

Rhetorical relations and verb placement in Old High German

Roland Hinterhölzl and Svetlana Petrova

1. Introduction

The present paper approaches the issue of salience in discourse from the perspective of historical linguistics and the theory of language change. In particular, we are interested in discerning and describing linguistic phenomena which are formal correlates of salience and related notions in the system of Old High German (henceforth OHG). In particular, we are interested in finding out how the expression of features related to salience influences the development of novel forms and patterns in the history of German.

According to the common definition employed in this volume, salience reflects “the degree of relative prominence of a unit of information, at a specific point in time, compared to other units of information” (Ramm, this volume). A variety of linguistic factors which determine the referent’s current degree of salience have been discussed in the literature, foremost cognitive status (given vs. new), grammatical role (subject vs. non-subject) and animacy (animate vs. non-animate). It is also claimed that there is a special matching relation between the referent’s current degree of salience and the form of the linguistic expression used to refer to it (Gundel et al. 1993) also called ‘referential choice’ (Krasavina, this volume). At the same time, languages employ special strategies to mark shifts in the degree of salience with respect to the preceding context, e.g. when a referent with a lower degree of salience is promoted to a higher degree of prominence at a particular stage of the discourse, also called ‘salience promotion’ (see also Filchenko, Chiarcos, all this volume). Addressing the issue of referential choice and the form of anaphoric expressions in OHG, Petrova and Solf (t.a.) have argued that salience promotion as a main principle governing the use of demonstratives vs. personal pronouns in modern German (see Bosch et al. 2003, Bosch and Umbach 2007), has applied already at the earliest stages of the language.

Yet the use of anaphoric expressions is only one domain in which salience-related features find a formal expression in the system of OHG. In the following contribution, we will argue that pragmatic factors related to salience and discourse coherence take formal realization in syntax as well, more precisely in the structure of the left periphery of main clauses in OHG. In particular, we will focus on the principles determining the position of the finite verb in the sentence. In this respect, the notion of salience and its realization are crucial for the explanation of structural variation in the left periphery of main clauses in OHG.

On the basis of evidence from the OHG Tatian, a major representative of the OHG corpus (see section 2 below), we distinguish verb-initial (V1) and verb-second (V2) as the two basic word order patterns at this particular stage of the development of German. In approaching the principles governing the distribution and functional properties of these patterns, we first draw the attention to the correlation between salience and syntactic position in the clause. Following initial observations outlined in Hinterhölzl et al. (2005), we show that the positional realization of referring expressions in OHG is sensitive to the degree of salience of the particular referent in the sense of givenness and accessibility in the discourse. So expressions referring to salient, i.e. pre-mentioned or situationally inferable, referents are realized in clause-initial position followed immediately by the finite verb, which results in V2 structures on the surface. In contrast, non-salient, i.e. discourse-new referents are placed postverbally yielding V1 on the surface. Following this, we conclude that V2 is used as a means of marking prominence on the constituent placed in clause initial position and separated from the rest of the utterance by the finite verb.

However, this correlation can be overwritten by discourse-structural factors, as is evidenced by the occurrence of V1 orders with given discourse referents. In some of the cases, the factors leading to V1 clearly pertain to discourse organization proper, i.e. they mark the beginning of a new chapter or episode in the structure of the text. With Grüning and Kibrik (2005), we can assume that referential distance across episode/paragraph boundaries lowers the status of salience of the antecedent which results in postverbal realization of the referring expression. In this case, the process of ‘salience demotion’ takes place (see also Filchenko, this volume). But in other cases, V1 with given referents occurs within one and the same episode. In these cases, however, the sentence conveys an especially important event or state which is crucial to the further development of the discourse. In attempting to provide a unified account for all cases of V1, we invoke the

distinction between coordination vs. subordination in discourse as outlined in the Segmented Discourse Relation Theory SDRT by Asher & Lascarides (2003) (see also Ramm, this volume). We analyze the instances of V1 and V2 from the perspective of the features viewed as constitutive for the definition of two basic types of rhetorical relations in discourse. As a result, we relate V2 to subordination, while all types of V1 are attributed to the realization of coordination in discourse. We conclude that word order and especially verb placement in OHG contribute to the realization of a dynamic, multi-layered discourse structure and are therefore best described as a formal correlate of text coherence and discourse relations in the system of OHG.

The implications of this study are twofold. For language theory, it outlines the interaction between the word order of constituents and their rhetorical and discourse-functional contribution in the text. For historical linguistics, it proposes an alternative approach to the research on word order variation and the development of V2 in the Germanic languages which sheds new light on these issues.

2. Philological issues and empirical data base

The OHG corpus comprises texts of different length, genre, and quality of transmission composed in the time between around 750 and 1050. Of course not all of them are equally appropriate for syntactic research (cf. Fleischer 2006). One of the largest prose texts from the beginning of the OHG period is the Tatian text, a gospel harmony translated from Latin and written down in the scriptorium of Fulda by at least 6 scribes. This text has been deliberately chosen for the purpose of the present investigation. Although having been considered for a long time a slavish word-for-word translation of the Latin original and therefore unsuitable for any investigation on word order, this text has been rediscovered as a good basis for research due to novel insights into the main principle of translation applied in it. In the manuscript, as Picture 1 of the Appendix shows, the Latin source and the OHG translation are attested as two juxtaposed columns. Only recently, it has been observed that each line in the OHG text translates exactly the same material found in the corresponding Latin line; departures from this basic principle are extremely rare within the whole text. A new diplomatic edition made available by Masser (1994) reflects these major characteristics and makes it possible to compare the source and target text,

cf. Picture 2 of the Appendix. The translating technique applied in the Tatian text certainly imposes restrictions on the possibility of rendering genuine word order patterns in the translation (cf. Masser 1997 a and b), while the *deviations* from the Latin source can be viewed as evidence for genuine OHG structures (cf. Dittmer and Dittmer 1998; Fleischer, Hinterhölzl and Solf 2008).

Therefore, we base our study on deviating examples from the Tatian text exclusively. The corpus of the study comprises the complete sample of deviations in constituent order found in the text portions of three scribes, a total of 1.658 clausal structures. These examples were fed into a corpus and annotated for various morpho-syntactic and information-structural features by project B4 of Collaborative Research Center 632 “Information Structure” (SFB 632 “Informationsstruktur”) at Humboldt University Berlin. The corpus is searchable via the ANNIS database developed by project D1 of SFB 632 at Potsdam University. For more details concerning the design of this corpus and the use of the ANNIS database, cf. Petrova et al. (t. app.).

