if they also stood so comes the rogue walked and looked horrible  
'And when they stood there like that, the rogue came walking and looked horrible.'  
(Fortunatus, 30)
- b. wann er mit im für das gericht keme, **so** solt er kein ander antwort geben ...  
when he with him for the court come.SBJ so must.SBJ he no other answer give  
'He should give no other answer when he brings him before the court.' (Rollwagen, 60)

While both clauses express a temporal relation, the *als*-clause often is used to express a past temporal relation, while the *wenn*-clause typically expresses a future event. This shows that these patterns differ both in form and in function, while they simultaneously share a part of their form–function mapping. It is therefore appropriate to posit interconnected lower-level associations of constructions, which are defined by the element introducing the adverbial clause and the functional relation to the following clause.

## 5.2 V1 Adverbials Are Typically Conditional

V1 adverbial clauses by definition lack a conjunction and their relation to the following clause is lexically unexpressed. In other words, their functional relations are less compositional than those of VF adverbials. As a consequence, the different functions associated with the V1 pattern are less numerous. The construction is furthermore less frequently ambiguous ( $p = 0.02$ ), but is instead primarily associated with one function. This is illustrated in table 6.

As table 6 indicates, the initial adverbial clause normally serves as a condition, the protasis, under which the proposition in the second clause, the apodosis, holds. This is exemplified in (18a).

- (18) a. **Velt** in der würt **so** muß der gast zufuß vnd bloß mit schaden von dannen  
fells him the innkeeper so must the guest on.foot and bare with shame from there  
scheiden  
separate  
'If the innkeeper fells him, the guest has to go on foot and depart from there with nothing but shame.' (Wigalois, 25)
- b. Context: King Melchior speaks to Lady Parclisen about a letter. She has written the letter, but he does not know this.  
**wissent** ir nit, was er uns geschriben hat **so** wellen wir eüch das sagen uns  
know you not what he us written has so want we you that say us  
embeüt v groß gott Machmet das ...  
inform the great god Machamet that ...  
'If you don't know what he has written to us, then we will tell you: The great god Machamet informs us that ...' (Wilhelm, 25)

Within the group of conditionals, there are also structures in which the apparent apodosis is true even if the condition is unrealized. They nevertheless represent a protasis–apodosis relation. This is the case in (18b): The reader knows that the addressee, Lady Parclisen, has written the letter and thus that the protasis is unrealized. Despite this, the event expressed in the second clause is claimed to hold. It is thus clear that the realization of the proposition of the second clause is not

**Table 6.** Functions of V1 adverbials resumed by *so*

Word order	Raw frequency	Percentage
Conditional	191	74.6
Adversative/concessive	11	4.3
Cause/reason	4	1.6
Comparison	4	1.6
Ambiguous	32	12.5
Other	14	5.5
Total	256	100

restricted to the space activated by the initial clause, and it is not implied that this proposition does not hold in the alternative space. Instead, the initial clause expresses the situation in which what follows is relevant. Such structures are called “relevance conditionals” (Scheffler 2008, Bhatt & Pancheva 2017), and have also been referred to as “biscuit conditionals” (Ebert, Endriss, & Hinterwimmer 2008, Predelli 2009). To this day, they may occur with a preverbal constituent in German, albeit with a subject pronoun and not a resumptive in preverbal position, as in *Wenn du mich brauchst, ich bleibe den ganzen Tag zuhause* ‘If you need me, I am staying home the entire day’ (Scheffler 2008:381).

V1 adverbials may also function as an adversative or concessive, in which case the *so*-clause normally is explicitly marked by a concessive marker *doch*. This is illustrated in (19).

- (19) **Müssen** wir dann lernen sterben **so** haben wir **doch** ein wil frist.  
 must we then learn die so have we still a while period  
 ‘Although we must then learn to die, we still have a bit of time.’  
 (Wilhelm, 259)

This data supports the observation that the V1 adverbials are strongly associated with a conditional function when they occur with LP *so*. This consistent conditional function is also the most prevalent one in VF clauses, but not with all conjunctions. In particular, *wo*- and *ob*-clauses also center around a conditional function, and so do adverbial clauses that are introduced by *so* and *wann*, although these show stronger polysemy.

### 5.3 Nonadverbial V1 Clauses

Nonadverbial V1 clauses also center around the [V1 | conditional] form-meaning pairing and are coerced into this interpretation: This is visible in imperatives and the affirmation of interrogatives, which are framed as a protasis to the following apodosis in constructions with *so*. Consider the sentences in (20).