3. The point of departure

3.1. Distribution of patterns and aim of the study

Some of the most puzzling questions in the diachronic syntax of the Germanic languages in general, and of German in particular, concern the principles determining the placement of the finite verb in the earliest records as well as the subsequent establishment of the word order regularities in the modern systems of these languages. To illustrate the degree of word order variation in early Germanic, we provide some examples from one of the earliest OHG records, the Isidor translation dated back to the time around 800. Here, the finite verb may occur in any position in a main declarative clause, for example in initial position (1), in second position (2), or in a later position, following more than two and sometimes all of the remaining constituents of the clause (3). Note that all sentences deviate in word order from the corresponding Latin original¹:

- (1) *Quhad got, see miin chnecht* (V1)
 spoke God behold my child
 ‘God spoke: “Behold my child”’ (I 330)
lat. Ecce, inquit, puer meum

- (2) *Ih faru dhir fora* (V2)
 I go you-dat. before
 ‘I’ll go before you’ (I 156)
lat. Ego ante te ibo
- (3) *Dher selbo forasago auh in andreru*
 the same prophet also in another
stedi chundida (Vend)
 place announced
 ‘The same prophet announced in another place too’ (I 348)
lat. [...] alias [...] testatur idem propheta

Table 1 provides the absolute number of word order patterns in main declarative clauses formed against the Latin original in Isidor. This overview shows that the patterns like in (2) and (3) appear with a considerable frequency in the document while V1 is found only rarely in clauses formed against the Latin word order.²

type of pattern	V1	V2	Vlate/end
number of occurrence in Isidor (against the Latin structure)	6	74	45

Table 1: Frequency of word order patterns in main declarative clauses in Isidor formed against the Latin original

Exploring the frequency of these word order types in the Tatian database described in section 2 above, we discover a rather different picture. Here, mainly V1 and V2 occur in considerable numbers against the structure of the Latin original³. Patterns in which the verb occurs in a position later than the second one like in (4) are formed against the original only rarely, and cases with the verb at the absolute end of the sentence as in (5) are mere exceptions⁴:

- (4) *thanan tho zacharias uuard gitruobit*
 then then Zacharias became troubled

‘Then, Zacharias was troubled’ (T 26, 20)
lat. & zacharias turbatus est

- (5) *min tohter/ ubilo fon themo tiuuale giuuegit ist*
 my daughter badly by the devil.DAT tortured is
 ‘My daughter is badly tortured by the devil’ (T 129, 10-11)
lat. filia mea/ male a demonio uexatur

type of pattern	V1	V2	Vlate/end
number of occurrence in Tatian (against the Latin structure)	96	382	11

Table 2: Frequency of word order patterns in main declarative clauses in Tatian formed against the Latin original

From this we can conclude that a process towards stricter verb fronting in main declarative clauses and a considerable reduction of the Vlate/end pattern has taken place already within the OHG period. One question arises from this observation, namely whether the distribution of the main competing patterns, V1 and V2, obeys certain rules in the system that emerges in the Tatian, and if so, what kind of principle may be made responsible for the choice of one pattern over the other. This question will be addressed in the following section.

3.2. Previous accounts

In the most recent investigation on the structure of the sentence left periphery in OHG, Axel (2007) claims that the verb-second property typical for modern German has already developed at this early stage of the language. In the generative framework which Axel adopts, a constitutive feature of the verb-second rule is that the inflected verb obligatorily moves to the head C° of the maximal projection CP. Additionally, in main clauses, the specifier position of CP is filled either by i) movement of a phrase bearing one of the operator features +topic/+focus/+wh (operator movement), or ii) movement of a phrase that occupies the highest position in the middlefield of the corresponding structure (stylistic fronting, cf. Fanselow (2003)). If

none of these movement operations applies, a non-referential expletive *es* is merged in Spec,CP.

Turning to OHG, Axel shows that both operator movement as well as stylistic fronting occur, while the third option, the placement of a base-generated expletive in Spec,CP has not emerged yet. As a consequence, sentences in which neither operator movement nor stylistic fronting can apply remain as V1 (analyzed as the verb moving to C° with Spec,CP remaining empty). This implies that the rule of V2 was not fully grammaticalized yet in OHG.

But what is then constitutive of the word order in OHG? To explain why Spec,CP remains empty in OHG, Axel refers to the fact that in most of the cases of V1, the sentence contains the adverbial *tho* ‘then’ in postverbal position taking the function of a narrative-expressive particle indicating sentence type just like other particles, e.g. the interrogative particle *inu/eno*, the affirmative particle *ia* or the imperative particle *nu* etc. Once sentence type has been indicated by the particle, the application of stylistic fronting is unnecessary leaving Spec,CP empty in the corresponding cases.

Expressivity as a factor leading to V1 in early Germanic is known from a number of previous works on the matter. In his very influential study, Fourquet (1974) has put forward the idea that verb fronting in early Germanic is used to highlight the entire contents of a sentence. Much earlier, Ries (1880, 19) had observed for Old Saxon that V1 occurs in sentences reporting an outstandingly important event or property. As for Old English, van Kemenade (1987, 44) reports that in the Anglo-Saxon Chronicle, V1 is especially characteristic of one particular section which is “famous for its lively narrative style”.

But expressivity, or stylistic vividness are rather vague terms when it comes to differentiating the domains in which the two main patterns in declaratives in OHG apply. All accounts mentioned before shift the attention to the broad field of pragmatics as the source of additional factors influencing word order in early Germanic. In this respect, they are representative of a long tradition of research whose attempts in explaining this issue should be reconsidered from the perspective of modern linguistic theory. In this respect, we want to analyze more thoroughly the functional domains in which the two main patterns of OHG main-clause syntax occur in order to be able to isolate operational features associated with each of them in OHG.

4. Information structure and word order in OHG

Hinterhölzl et al. (2005) launch a large-scale investigation on the sensitivity of word order in OHG to factors pertaining to information structure. In line with the account proposed by Molnár (1993) and Krifka (2007) among others, information structure is understood as a complex linguistic phenomenon comprising functional distinctions of categories on the following three layers: i) the informational status of referents (theme vs. rheme or given vs. new); ii) the predicational structure of the utterance (topic vs. comment); and iii) the communicative weight or relevance of sentence constituents (focus vs. background). These layers of information structure are viewed to function independently in the language but to interact with each other in yielding the full picture of the information-structural shape of an utterance.

In a first step, Hinterhölzl et al. (2005) investigate the relationship between the informational status of discourse referents and their positional realization with respect to the finite verb in the clause. The notion of ‘discourse referents’ is understood in the sense of Karttunen (1976) who applies this term to individuals (persons, events, facts) that can be referred back to in a coherent discourse by coreferential definite expressions, i.e. pronouns or full noun phrases. The identification of the informational status of discourse referents is based on taxonomies proposed by Prince (1981) and Dik (1989) who argue for a more fine-grained system in which ‘given’, i.e. explicitly pre-mentioned material, and ‘new’, i.e. novel, non-inferable information represent the two endpoints of a scale including different subtypes of textually or situationally accessible entities in between.

The investigation of a possible correlation between verb placement and discourse status of constituents in instances of the OHG Tatian text reveals two striking tendencies. On the one hand, there is a regular preference for V1 in presentational sentences which introduce new referents to the context. This is shown in (6) through (8). It can be observed that V1 in OHG is the constant pattern corresponding to a variety of different orders in the Latin original:

- (6) [The forty-days’ old Infant is presented to the Lord in the temple in Jerusalem and blessed there by Simeon. After that, the holy family meets the prophetess Anna.]
- | | | | | |
|-------------|------------|-------------|-------------|-----------------|
| <i>uuas</i> | <i>thô</i> | <i>thâr</i> | <i>anna</i> | <i>uuizzaga</i> |
| was | then | there | Ann | prophetess |

‘There lived there at that time the prophetess Anna’ (T 38, 22)
lat. & erat anna proph&issa

- (7) [in the Nativity of Christ]
uuarun thô hirta In thero lantskeffi
 were then shepherds in this region
 ‘There were shepherds in the same country’ (T 35, 29)
lat. Et pastores erant In regione eadem

- (8) [Jesus tells a parable about an unjust judge who was asked by a widow to avenge her against her adversary]
uuas thar ouh sum uuitua/ In thero burgi
 was there also certain widow in this town
 ‘There uuas a widow too in that city’ (T 201, 2)
lat. Vidua autem quaedam erat/ In ciuitate illa

On the other hand, sentences maintaining an already introduced discourse referent as in (9) or involving a referent considered accessible via a bridging relation to an already established entity as in (10) show a regular tendency for V2 against the underlying word order of the Latin original. In other words, V2 appears to be bound to referents that are already salient in the discourse:

- (9) [Jesus compares himself with a shepherd. *ih bin guot hirti* = ‘I am a good shepherd’]
guot hirti/ tuot sina sela furi sinu scaph
 good shepherd does his soul for his sheep
 ‘The good shepherd gives his soul for his sheep’ (T 225, 16-17)
lat. bonus pastor/ animam suam dat pro ouibus suis

- (10) [The previous sentence introduces Zacharias who is married to one of the daughters of Aaron]
Inti ira namo uuas elisab&h
 and her name was Elizabeth
 ‘and her name was Elizabeth’ (T 26,2)
lat. & nomen eius elisab&h

The text also provides numerous examples of ‘minimal pairs’ where the initial placement of the verb in the first sentence introducing new discourse

referents is immediately suspended for a V2 clause in the following utterance making a statement on the referents just established. Consider the following small discourse:

- (11) [the beginning of the story about the Nativity of John the Baptist]
- a. uuas *In* *tagun* *herodes[...]*/
 was in days Herod.GEN
 sumer *biscof[...]*/
 some bishop and wife him.DAT
- b. *siu* uuarun *rehtiu* *beida* *fora gote*
 they were righteous both before God.DAT

‘In the days of Herod[...], there was a certain priest [...] and his wife [...]. They were both righteous before God’ (T 26, 3)

lat. a. *Fuit in diebus herodis regis/[...]quidam sacerdos/[...]& uxor illi[...]*/b. *erant autem iusti ambo ante deum*

This evidence provides significant points in favor of the interdependence between verb placement and information structure in OHG. It shows that new referents follow the verb, while referents already salient in the context precede it. What kind of generalization can we draw from these observations?

Looking at the data from the perspective of the model developed by Sasse (1995), we discover that the sentences we are dealing with are typical representatives of thethetic vs. categorical type of judgments. By definition, categorical sentences have a bipartite structure divided into a predication base, or topic of the sentence and a comment on this topic. This is the case in (9), (10), and (11b). Here, the finite verb separates from the rest of the utterance exactly that constituent which provides the sentence topic (both in line with the familiarity as well as the aboutness concept, for a discussion see Frey 2000, 137-138). By contrast, the presentational sentences in (6) through (8) and in (11a) are typical instances of thethetic type of judgments. The most significant feature of such instances is that they represent “monominal predications” (Sasse 1995, 4) in which no particular constituent is taken as the predication base of the utterance; rather, the entire sentence, including all participants, is asserted as a unitary whole⁵.

Therefore, we can conclude that the position of the finite verb in OHG is firmly related to the realization of the topic-comment structure in a sentence. As a rule, the finite verb separates the topic expression from the

comment of the utterance. In the most cases, this position is occupied by an expression referring to the most salient referent in the context, which is either previously mentioned or situationally accessible at that particular point of the discourse. Remarkably, novel referents serving as the predication base of a categoric utterance also share the positional properties of canonical (i.e. salient) topics in OHG. Consider the bare plural *fohún* ‘foxes’ in (12) which is not previously established in the context but is nevertheless placed in preverbal position. The sentence receives an interpretation according to which it makes a statement about a set of individuals of the denoted kind. Thus, the kind-referring bare plural in *fohún* is the aboutness topic of the utterance⁶:

- (12) [a chain of coordinate conjuncts claims that every creature has a home to stay over night except the Son of the Lord]
fohún habent loh
 foxes have holes
 ‘The foxes have holes’ (T 85, 25)
lat. vulpes foueas habent

In case no topic-comment distinction applies, the verb moves to the position in front of all arguments to indicate that none of them functions as the sentence topic and that the entire proposition has to be interpreted as wide (sentence) focus.

These observations are summarized in (13):

- (13) a. [Vfin....DR_{new}...]FOCUS (V1)
 b. [DR]_{TOP} [Vfin.....]COMMENT (V2)

Lenerz (1984, 151–153) and Ramers (2005, 81) also observe that V1 is typical for presentational sentences in OHG. They conclude that V1 in OHG is used when the sentence conveys discourse-new, or rhematic material only. Looking at the examples above, we nevertheless discover that new information is established only in the subject expressions, while the remaining part of the sentence is given; see e.g. the adverbials *In thero lantskeffi* ‘in this country’ in (7), or *In thero burgi* ‘in this town’ in (8). From this perspective, the notion that V1 occurs in all-new sentences cannot be maintained. Rather, verb fronting signals that none of the constituents provided in the sentence takes over the function of the sentences topic because no topic-comment division applies in these utterances.

5. Discourse structure and the distribution of word order patterns in OHG

5.1. Evidence for discourse relations

On a closer look, it turns out that V1 is frequent in sentences with given arguments as well. Consider the subjects in (14) and (15):

- (14) [A Pharisee invites Jesus to dine in his house. Jesus enters the house and sits down to eat. The Pharisee realizes that Jesus has not washed his hand before dinner and criticizes him on that occasion]

bigonda *ther* *phariseus* [...] *quedan*
 began this Pharisee speak.INF
 ‘The Pharisee began to speak’ (T 126, 5-6)
lat. Phariseus autem coepit [...] *dicere*

- (15) [Jesus starts telling a parable on whether it is allowed to heal on Sabbaths]

Quad *her* *tho* *zi then giladoten/* *ratissa*
 spoke he then to the invited parable
 ‘Then he told to the guests a parable’ (T 180, 9-10)
lat. Dicebat autem & ad Inuitatos/ parabolam

The full definite expression *ther phariseus* ‘the Pharisee’ in (14) as well as the personal pronoun *her* ‘he’ in (15) refer to entities already introduced in the previous discourse. But although they display pragmatic properties of sentence topics like givenness/accessibility, definiteness and referentiality, they fail to occupy the topic position established in (13b) above.

To explain these data, we need to find a common basis to account for the postverbal placement of both given and new referents in OHG. In our opinion, this may be achieved if one broadens the account on information packaging beyond the scope of the informational status of individual discourse referents in the sentence and takes into consideration the discourse-functional role of the utterance in the narrative structure of the text.

5.2. Basic notions of discourse analysis

We shall briefly outline some basic notions and distinctions in current research on discourse structure in order to show in our analysis that important

discourse-related features of utterances correlate with the two main word order patterns in OHG, thus allowing the conclusion that variation in verb placement in OHG is pragmatically driven.