- (20) a. kompt mit mir **so** werden ir die warheyt selbs sehen  
 come with me so will you the truth self see  
 'Come with me and you will see the truth for yourself.' (Wigalois, 58)
- b. fraw, ist der staub vergangen? **so** wil ich hineinkumen.  
 woman is the dust passed so want I in.come  
 'Woman, is the dust gone? Then I want to come inside.' (Rollwagen, 157)

Both the imperative in (20a) and the interrogative in (20b) have a very similar function to the conditionals encountered earlier: In (20a), the addressee will only see the truth if she follows the speaker. In this case, it is an imperative that evokes a hypothetical space in which the addressee goes with the speaker and an alternative in which she does not do so. The speaker claims that the addressee will see the truth for herself only in the hypothetical, but not in the alternative space.

The polar-interrogative in (20b) similarly activates a space in which the dust has passed and an alternative space in which the dust has not passed. In the first but not in the second space, the speaker has the desire to enter. It here depends on the affirmation by the addressee whether the apodosis holds. In fact, sometimes when *so* is used turn-initially, this affirmation by the addressee is precisely what precedes *LP so*. Consider the example in (21).

- (21) Vnd sprach Agripina **begerest** du hye in disem closter dein wonung zu haben?  
 and spoke Agripina desire you here in this monastery your living.space to have  
 sy sprach gar demütiglich ja gnedige fraw äbtissin.  
 she spoke quite humbly yes merciful woman abbess  
 Sy sprach **so** wüerst du mir gehorsam sein  
 she spoke so will you me obedient be  
 'and said, "Agripina, do you desire to live here in this monastery?"  
 She said quite humbly, "Yes, merciful Miss Abbess."  
 She said, "Then you will obey me.'" (Fortunatus, 171)

In (21), a character in the story, the abbess, starts a sentence with *so* after she has asked a question and received an affirmative answer from Agripina. While the V1 clause is uttered independently and thus is fully nonintegrated, the proposition of the main clause does depend directly on the affirmation of the proposition: In the alternative space in which Agripina does not want to live in the monastery, she does not have to obey the abbess.

The coercion of a conditional meaning on imperatives and interrogatives brings support for an overarching V1 + *so*-construction in which a conditional relationship between the V1 clause and the following clause is specified. This provides evidence together with the relatively high frequency of the construction and its consistency in form and function that such a construction exists in the communal constructicon.

#### 5.4 One Overarching Construction?

Although VF adverbials are the most frequent type of constituent that precedes *so*, they are used to express a wide variety of functional relations. Therefore, if a schema

like [VF<sub>adv-cl</sub> so Y<sub>clause</sub>] was psychologically real for speakers of ENHG, it must have had a rather vague meaning.

It has been independently argued that there are tight cognitive connections between conditional, temporal, adversative/concessive, comparative, and causal adverbial clauses (see, for example, the contributions in Couper-Kuhlen & Kortmann 2000), namely the functions VF adverbials are associated with. Building upon work on *så* by Nordström (2010) and Eide (2011), the initial VF adverbials can be analyzed as providing the ground (Talmy 1975, Croft 2001:329–346, Croft & Cruse 2004:56) on which the figure – the proposition in the second clause – can be interpreted. In other words, they may function as a frame-setter (see section 2.2). Yet, due to differences in form, function, and distribution of the different VF clauses, it was argued in section 5.1 that it is appropriate to consider them at a lower level of abstraction as well.

V1 adverbials lack an introducing element and are more coherent in function than VF adverbials with LP *so*, with the vast majority expressing conditionality. It was furthermore shown that other V1 clauses are also coerced in a conditional function, demonstrating that there is a schematic V1 clause + *so* schema with this meaning. Thus, at least V1 clauses are motivated by the same construction as the following clauses. This can be potentially realized by two structures: Either the V1 clause is motivated by the clausal construction that the following clause instantiates, or they are both slot-fillers of a third construction. This is illustrated in figures 5 and 6.

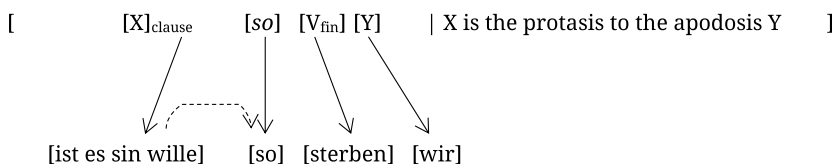


Figure 5. Integrating *so*.