A particular model relating word order in early Germanic to discourse organization is proposed by Hopper (1979a and b) who distinguishes between the part of main action, i.e. foregrounding, and the part of supportive information, i.e. backgrounding in text structure. Hopper identifies some distinctive features associated with these notions. Typically, foregrounding is conveyed by dynamic, perfective verb meanings providing temporal progression on the level of main action. By contrast, backgrounding establishes temporal relations of simultaneity to main actions induced by the durative semantics of the predicates involved. In this way, Hopper establishes a relation between discourse structure and aspectuality of the verb in the sentence, a feature which shall turn out to be important in our interpretation of the examples as well.

Moreover, in his survey of formal realizations of foregrounding and backgrounding in a variety of non-related languages, Hopper comes across a fundamental matching relation between word-order, especially verb placement, and discourse structure in the text of the Old English *Anglo-Saxon (Parker) Chronicle* as a representative of the early Germanic tradition. He observes that backgrounding parts employ SVO order, i.e. medial verb placement, whereas foregrounding parts generally display peripheral verb placement, either verb-final or verb-initial. The distribution of the latter two patterns is said to be a matter of further “discourse considerations” (cf. Hopper 1979b, 221): verb-initial is viewed to occur in introductory parts, that is, at the beginning of new episodes, whereas verb-final is bound to episode-internal sentences.

Recent approaches to discourse semantics also take into consideration the temporal relation between clauses as a major device for text organization and coherence (see Claus (this volume) for the role of discourse participants in imposing a temporal structure on the narrated world). Two approaches that we will take into account are the Rhetorical Structure Theory (RST) by Mann & Thompson (1988) and the Segmented Discourse Relation Theory (SDRT) by Asher & Lascarides (2003). A basic assumption in both of them is that discourse coherence is achieved only if each utterance makes an illocutionary contribution to another utterance in the context. This is achieved when discourse units establish different kinds of rhetorical relations among each other, thus creating a dynamic hierarchical structure in discourse.

According to RST and SDRT, the rhetorical relations linking together the contents of single discourse units can be of the following two kinds:

- two units can display no dependency relation among each other but share the same level of discourse hierarchy thus creating a multi-nuclear relation in the terms of RST or a relation of coordination in the terms of SDRT
- two units can build a dependency relation creating a hierarchical structure in discourse, i.e. a nucleus-satellite relation in RST or a relation of subordination in SDRT.

In order to show how verb placement participates in achieving discourse hierarchy in texts of the early Germanic tradition, we chose the model of SDRT. Although the inventory of individual discourse relations is still under discussion, there is overwhelming agreement on the basic features distinguishing coordination vs. subordination as the two basic types of linking. Both are associated with a particular prototypical rhetorical relation displaying some well-defined, complementary features (Asher & Vieu 2005). Subordination is typically represented in *elaboration*, i.e. when a unit β provides more detail on another unit α situated on a higher level of discourse structure. In this case, the two events (α , β) temporally overlap. Further, the rhetorical relation of *continuation* applies if two or more subsequent units β and γ are equally situated on a lower level of dependency with respect to a higher unit α such that both β and γ elaborate on α . By contrast, coordination, which holds between units situated on the same level of discourse hierarchy, is typically represented in the relation of *narration*. Narration is established e.g. if two discourse units (α , β) display a temporal relation of succession and β continues the narrative sequence in discourse.

Looking at the distinctive features of coordination vs. subordination in SDRT, we discover a number of parallels between them and the discourse properties of the word order patterns discussed in the foregoing data analysis. These will be discussed in turn in the following two sections.

5.3. V2 as a means of subordination in discourse

From the perspective of the discourse relations distinguished above, the instances of V2 in (9), (10) and (11b) immediately evoke parallels to the subordinative type of linking. Consider also the following small discourse⁷:

(16) [Jesus and his disciples approach the gates of a city called Nain and witness the following scene]

- | | | | | |
|----|--------------|---------------------|--------------------|-----------------|
| a. | <i>senu</i> | <i>arstorbaner/</i> | <i>uías</i> | <i>gitragan</i> |
| | behold | dead man | was | carried |
| | <i>einag</i> | <i>sun</i> | <i>sinero</i> | <i>muoter</i> |
| | only | son | his.GEN | mother |
| b. | <i>Inti</i> | <i>thiu</i> | <u><i>uuas</i></u> | <i>uuituuua</i> |
| | and | she | was | widow |

‘behold, a dead man was being carried out, the only son of his mother and she was a widow’ (T 84, 22-24)

lat. a. *ecce defunctus/ efferebatur. filius unicus/ matris suae.* b. & *haec uidua erat.*

In (16b), the finite verb is shifted from the sentence final position in the Latin source to the position between the topic and the comment in the OHG translation. Clearly, the sentence in (16b) provides additional information on the discourse referent *muoter* ‘mother’ introduced by the preceding sentence. With respect to the temporal relation of the two sentences, we can observe that the event in (16b) overlaps with the event in (16a). Taken together, all these features favor the identification of elaboration among (16b) and (16a) as the prototype of the subordinating kind of linking in discourse.

In other parts of the text, we discover chains of utterances equally depending on a higher unit in discourse structure. Consider (17b–e) which assign different properties to the referent *scríbera* ‘the scribes’ introduced in the opening sentence (17a). V2 is established by the regular insertion of the pronominal subject referring to the topic referent of the entire text portion (topic continuity):

- | | | | | | | |
|------|----|-------------|------------------------|---------------|---------------------------|------------------|
| (17) | a. | <i>obar</i> | <i>stuol/</i> | <i>moyses</i> | <i>sâzzun</i> | <i>scríbera/</i> |
| | | over | seat | Mose.GEN | sat | scribes |
| | | <i>Inti</i> | <i>pharisej [...]</i> | | | |
| | | and | Pharisees | | | |
| | b. | <i>sie</i> | <u><i>quedent/</i></u> | <i>Inti</i> | <i>nituont</i> | |
| | | they | say | and | NEG.PRT.do | |
| | c. | <i>sie</i> | <u><i>bintent</i></u> | <i>suuara</i> | <i>burdin [...]/</i> | |
| | | they | bind | heavy | burdens | |
| | d. | <i>sie</i> | <u><i>breitent</i></u> | <i>Iro</i> | <i>ruomgiscrib/ [...]</i> | |
| | | they | make broad | tier | phylacteries | |

e. *sie* *minnont* *furista* *sedal*
 they love first seats

‘in Mose’s seat sit the scribes and the Pharisees. They say and they do not do, they bind heavy burdens, they make their phylacteries broad, they love the best places at feasts’ (T 242, 18-243, 5)
lat. a. *super cathedram/ moysi sederunt scribe/ & pharisej. [...]* b. *dicunt enim/ et non faciunt.* c. *Alligant autem onera grauia [...]* d. *dilatant enim philacteria sua/ [...]*/ e. *Amant enim primos recubitos*

We interpret instances like these as cases of *continuation*, i.e. as a series of utterances serving to elaborate on the same unit situated higher in the discourse.