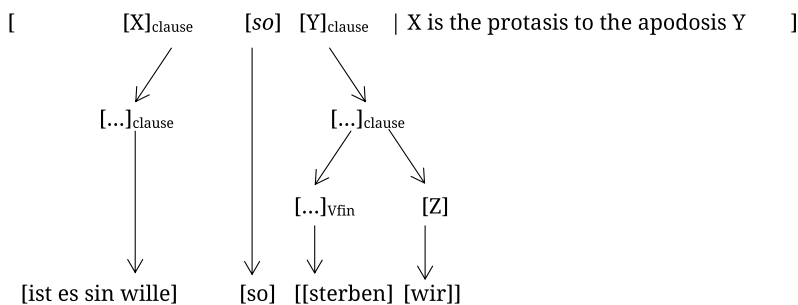


Figure 6. Separate *so*-construction.

Figure 5 illustrates the analysis of *so* as an element that syntactically integrates the V1 clause into the main clause, as discussed in section 2.2. The initial clause fills a slot – here called *X* – in a particular overarching main clause construction. This construction has a position for the finite verb in the third slot and is characterized by a conditional relation between *X* and the main clause.

An alternative – and I propose more likely – analysis is that both the V1 clause and the main clause are represented as separate constructions. They are selected as slot-fillers in a *so*-construction that has a clausal slot for the protasis and the apodosis. This is illustrated in Figure 6.

What speaks in favor of this latter scenario is that it is compatible with the proposal by Axel & Wöllstein (2009) and Reis & Wöllstein (2010), who have argued that V1 conditionals are nonintegrated to this day. In the absence of *so* this means they are followed by a new type of V1 apodosis. See also Ruppenhofer (2018:213). It makes little sense to posit an intermediate step with a V2 structure at a time in which V1 declaratives were productively used, and then, when V1 clauses become more restricted in usage, a reanalysis of the clause as V1 (Demske 2022). A V1 analysis of the clause following *so* also accounts for the possibility of the construction occurring with imperatives in the *Y*-slot as in (22), which do not normally have a preverbal element (see also section 4.1). Yet they are productively used following *so*.

- (22) Und wenn man dich fragst, was du tragest, **so** sag, es seye haber ...  
 and if one you asks what you carry **so** say.IMP it is oat ...  
 ‘And if one asks you what you are carrying, say it is common oat.’ (Rollwagen, 105)

Moreover, the analysis proposed in figure 6 does not require an otherwise almost unsupported V3 declarative main clause to occur in the language, because the structure as a whole would be a linking construction in which there is no dedicated slot for a finite verb: These are instead specified within the constructions that are selected as slot-fillers.

Finally, the construction is attested in contexts in which the construction as a whole functions as a complement clause.

- (23) vnd **sagt** yne wolten sie is nit thun **so** wulde er sie alleer drencken  
 and says him wanted they it not do **so** would he them all drown  
 ‘And told him that he would drown them all if they wouldn’t do it.’ (Pontus, 30va)

In (23), the entire construction functions as a complement to the verb *sagen* ‘say’. The adverbial clause is preposed to the *so*-clause and presents a condition to the following proposition and is part of the complement. Because of the structural and functional differences between main clauses and complement clauses, it is unlikely that a verb will select a declarative main clause as one of its complements. Instead, I propose that it here combines with a construction that does not specify a clausal category, namely a *so*-construction, as in figure 6. Whether the construction as a whole functions as a complement clause or declarative main clause is determined by whether it is selected as a slot-filler in another construction, as in (23), or not.

It should be noted that VF clauses, both with a conditional and with other functions may also occur in this constellation.

- (24) a. und **vermainten** wenn er darvon kâm so gâb er yn nichts  
 and meant when he there.from come.SBJ so give.SBJ he him nothing  
 ‘And thought that he would not give him anything if he got away.’ (Fortunatus, 184)
- b. unnd ist sein fürnemen **so bald** er gen hoff kommpst so wil er den maister  
 and is his intention as soon he against court comes so wants he the master  
 bestellen das ...  
 order that ...  
 ‘And it is his intention to order the master to ... as soon as he comes to court.’  
 (Fortunatus, 16)

As in (23), the complex in (24a) functions as the complement to the verb *vermainten*. Such uses suggest that the X-slot in the so-construction is not necessarily restricted to V1 clauses, but may also be filled by introduced VF conditionals.

Via the network that connects the different VF adverbials (which was visualized in figure 4) other cognitively closely related functional relations are associated with the pattern, for example, when X expresses a temporal frame in which Y is interpreted. As with the conditionals, the constructs that instantiate this pattern also do not necessarily function as a main clauses as a whole: In (24b), the adverbial frames the following proposition temporally. The entire complex again functions as a complement clause.

The examples above illustrate that the X so Y-pattern functions as one linguistic constituent. This is not restricted to those with the prototypical slot-fillers, but extends to other adverbials as well. What is more, they provide evidence that the construction as a whole does not necessarily function as an independent main clause, which proves that the main clause status of the Y-fillers is a feature of the typical slot-filler, not of the entire complex construction.

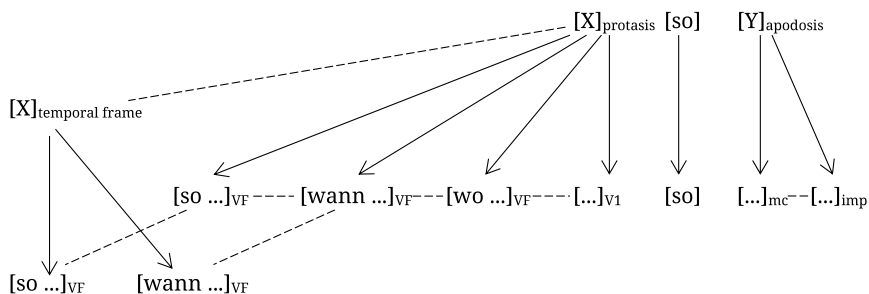


Figure 7. A simplified network representation.

The network suggested above is presented in simplified form in figure 7. The dashed lines indicate lateral relations, and the arrows instance links. Dominant is the protasis-so-apodosis-schema around which the other constructions center.

In the following section, the degree to which V2 main clauses are connected to this network will be evaluated. It will be argued that some of constructions are laterally related to lower-level VF + *so*-constructions and others to prototypical V1 protasis.

## 6 V2 clauses with LP *so*

What makes V2 clauses different from the V and VF clauses is that German V2 clauses are normally associated with assertion (Gärtner 2000, Freywald 2009, Jacobs 2017). As such, they are not compatible with a conditional function. It may come as no surprise that V2 clauses before LP *so* occur primarily with comparative (13.3%), additive (12.8%), and cause/reason meanings (12.8%). Most common, however, are cases in which the functional relation between the V2 clause and the following clause allows for multiple interpretations (18.6%).

- (25) Herre konig Ich han vwer swester zu eyner frauwen **So** habent Ir die myne auch zu  
 lord king I have your sister to a woman so have you the mine also to  
 eyner wybe darvor halt ich vch vor mynen Bruder  
 a wife therefore keep I you as my brother  
 'Lord King, I have married your sister, as you have married mine. Therefore I view you as  
 my brother.' (Pontus, 76rb)

For example, a V2 clause may express a comparative relation between the first and the second clause, which may simultaneously be construed as additive, as it may draw parallels between two situations to support a broader claim or perspective. This is exemplified in (25): The speaker – the king of the Scots – talks to the king of England and states that the relation between them is reciprocal: Both men are married to the wife of the other. The two sentences bring support for the proposition that follows, namely that the speaker sees the addressee as a brother. This is not merely a remark that is made on the side, but important for the further discourse: The king of the Scots subsequently proposes that a marriage may be a solution to the threat Pontus poses, because Pontus will see them as family if he marries into the family. For the following discourse it is thus not the comparative relation, but the additive support that is relevant.

A similar relation of similarity is found with VF adverbial clauses, in particular with those that are introduced by the conjunction *so*. This is exemplified in (26).

- (26) so du uns umb das gütt bracht hast **so** woltestu uns auch umb das hütlin  
 CONJ you us at the asset brought has so wanted.you us also at that hat  
 bringen  
 bring  
 'As you have squandered our asset, you wanted to squander our little hat as well.'  
 (Fortunatus, 146)

Cause/reason meaning was found with both V2 and VF clauses as well. This is illustrated below in (27a) and (27b).