In other cases, a discourse unit provides additional, explanatory information with respect to a previous event. Consider (18b) which provides a motivation for the proposition denoted in the previous utterance (18a):

- (18) [an angel prophesies to Zacharias the near birth of his son, John the Baptist, and explains that he will be a person of special qualities]
 a. *Inti* *manage* *in sineru giburti* *mendent*
 and many in his birth have joy
 b. *her ist* *uuârlihho* *mihhil fora* *druhtine*
 he is truly great fore God.DAT
 ‘And many people will rejoice at his birth. For he will be great in the eyes of the Lord’ (T 26, 29-30)
lat. & *multi in natiuitate eius gaudebunt/ erit enim magnus coram domino*

To conclude, we relate the distribution of V2 in OHG to sentences establishing relations of subordination in discourse. First, V2 appears in sentences assigning properties to individuals or explaining the circumstances of events or actions established in previous discourse units. Second, the events provided by V2 sentences temporally overlap with those of the discourse units on which they elaborate. In terms of discourse hierarchy, V2 creates units that depend on higher units in discourse structure thus instantiating subordination in discourse.

307) observes that the strategy of dividing episodes and sub-episodes by means of initial capital letters predominantly applies for the Latin section of the text and only rarely occurs in the OHG part. Petrova (2006, 158-159) notices that the graphical distinction of new episodes in the Latin original correlates with the regular preposing of the finite verb in the OHG translation. Consider (20), next to (14) and (15) given above, which demonstrates that the syntactic means of verb fronting systematically applies for marking episode boundaries in OHG as a functional equivalent to the graphical highlighting of the episode onsets in the Latin original:

- (20) [Joseph of Arimathea and Nicodemus take the body of Jesus to conduct a Jewish burial]

<i>Intfiengun</i>	<i>sie</i>	<i>tho</i>	<i>thes heilantes lichamon</i>
took	they	then	the.GEN Saviour.GEN body
‘Then they took the body of Jesus’			(T 321, 29)
<i>lat. Acceperunt autem corpus ihesu</i>			

This example is remarkable in some more respects. First, it shows that the strong preference for V1 at the beginnings of new episodes does not only account for the post-verbal position of full subject constituents as in (14), but quite obviously affects the positioning of pronominal subjects inserted against the Latin original like *sie* ‘they’ in (20) or *her* ‘her’ in (15) above. Second, it shows that V1 in episode-initial position applies generally, not only with impersonal intransitive predicates as in (19) but also with transitive verbs like the one in (20).

The fact that V1 is used to indicate the beginning of a new episode is rather suggestive for the role of this pattern in the structuring of the discourse. In particular, it is clear that no elaboration on the discourse referents involved in the sentences is at issue here. Rather, the information in the sentences under scrutiny is part of the core scheme of the narrative, providing the basis for further elaboration in the discourse.

5.4.2. Types of predicates favoring V1

Next to its function to mark episode boundaries, V1 is said to be frequent with certain groups of predicates. According to our empirical investigation, the most common groups of predicates favouring V1 – apart from existential verbs in presentational sentences discussed in section 4 above – are motion verbs, verbs of saying as well as perfective, inchoative verbs signal-

ing the initiation of a new state of affairs, very often a new physical or cognitive state of the referent.

Among these predicate groups, verbs of motion constitute the largest class. Some of the examples as in (21) introduce novel discourse referents and thus functionally overlap with the type of presentational sentences. But in a great number of other cases, the appearance or withdrawal of a given discourse referent is reported, cf. (22) and (23):

- (21) [Zacharias conducts service as a priest when suddenly an angel appears in the temple]
quam thara gotes engil
 came there God.GEN angle
 ‘There came God’s angel’ (T 35, 32)
 lat. & *ecce angelus domini*
- (22) [A centurion asks Jesus to heal his servant. Jesus demands his faith and sends him back to his house.]
uuarb tho ther centenary in sin hús
 returned then this centurion to his home
 ‘Then the centurion returned to his home’ (T 84, 8)
 lat. & *reuersus est centurio in domum suam*
- (23) [The archangel Gabriel departs from Mary after the revelation]
 Inti arfuor tho/ fon Iru ther engil
 and flew away then from her this angle
 ‘And then the angel left her’ (T 29, 6-7)
 lat. & *discessit/ ab illa angelus*

Furthermore, V1 is attested in clauses with motion verbs selecting an inanimate subject as in (24). It is not the appearance or withdrawal of a discourse referent that is reflected here, but rather the establishment of a new state in the overall development of the plot:

- (24) [Jesus has healed lots of people and performed many miracles]
 Inti argieng thó úz thiu liumunt
 and spread then out this fame
 ‘And this fame spread around’ (T 97, 5)
 lat. & *exiuit fama haec*

Next to verbs of motion, verbs of saying form another group of stable V1 occurrences in sentences involving context-given referents. The instances indicate a change of interlocutors in a dialogue sequence and therefore a shift in perspective. Consider (25):

- (25) [Within a dialogue scene]
antlingota thô sîn muoter Inti quad
 responded then his mother and said
 'Then his mother responded and said' (T 30, 24)
lat. & respondens mater eius & dixit

Finally, V1 regularly occurs in contexts where a previously given discourse referent undergoes a transition into a new mental or physical state. Verbs of cognitive or sensual perceptions are common representatives of this group of predicates triggering V1:

- (26) [A woman suffering from a flow of blood becomes healed by touching secretly the garment of Jesus]
furstuont siu thó in ira lihhamen/
 realizes she then in her body
 thaz siu heil uuas fon theru suhti
 that she healed was from this.DAT plague
 'She realized on her body that she was recovered from this plague'
 (T 95, 14-15)
lat. & sensit corpore/ quod sanata ess& a plaga

- (27) [Jesus heals a paralyzed boy]
uuard tho giheilít ther kneht in thero ziti
 became then healed the boy in this moment
 'Then the boy was healed at this very moment' (T 84, 7)
lat. & sanatus est puer in illa hora

- (28) [Salomé demands from King Herod the head of John the Baptist on a platter. The king is troubled because he has promised to fulfill any wish of the girl]
 Inti uuard gitroubit ther kuning
 and became troubled this king
 'And the king was troubled' (T 116, 21)
lat. & contristatus est rex

These instances show that V1 is a wide spread syntactic pattern in OHG, which on the first glance appears to be highly heterogeneous in use. But from the perspective of discourse relations, the uses of V1 in the examples above actually allow for a unified interpretation. On the one hand, it is evident that the sentences with verbs of motion and verbs of saying affect the narrative setting of the situation with respect to the participants involved in the action or the speaker from whose perspective the event or action is reflected. As such, sentences including a predicate of one of these groups automatically indicate a change in the narrative situation. On the other hand, the inchoative predicates convey important, extraordinary or unexpected events which reveal a turning point in the course of the story and therefore establish the initiation of a new situation in the structure of the narrative.

From this perspective, sentences with V1 do not provide more information on a discourse referent distinguished as the predication base of the utterance, but assert the contents of the entire proposition, including all participants, as new information representing a unitary whole. In this respect, V1 sentences with these predicates representthetic judgments with no topic-comment division.

From the point of view of temporal relation to the previous context, the examples with V1 discussed here also reveal one important common feature. Without any exceptions, they establish relations of temporal succession with respect to the previous context, quite often indicated by temporal adverbials like *tho* 'then, after that' included in the sentence.

From this, we can conclude that sentences with V1 serve to establish new situations by providing narratively important information and carrying forward the discourse. We assume that they continue the discourse on the level of main action and share important properties with coordinative discourse linking like temporal succession and progress in narration.