- (27) a. Yedoch wer man herr Heynrich nit zû hilff kommen **so** wer er gefallen  
 yet was one lord Heynrich not to help come so was he fallen  
 'Yet no one had come to help lord Henrich. Thus he had fallen.' (Magelone, 630)
- b. so ir meines rats begerent **so** wil ich ratten das mich das best bedunckt  
 conj you my advice desire so want I advise that me that best deems  
 'Since you desire my advice, I will advise you what I deem best.' (Fortunatus, 40)

These examples illustrate that both comparative and cause/reason functional relations were found with V2 clauses and VF clauses, in particular those that were introduced by *so* (see (26) and (27b)). This is suggestive of a systematic form–function similarity between them. The association is weaker here than between the different VF constructions, because a similar systematic construction-internal correspondence in form and function as was found with the conjunctions is absent. Moreover, unlike VF and V1 clauses, V2 clauses are rarely found with the prototypical function of condition and no coercion takes place. As such, these constructions are only indirectly connected to the *so*-construction, and normally not directly motivated by the most entrenched schema.

However, there is a group of potential V2 clauses which seem to be hybrids between V1 and V2 clauses. On the surface, they are V2 clauses, but the clause can be construed as the protasis. This is exemplified in (28), repeated from (9).

- (28) **Nu** sollent Ir glauben an den heyligen machamet **so** wil ich vch zu grossen eren  
 now must you believe in the holy Machamet so want I you to great honor  
 vnd gude helffen  
 and goods help  
 'Now you must believe in the holy Machamet/Now, should you believe in the holy Machamet,  
 I will help you to great honor and goods.' (Pontus, 4ra)

As was mentioned in section 3.2.2, it is not always straightforward whether a string of adverb + finite verb marks the beginning of a main clause with an adverb in its initial slot, or whether the adverb precedes an adverbial clause with a verb in first position. The V1/V2 ambiguity mainly arises whenever the clause is introduced or preceded by *wann*, *dann*, *nu(n)*, *darumb*, and *(ye)doch* and the clause can be interpreted as the protasis. If such initial adverbial elements are analyzed as clause-external, these clauses would be V1 clauses incognito. Alternatively, a restricted group of V2 clauses may be selected as fillers for the protasis slot.

## 7 Adverbs and LP *so*

In section 4, we have seen that nonclausal constituents account for 16.5 percent of the elements preceding LP *so*, or 9.9 percent when removing the three outliers “Fortunatus,” “Melusine,” and “Wigalois.” Of these constituents, the vast majority were identified as adverbs (section 4.2). This section takes a further look at these constituents.

There are two lexical items that jump out in frequency: *doch* (63) and *darumb* (51). They make up 25.4 percent and 20.6 percent of all nonclausal constituents. This seems to support the generalizability of Thim-Mabrey’s (1987:206) observation that *doch* and

Table 7. Frequency of adverbs per text

Source	<i>doch so</i>	<i>darumb so</i>	Total of adverb <i>so</i>
Esel	0	0	0
Fortunatus	35	10	79
Huge Scheppel	1	0	6
Pontus	1	9	18
Magelone	0	0	0
Melusine	13	13	44
Rollwagen	0	4	9
Tristrant	2	3	12
Wigalois	0	6	10
Wilhelm	10	6	22
Total	62	51	200

*darumb* are the most frequent of such items. However, LP *doch so* and *darumb so* are not even remotely evenly distributed among the texts, as is illustrated in table 7.

More than half of the occurrences of *doch so* come from “Fortunatus,” whereas the use of *darumb so* is more evenly spread. Moreover, *doch so* is remarkably frequent in “Fortunatus” in comparison to other adverbs. This is confirmed with a chi-squared test ( $\chi^2 = 9.8$ ,  $df = 1$ ,  $p = 0.002$ ). Seeing that “Fortunatus” is part of Thim-Mabrey’s (1987) data set as well, the relatively high frequency of *doch so* may likewise be a reflection of its frequent use in “Fortunatus.” Nevertheless, even when disregarding this text, *doch so* is the second most frequent item.

Other adverbs that reoccur more than once in the data set are *auch* ‘also’, *yedoch* ‘yet’, *denn/dann*<sup>9</sup> ‘then’, *indem* ‘with that’, *besunder* ‘especially’, *noch* ‘still, yet’, *hierumb* ‘herefore, hereby’, *dartzu* ‘thereto’, and *da(r)mit* ‘therewith’. Note that these strings again exhibit intertextual variation: *Besunder/besonder so* is, for example, only attested in “Fortunatus” and “Melusine,” and *yedoch* is the most frequent adverb before *so* in “Huge Scheppel,” but is fully absent from “Melusine” for example. The individual texts thus show considerable differences, which suggests that not all sequential associations between the individual adverbs and *so* are fully conventionalized at a population level (Schmid 2020:88–100). The only pair for which one might posit a conventionalized lexically filled construction is *darumb so*, seeing that it is used repeatedly in most texts, as a quite stable form–meaning pairing.

Can all of them – including *darumb so* – be analyzed as slot-fillers in the *so*-construction? I argue against this. First, adverbs and adverbial clauses occur in different positions. Second, they fulfill distinct functions.

Let us first consider the different position of the adverbs in comparison to adverbial clauses. The adverbs tend to precede rather than follow vocatives. In this

<sup>9</sup> Until the eighteenth century, authors used *denn* and *dann* interchangeably without any semantic difference (Paul 2002:209).

way, they are unlike adverbial clauses which occur in a position closer to the finite verb. This is exemplified in (29).

(29) a. **Darumb** lieber Thinas lieber herr vnd freünd würde die bottschafft gar fleissig  
therefore dear Thinas dear lord and friend would.be the message completely urgent  
'Therefore, dear Thinas, dear lord and friend, the message would be quite urgent.' (Tristrant, 132)

b. Olieber Thinas vnd mein güter freinde. wilt du mir dann zů willen werden. so  
Odear Thinas and my good friend want you me then to wish become so  
sag meiner frawen. das bey der straß die sy reyten sol. ist ein pirßs wart  
tell.IMP my woman that at the road that she ride must is a hunting lookout  
'O dear Thinas, my good friend. If you want to do my bidding, tell my wife that there is a  
hunting lookout close to the road where she will ride.' (Tristrant, 132–133)

In (29a), the vocative that addresses Thinas intervenes between *darumb* and the finite verb *würde*, whereas in (29b) it precedes the V1 conditional. This indicates that the adverb and adverbial clause are not in paradigmatic relation to each other, in the sense that they do not fill the same slot. No conclusion can be drawn for prepositional phrases and noun phrases, which are not attested with a vocative and LP *so* in the corpus.

The considerable number of constructs in the data in which both adverb and adverbial clause are realized further supports a different position for adverbs and adverbial clauses. This is illustrated by (30a) and (30b). In such sentences, one finds the same adverbs that can combine with LP *so* in absence of a preposed clause and *nun*.

(30) a. **Darnach** so er dann bestattet ist so werden die edlen all kommen  
thereafter CONJ he then buried is so will the nobles all come  
'Thereafter, when he is then buried, all the noblemen will come.' (Melusine, 26)

b. Context: Es ist nit ein mensch. sunder ein rechter teüfel  
'It is not a man, but a true devil.'  
**doch** ist es das ich in vinde. so hoff ich in mit der hilfpe gotes wol zů  
still is it that I him find so hope I him with the help god PRT to  
überwinden vnd vmb zů bringen  
conquer and about to bring  
'Still, if I find him, I hope to conquer and kill him with the help of God.' (Melusine, 127)

The utterance in (30a) follows a sequence in which the speaker tells Reymund that he has to go and let people find his lord, carry him to Poitiers, and bury him with a lot of sadness.<sup>10</sup> The speaker speaks about the immense sadness that the wife and child of Reymund's lord will feel. He suggests that Reymund should comfort them. The adverb *darnach* places the proposition of the main clause explicitly after this series of events. The adverbial clause may likewise be interpreted as framing the events of the main clause temporally, but it is also the reason for the arrival of the noblemen. While the noblemen will come after the burial and Reymund's comforting of his lord's family, only the burial and not the comforting is the reason. This suggests that the two

<sup>10</sup> *Darumb wirt man in sůchen vnd in ze letst vinden vnd wirt in mit grosser klag gen Poitiers fůren vnd mit newer klag vnd betrůbnuß begraben* 'Therefore people will search for him and find him finally and will carry him with great sorrow to Poitiers and bury him with new sorrow and sadness.'



adverbials contribute two different temporal settings. In an alternative interpretation, *darnach* refers not to the comforting or the entire sequence of events, but specifically to the earlier mentioned burial. This is made explicit by the adverbial clause modifying the adverb. Even in this reading, *darnach* itself connects to a previous element in the discourse.

In (30b), however, an analysis in which the adverbial clause further restricts the adverb is not available. Here, the concessive conjunctive *doch* precedes the V1 conditional, which is followed by LP *so*. The relation between the main clause following *so* and the sentence that precedes *doch* is one of concession: Despite the expectation set by the first sentence – that the speaker is facing a true devil and thus a seemingly invincible enemy – the speaker hopes to conquer and kill him. The relation between the V1 clause and the main clause is (relevance) conditional: If the speaker finds him, the speaker hopes to kill him.