6. Implications for the generalization of V2 in modern German

If the distribution of V1 and V2 was ruled by discourse-organizational principles and each of these patterns was associated with one particular, well-defined functional field in the system of early German, then the question arises why and how this functional opposition was lost in the course of language development and how V2 became generalized in main clauses.

We assume that the reason for this development is already present in the system of OHG. Note that V2 has already been generalized in *wh*-interrogatives at the stage of development represented in the Tatian text (cf. Petrova and Solf 2009). Apart from this, we encounter cases of variation in one functional domain of the opposition described for V1, namely in the domain of the coordinative type of discourse relations. Here, next to V1, V2 structures with a sentence-initial adverbial co-occur. This pattern mainly applies to *thô* ‘then’ used as a connective marking the coordinative relation to the previous event. Note that (29) through (31) have the same discourse function as the V1 clauses discussed above:

- (29) *tho uuas man In hierusalem*
 then was man in Jerusalem
 ‘There was a man in Jerusalem’ (T 37, 23)
lat. & ecce homo erat In hierusalem
- (30) *thó uuverdun sie gifullte [...] gibuluhti*
 then became they filled anger.DAT
 ‘then they became full of anger’ (T 115, 7)
lat. & repl&i sunt omnes/ in sinagoga ira
- (31) *tho fragata inan petrus*
 then asked him.DAT Peter
 ‘then Peter asked him’ (T 128, 18)
lat. interrogabat eum p&rus

This means that we encounter competition between V1 and *thô*+V2 in the domain of coordinative linking in OHG. This is represented in (32):

- (32) coordination in discourse:
 a. [Vfin....DR_{new/giv...}]FOCUS (V1)
 b. *thô* [Vfin....DR_{new/giv...}]FOCUS (*thô*+V2)

We have to consider these two structures as optional varieties in OHG. This can be inferred from the fact that according to the database, in 52 of the 96 instances involving V1, the adverbial *thô* is put independently of the original in the position after the finite verb thus supporting V1 on the surface, see (6), (7) as well as (24) through (27) above. However, in 122 of the 382 V2-cases included in the database, the structure in (32b) occurs. We assume

that this situation shows the beginning of a process whereby the initial position in a sentence, which was originally preserved for the most salient constituent of sentences with a topic-comment division, was reanalyzed and extended by analogy to adverbials used to link the sentence to the discourse situation established in the previous discourse. Note that adverbials in anaphoric relation to a previously mentioned location or goal share the positional properties of nominal referential expressions as topics described so far. See *thar* ‘there’ referring to the pre-established place of the wedding ceremony in (33):

- (33) [at the Cannae wedding]
thar uuas thes heilantes muoter
 there was the.GEN Saviour.GEN mother
 ‘The mother of the Saviour was also there’ (T 81, 15)
lat. erat mater ihesu & ibi

As a result of this unification process, the preverbal position cannot be identified with any specific information-structural category anymore and is neutralized leading to V2 in modern German declaratives.

Note that there was a different preference for one or the other structure in (32) among the different scribes of the Tatian text. Although it has to be clarified if the scribes are the actual translators of the text, we can detect some interesting patterns. First, within the text portion supplied by the scribe ϵ , there is a 100 per cent of consistency as to using the structure in (32b) in sentences indicating a change of speaker in dialogue. The investigation of the same amount of text in the portions of three different scribes reveal quite different preferences for V1 against *thô*+V2 in sentences with verbs of saying, namely 16 to 3 for scribe α , 3 to 9 for scribe β and 1 to 12 for scribe ζ , respectively.

The fact that we encounter variation within one and the same functional domain indicates a language change in progress. In the framework of Lightfoot (1999), language change is viewed as a new type of parameter setting in the internal grammar of young generations of speakers resulting from a shift in the frequency relation of competing structures in the input data during language acquisition. In this sense, the existence of competing structures in the domain of sentences attributed to the coordinative type of discourse relations can be viewed as a pre-condition and indication of language change.

7. Conclusion

In the Old High German (OHG) Tatian text we find systematic variation between V1 and V2 clauses that is pragmatically driven. In particular, the distribution of V1 and V2 clauses correlates with coordination and subordination as the two basic types of discourse relations in the framework of SDRT by Asher & Lascarides (2003). First, instances of V2 are regularly found in structures providing additional descriptive or explanatory information on a discourse referent representing the topic of the sentences. These clauses provide additional information about elements located higher in discourse structure. From this we conclude that V2 correlates with *elaboration* and *continuation*, more precisely with the realization of subordination in discourse structure.

In contrast, V1 comes in two main functions signaling main line sequentiality and progress in narration: i) it provides information which constitutes the basis for a subsequent *elaboration* on a lower level of discourse hierarchy; or ii) it signals that a previous chain of subordinative units is suspended and that the discourse returns to the main line of the story. In both cases, we assign to V1 properties of coordination in discourse.

Thus, we arrive at the conclusion that verb placement in the earliest stages of German was governed by pragmatic, more precisely, by discourse-related properties. Our main claim is that at a certain stage in the history of the Germanic languages, the position of the verb was a means for distinguishing the type of rhetorical relation which the sentence holds with respect to the previous context. In this way, word order and verb placement were involved in the creation of dynamic text structure and discourse coherence.

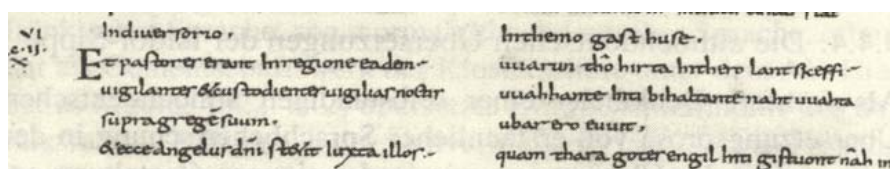
Acknowledgements

This is a modified and extended version of Hinterhölzl and Petrova (2005). The investigation was conducted during our work in Research Project B4 of the Collaborative Research Center 632 Information Structure at Humboldt-University Berlin⁸ and was presented at the International Workshop on Saliency in Discourse in Chorin, Germany, on 5th-8th Oct 2005. We are grateful to all participants in the workshop for fruitful exchange of ideas. For useful comments and discussions we also thank Karin Donhauser, Milena Kühnast, Sonja Linde, Michael Solf, Eva Schlachter as well as two anonymous reviewers.

Appendix

Picture 1.

The beginning of Luke 2, 8 in the manuscript of the St. Gallen, Stiftsbibl. Cod. 56. Facsimile, pag. 35. In Sonderegger (2003, 130).



Picture 2.

The same part of the text in the edition of Masser (1994, 85).

	In diuersorio.		In themo gasthuse.
vi	Et pastores erant in regione eadem.		uuarun thô hirta In thero lantskeffi.
Le ij	uigilantes & custodientes uigilias noctis	30	uuahhante Inti bihaltante nahtuuahra
x	supra gregem suum,		ubar ero euuit,
	& ecce angelus domini stetit iuxta illos.		quam thara gotes engil Inti gistuont nâh
			in.