Note that these co-occurrences of adverb and adverbial clause before LP *so* are not restricted to so-called central adverbial clauses (e.g., Haegeman 2004, Frey 2020), but are attested with peripheral adverbial clauses as well. This is illustrated in (31).

- (31) **Darumb** so ich erkenn und weiß, das ich noch nyemandt dich genügsamlich geloben  
 Therefore CONJ I recognize and know that I nor no.one you abundantly praised  
 mügent so wil ich dich biten ...  
 must so want I you ask ...  
 ‘Therefore, as I recognize and know that neither I nor anyone else has praised you abundantly,  
 I want to ask you ...’ (Wilhelm, 208)

The adverbial clause functions as a justification for the request by the speaker. Such justification clauses are not event-related adverbials, but get an epistemic reading which is thought to be more loosely connected to the clauses than central adverbial clauses, such as temporal clauses. In other words, *darumb* may even precede adverbial clauses that have been considered to be not fully integrated, making it unlikely that it is itself integrated.

- (32) Doch under ander schanckungen so het Andolosia ...  
 still under other gifts so had Andolosia  
 ‘Still, amongst other gifts, Andolosia had ...’ (Fortunatus, 181)

Despite the low amount of prepositional phrases, the data set contains a few cases in which adverb and prepositional phrase co-occur. This is illustrated in (32). Such examples suggest that PPs and adverbs are also not in paradigmatic relation. More data is needed in order to draw reliable conclusions.

The examples above already suggest that the adverbs have a similar function to *so*, not to the adverbial clauses: Adverbs are backwards-oriented elements. They take up the previous discourse themselves. In contrast, adverbial clauses are more forward-oriented, setting a frame in which the following utterance is to be interpreted. What most of the adverbs have in common is that they are not prototypical circumstantial adjuncts, but instead are conjunctives, each connecting to the preceding discourse themselves (Halliday & Matthiessen 2014:156–9). These adverbs are more strongly associated with a specialized function than *so*. For example, *doch* typically connects two elements via a concessive relation, and *darumb* via a causal, reason, or purpose

relation. This is also the case when there is no adverbial clause. This is exemplified in (2) and (6b), repeated in (33) below. For (2), the sentence preceding is added in (33a).

- (33) a. Context: Doch lieber sun jch wil vnd muß ein verre vart zû den heiligen thûn die ich vor langest gelobet hab zû thûn  
 ‘Still, dear son, I want to and have to make a long trip to the holy one, which I have promised to do for a long time.’  
 Vnd **darumb** so wil ich dir mein landt eingeben zû behûten.  
 and therefore so want I you my country give to keep  
 ‘And therefore, I want to give you my country to keep.’ (Melusine, 149)
- b. Context: Die frau gedacht tausent Cronen wâren bald verdienet  
 ‘The woman thought: A thousand crowns would be quickly earned.’  
**doch** so was sy so eerber daz sy es nit thûn wolt.  
 still so was she so honorable that she it not do wanted  
 ‘Though she was so honorable that she would not do it.’ (Fortunatus, 126)

In both examples in (33), it is the initial adverb that takes up the proposition of the previous clause: That is, both *darumb* and *doch* have more specialized semantics than *so* and explicitly express the way in which this proposition should be understood, with *darumb* expressing causal relations and *doch* expressing concession. They themselves have a connective function, signaling more precisely the way in which an element in the preceding discourse is to be understood in relation to the proposition that follows.

Interestingly, the studies on Scandinavian *så* discussed in section 2.2 argued that *så* does not function primarily as an element that syntactically integrates an adverbial, but as an element that marks a shift in the discourse (Sollid & Eide 2008, Nordström 2010, Eide 2011). These analyses are quite compatible with a unified account of adverb and conditional clauses. Conditional clauses have been analyzed as topics (Haiman 1978), specifically as frame-setting topics, just like the Scandinavian adverbs that precede LP *så*. *Så* then signals a shift in frame-setting. This function may be seen as an extension of the use of *så* after conditional clauses, as has been suggested by Sollid & Eide (2008). Other adverbial clauses may be analyzed in a similar fashion (Chafe 1984).

In the case of ENHG *so*, the adverbs that occur in front of *so* are not primarily frame-setting adverbials, but elements that connect themselves to the previous discourse. While it may be the case that *so* nonetheless marks a shift in frame-setting, *doch* and *darumb* do not denote the topic. It is left for further study to compare the use of adverbial clauses with and without *so* to see whether they contrast in ENHG regarding this type of topic continuity. That constructions of this type may be used to signal such discourse functions has been argued, for example, by Breindl (2011), who claims that certain V3 constructions in Present-Day German are specifically used to signal topic shift.

## 8 Conclusion

The study presented in this article illustrates the use of ENHG LP *so*. The main aim was to present a quantitatively informed picture of the uses of this element and to show

the types of adverbial clauses it followed. Second, the question was raised as to how *so* following main clauses fits into the picture. Finally, it was considered whether and to what degree the use of *so* following adverbs should be analyzed in the same way as *so* following adverbial clauses.

The study confirms that LP *so* is primarily found with clausal antecedents. V1 conditional clauses and VF adverbial clauses were found to be the predominant fillers. This is now quantitatively supported, and a *so*-construction was proposed. The sequence [ $X_{clause}$  *so*  $Y_{clause}$ ] was argued to form a network of constructions, in which *so* prototypically links a V1 adverbial clause with a main clause, in such a way that the adverbial clause functions as the protasis to the apodosis.

The data require a more nuanced picture, which is sanctioned in the network. First,  $Y$  is not necessarily a declarative main clause but may be an imperative. Moreover, the entire complex does not need to function as an independent clause. Therefore, it was argued that there is an overarching *so*-construction, and we are not dealing with an element that solely integrates constituents into a main clause. This *so*-construction may function in its entirety as a complement clause, a declarative main clause, or an imperative. Second,  $X$  is not necessarily adverbial, but other V1 patterns can be coerced into the conditional meaning. This supports a [V1 *so*  $Y$ ] schema in which V1 functions as the protasis of the apodosis  $Y$ . VF clauses also occur most often as protases but are not restricted to this function, nor can it be posited as their overarching function. This brings us to the third point: The function of the construction is not necessarily conditional. In particular with VF adverbial clauses, certain lower-level constructions are more strongly associated with distinct, but cognitively closely related meanings. It is therefore appropriate to posit lower-level constructions, in which *so* is used to connect various types of frame-setters to propositions. As a consequence, at a higher level of abstraction, the meaning of the *so*-construction with VF clauses is more vague than with V1 clauses. The *so*-construction does not have a dedicated verb position, but this is specified in the slot-fillers. Hence, we are not dealing with an otherwise weakly supported or even unsupported clausal construction with a V3 slot in the construction, but with a slot-filler in the second slot that has a verb in initial position, resulting in a construction with V3.

Main clauses preceding LP *so* were found to be functionally connected to the following proposition via inference or relations signaled with adverbs like *doch*. They were not normally coerced into a conditional function. In these cases, the functional relation is more often ambiguous than with V1 and VF clauses and other relations like addition are also attested. Still, partial functional overlap was found with specific VF adverbial clauses. In addition, clauses with an adverb in preverbal position are highly similar to V1 conditionals connecting via V1 conditionals to the network.

Differently, patterns with adverbs were argued not to be the result of a paradigmatic expansion of the protasis or frame-setting slot that is normally filled by adverbial clauses. In constructs in which an adverb precedes *so*, *so* does not connect the adverb to the following clause, but links another piece of discourse to it. The adverb has a connective function similar to that of *so* and the adverb regularly collaborates with LP *so*, specifying more precisely the relation between the preceding discourse and what follows.

This account has some consequences for the analysis of *so* itself. Earlier studies have argued that *so*'s main function is resumptive and used to integrate adverbials into the following main clause. This focus on adverbial clauses may have led to an overemphasis on the dependent status of the element preceding *so*, leading to the conclusion that *so*'s main function is pronominal (Paul 2002) or resumptive (Meklenborg 2020) in these constructions. While this resumptive or anaphoric character of *so* is definitely easily associated with the construction, I have argued that *so*'s main function is to signal a construction that prototypically construes the element that fills the slot before *so* as the protasis of the filler of the slot after *so*, but may signal more generally the interpretation of a proposition in a specified frame. In this way, the analysis is highly similar to what Nordström (2010) has proposed for Swedish adjunctive *så*; however, in contrast to what she argues for Swedish, the most frequent adverbs in ENHG do not fulfill this frame-setting role, but are themselves connectives.

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