Notes

1. The examples from the Isidor [I] text are cited by line number according to the edition of Eggers (1964). The examples from the Tatian [T] text are cited by manuscript page and line number according to Masser (1994). A slash in the Tatian examples represents the end of line according to the manuscript. The inflected verb in both OHG and Latin is underlined for clarity throughout the paper.
2. Here, we only briefly refer to some previous accounts on some of these patterns in Isidor. First, we do not subscribe to the view expressed by Robinson (1994) who claims that V1 represents a foreign pattern used exclusively in the translation of the biblical citations rather than of the commentary parts of the treatise in order to signal foreign speech. Rather, we regard V1 as a common Germanic pattern which abounds both in the remaining texts of the OHG tra-

dition as well as in all other early Germanic languages, i.e. in Old English, Old Saxon and Old Norse. Second, with respect to Vlate/Vend, we deny the view of Tomaselli (1995) reducing such examples to cases involving pronominal or other prosodically light constituents which she explains as clitics attached to the left of the verb after a full constituent in initial position. As our example in (3) shows, Vlate/Vend in main clauses in Isidor also appears in sentences with full constituents before the finite verb.

3. Note that the cases of V1 included in this statistics do not comprise elliptic non-initial conjuncts sharing the subject of the preceding clause and therefore showing surface V1-order.
4. In this example, the synthetic passive of the Latin original is represented by an analytic construction involving the finite form of the auxiliary *sîn* 'be' + Past Participle. As the semantics of the Latin main verb is reflected in the OHG participle, the finite auxiliary has to be regarded as an additional constituent not present in the original. Therefore, its placement in the OHG part is a matter of free choice.
5. Drubig (1992) and Lambrecht (1994, 137-146) also argue that inthetic utterances no topic-comment division applies.
6. In this respect, we follow Endriss and Hinterwimmer (2007) who argue that givenness is not necessary for topicality. They argue that novel constituents may provide the aboutness topic of an utterance if the utterance allows for a topic-comment division in which the respective constituent takes the role of the subject of the predication.
7. Unfortunately, any significant reordering of constituents in the first sentence of this small discourse is impossible for reasons of the line-for-line principle of translation outlined in section 2 above. Therefore, the placement of the indefinite subject expression *arstorbaner* 'a dead man' introducing a new referent does not illustrate the distributional properties of such constituents outlined in this study.
8. Project URL: <http://www.linguistik.hu-berlin.de/sprachgeschichte/forschung/informationsstruktur/index.php>; http://www.sfb632.uni-potsdam.de/projects_b4ger.html).

References

- Asher, Nicholas and Alex Lascarides
2003 *Logics of Conversation*. Cambridge: Cambridge University Press.
- Asher, Nicholas and Laure Vieu
2005 Subordinating and coordinating discourse relations. *Lingua* 115:591-610.

- Axel, Katrin
2007 *Studies in Old High German Syntax. Left sentence periphery, verb placement and verb-second*, Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Bästlein, Ulf Christian
1991 *Gliederungsinitialen in frühmittelalterlichen Epenhandschriften. Studie zur Problematik ihres Auftretens, ihrer Entwicklung und Funktion in lateinischen und volkssprachlichen Texten der Karolinger- und Ottonenzeit*. Frankfurt a. M.: Peter Lang.
- Bosch, Peter, Tom Rozario and Yufan Zhao
2003 Demonstrative Pronouns and Personal Proumeouns. German *der* vs. *er*. In *Proceedings of the EACL Workshop on the computational treatment of anaphora in Budapest 2003*.
- Bosch, Peter and Carla Umbach
2007 Reference Determination for Demonstrative Pronouns. *ZAS Papers in Linguistics* 48:39-51.
- Chiarcos, Ch.
this vol. The Mental Salience Framework: Context-adequate generation of referring expressions.
- Claus, Berry
this vol. Establishing salience during narrative text comprehension: A simulation view account
- Dik, Simon C.
1989 *The Theory of Functional Grammar. Part I: The Structure of the Clause*. Dordrecht: Foris Publications.
- Dittmer, Arne and Ernst Dittmer
1998 *Studien zur Wortstellung - Satzgliedstellung in der althochdeutschen Tatianübersetzung*. Göttingen: Vandenhoeck & Ruprecht.
- Drubig, H. Bernhard
1992 Zur Frage der grammatischen Repräsentation thetischer und kategorischer Sätze. *Linguistische Berichte Sonderheft 4 / 1991-92*:142-195.
- Eggers, Hans ed.
1964 *Der althochdeutsche Isidor. Nach der Pariser Handschrift und den Monseer Fragmenten. Altdeutsche Textbibliothek 63*. Tübingen: Niemeyer.
- Endriss, Cornelia and Stefan Hinterwimmer
2007 Direct and Indirect Aboutness Topics. In *The notions of information structure*, eds. Caroline Féry, Gisbert Fanselow and Manfred Krifka, 83-96. Potsdam: Universitätsverlag.
- Fanselow, Gisbert

- 2003 Münchhausen-style head movement and the analysis of verb-second. In *Syntax at Sunset: Head movement and Syntactic Theory. UCLA Working Papers in Linguistics 10*, ed. Anoop Mahajan, 40-76.
- Filchenko, A. Y.
 this vol. Parenthetical Agent-demoting Constructions in Eastern Khanty: Discourse Saliency vis-à-vis Referring Expressions.
- Fleischer, Jürg
 2006 Zur Methodologie althochdeutscher Syntaxforschung. *Beiträge zur Geschichte der deutschen Sprache und Literatur* 128:25-69.
- Fleischer, Jürg, Roland Hinterhölzl and Michael Solf
 2008 Zum Quellenwert des AHD-Tatian für die Syntaxforschung: Überlegungen auf der Basis von Wortstellungsphänomenen. *Zeitschrift für germanistische Linguistik* 36:210-239.
- Fourquet, Jean
 1974 Genetische Betrachtungen über den deutschen Satzbau. In *Studien zur deutschen Literatur und Sprache des Mittelalters. Festschrift für Hugo Moser zum 65. Geburtstag*, eds. Werner Besch, Günther Jungbluth, Gerhard Meissburger and Eberhard Nellmann, 314-323. Berlin: Erich Schmidt.
- Frey, Werner
 2000 Über die syntaktische Position der Satztopiks im Deutschen. *ZAS Papers in Linguistics* 20:137-172.
- Grüning, André and Andrej A.Kibrik
 2005 Modelling Referential Choice in Discourse: A Cognitive Calculative Approach and a Neutral Network Approach. In *Anaphora Processing. Linguistic, Cognitive and Computations Modelling*, eds. António Branco, Tony McEnery and Ruslan Mitkov, 163-197. Amsterdam / Philadelphia: John Benjamins Publishing Company.
- Gundel, Jeanette K., Nancy Hedberg and Ron Zacharsky
 1993 Cognitive status and the form of referring expressions in discourse. *Language* 69 (2):274-307
- Hinterhölzl, Roland and Svetlana Petrova
 2005 Rhetorical Relations and Verb Placement in Early Germanic Languages. Evidence from the Old High German Tatian translation (9th century). In *Saliency in Discourse. Multidisciplinary Approaches to Discourse*, eds. Manfred Stede, Christian Chiarcos, Michael Grabski and Luuk Lagerwerf, 71-79. Münster: Stichting / Nodus.
- Hinterhölzl, Roland, Svetlana Petrova and Michael Solf
 2005 Diskurspragmatische Faktoren für Topikalität und Verbstellung in der althochdeutschen Tatianübersetzung (9. Jh.). In *Interdisciplinary Studies on Information Structure (ISIS) 3*, eds. Shinichiro Ishihara, Michaela Schmitz and Anne Schwarz, 143-182. Potsdam: Universitätsverlag.

- Hopper, Paul J.
1979a Some Observations on the Typology of Focus and Aspect in Narrative Language. *Studies in Language* 3.1:37-64.
- Hopper, Paul J.
1979b Aspect and Foregrounding in Discourse. In *Syntax and Semantics*, ed. Talmy Givón, 213-241. San Diego / New York / Berkeley / Boston / London / Sydney / Tokyo / Toronto: Academic Press, INC.
- Karttunen, Lauri
1976 Discourse Referents. In *Syntax and Semantics 7: Notes from the Linguistic Underground*, ed. James McCawley, 363-385. New York / San Francisco / London: Academic Press.
- Kemenade, Ans van
1987 *Syntactic Case and Morphological Case in the History of English*. Dordrecht: Foris Publications.
- Krasavina, Olga
this vol. Demonstratives and salience: Towards a functionally taxonomy.
- Krifka, Manfred
2007 Basic notions of information structure. In *The Notions of Information Structure*, eds. Caroline Féry, Gisbert Fanselow and Manfred Krifka, 13-56. Potsdam: Universitätsverlag.
- Lambrecht, Knud
1994 *Information structure and sentence form. Topic, focus and the mental representations of discourse referents*. Cambridge: Cambridge University Press.
- Lenerz, Jürgen
1984 *Syntaktischer Wandel und Grammatiktheorie. Eine Untersuchung an Beispielen aus der Sprachgeschichte des Deutschen*. Tübingen: Max Niemeyer.
- Lightfoot, David
1999 *The Development of Language. Acquisition, Change, and Evolution*. Malden / Oxford: Blackwell.
- Mann, William C., and Sandra A. Thompson
1988 Rhetorical Structure Theory: Toward a functional theory of text organization. *Text. An interdisciplinary journal for the study of discourse* 8:243-281.
- Masser, Achim ed.
1994 *Die lateinisch-althochdeutsche Tatianbilingue Stiftsbibliothek St. Gallen Cod. 56*. Göttingen: Vandenhoeck & Ruprecht.
- Masser, Achim
1997a Syntaxprobleme im althochdeutschen Tatian. In *Semantik der syntaktischen Beziehungen. Akten des Pariser Kolloquiums zur Erforschung des Althochdeutschen 1994*, ed. Yvon Desportes, 123-140. Heidelberg: Carl Winter.

- Masser, Achim
 1997b Wege zu gesprochenem Althochdeutsch. In *Grammatica Ianua Artium. Festschrift für Rolf Bergmann zum 60. Geburtstag*, eds. Elvira Glaser and Michael Schläfer, 49-70. Heidelberg: Carl Winter.
- Molnár, Valéria
 1993 Zur Pragmatik und Grammatik des TOPIK-Begriffs. In *Wortstellung und Informationsstruktur*, ed. Marga Reis, 155-202. Tübingen: Max Niemeyer.
- Önnerfors, Olaf
 1997 *Verb-erst-Deklarativsätze. Grammatik und Pragmatik*. Stockholm: Almquist & Wiskell International.
- Petrova, Svetlana
 2006 A discourse-based approach to verb placement in early West-Germanic. In *Interdisciplinary Studies on Information Structure (ISIS) 5*, eds. Shinichiro Ishihara, Michaela Schmitz and Anne Schwarz, 153-185. Potsdam: Universitätsverlag.
- Petrova, Svetlana and Michael Solf
 2008 Rhetorical relations and verb placement in early Germanic. A cross linguistic study. In *'Subordination' vs. 'coordination' in sentence and text - from a cross-linguistic perspective*, eds. Cathrine Fabricius-Hansen and Wiebke Ramm, 329-351. Amsterdam / Philadelphia: John Benjamins Publishing Company.
- 2009 Die Entwicklung von Verbzweit im Fragesatz. Die Evidenz im Althochdeutschen. *Beiträge zur Geschichte der deutschen Sprache und Literatur* 131 (1):6-49.
- to app. Pronominale Wiederaufnahme im ältesten Deutsch. Personal- vs. Demonstrativpronomen im Althochdeutschen. In *Historische Textgrammatik und historische Syntax des Deutschen: Traditionen, Innovationen, Perspektiven*, ed. Arne Ziegler, Berlin: Walter de Gruyter.
- Petrova, Svetlana, Michael Solf, Julia Ritz, Christian Chiarcos and Amir Zeldes
 to app. Building and using a richly annotated interlinear diachronic corpus: the case of Old High German Tatian. In *Natural Language Processing for Ancient Languages*, eds. Joseph Denoos and Serge Rosmorduc, special issue of *Traitement Automatique des Langues / Natural Language Processing*.
- Prince, Ellen F.
 1981 Toward a Taxonomy of Given-New Information. In *Radical Pragmatics*, ed. Peter Cole, 223-255. New York: Academic Press.
- Ramers, Karl Heinz
 2005 Verbstellung im Althochdeutschen. *Zeitschrift für Germanistische Linguistik* 33:78-91.
- Ramm, Wiebke

- this vol. Discourse-structural salience from a cross-linguistic perspective: Coordination and its contribution to discourse (structure).
- Ries, John
1880 *Die Stellung von Subject und Prädicatsverbum im Heliand. Nebst einem Anhang metrischer Excurse: Quellen und Forschungen zur Sprach- und Culturgeschichte der germanischen Völker.* Strassburg / London: Karl J. Trübner.
- Robinson, Orrin W.
1994 Verb-First Position in the Old High German *Isidor* Translation. *Journal of English and Germanic Philology* 93:356-373.
- Sasse, Hans-Jürgen
1995 "Theticity" and VS order: a case study. *Sprachtypologie und Universalienforschung* 48, 1/2:3-31.
- Schrodt, Richard
2004 *Althochdeutsche Grammatik II. Syntax: Sammlung kurzer Grammatiken germanischer Dialekte. A. Hauptreihe, Nr. 5/2.* Tübingen: Max Niemeyer.
- Simmler, Franz
1998 Makrostrukturen in der lateinisch-althochdeutschen Tatianbilingue. In *Deutsche Grammatik. Thema in Variationen. Festschrift für Hans-Werner Eroms zum 60. Geburtstag*, eds. Karin Donhauser and Ludwig M. Eichinger, 299-335. Heidelberg: Carl Winter.
- Sonderegger, Stefan
2003 *Althochdeutsche Sprache und Literatur. Eine Einführung in das älteste Deutsch. Darstellung und Grammatik. 3. durchgesehene und wesentlich erweiterte Auflage.* Berlin, New York: Walter de Gruyter.
- Tomaselli, Alessandra
1995 Cases of Verb Third in Old High German. In *Clause Structure and Language Change*, eds. Adrian Battye and Ian Roberts, 345-369. New York / Oxford: Oxford University Press.