



Available online at www.sciencedirect.com



Lingua xxx (2009) xxx–xxx

Lingua

www.elsevier.com/locate/lingua

From V1 to V2 in West Germanic

Roland Hinterhölzl*, Svetlana Petrova

Humboldt-Universität zu Berlin, Philosophische Fakultät II, Institut für Deutsche Sprache und Linguistik,
Unter den Linden 6, 10099 Berlin, Germany

Received 1 October 2007; received in revised form 31 October 2008; accepted 31 October 2008

Abstract

Declarative clauses in Old High German (OHG) display V1- and V2-orders. In this paper, we show that verb placement in OHG is determined by information-structural (IS-) conditions: the verb serves to separate the aboutness topic from the rest of the clause (the comment). In this system, V1-clauses appear in sentences that lack a topic-comment division. The generalization of the V2 rule in German came about by extending the pattern representing topic comment structures onto sentences representing other discourse relations. In this process, the sentence-initial position was IS-neutralized, supporting an analysis of V2 in the modern language as verb movement to a unique head position with an EPP-feature. We compare this scenario with the system of verb placement in Old English (OE) and argue that English did not develop a generalized V2 rule, since the position of the verb in OE did not serve to separate a special topic from the rest of the clause, but separated all background elements from the focus domain of the clause. Finally, we argue that the V2-pattern in OHG derives from a construction in which a topic and a V1-clause were juxtaposed. Thus, the historic scenario as a whole provides support for the analysis of V2 in German as being derived from an original V1 system.

© 2009 Elsevier B.V. All rights reserved.

Keywords: Verb second; Grammaticalization; Information structure; Discourse relations

1. Introduction

When we look at word order patterns in the older stages of Germanic, we find a greater amount of freedom in verb placement than is allowed in the modern varieties. As far as the left periphery of the clause is concerned, we find V1-, V2- and V3-patterns in declarative clauses in Old English (OE) and in Old High German (OHG), as is illustrated in (1) and (2), respectively. (1b and c) are taken from Haeberli (2002a:88–90).

- | | | | |
|-----|----|---|----|
| (1) | a. | <i>Com þa to lande lid-manna helm</i> (Beo 1623)
came then to land sailors _{Gen} protector
'Then the protector of the sailors came to the shore' | V1 |
| | b. | <i>Him geaf þa se cync twa hund gildenra paeninga</i>
him gave then the king two hundred golden pennies
'Then the king gave him two hundred golden pennies' | V2 |

* Corresponding author.

E-mail address: roland.hinterhoelzl@rz.hu-berlin.de (R. Hinterhölzl).

- c. *Hiora umtrymnesse he sceal ðrowian on his heortan* V3
 their weakness he shall atone in his heart
 ‘He shall atone their weakness in his heart’
- (2) a. *Was liutu filu in flize, in managemo agaleize* (O I 1, 1) V1
 were people many in diligence in great effort
 ‘There were many people in diligence, in great effort’
- b. *then scuóf hér namon* (T 59, 21) V2
 them_{Dat} created he names
 ‘He gave them names’
- c. *erino portun ih firchnussu* (I 157) V3
 iron doors I smatter
 ‘I will smatter iron doors’

The data in (1) and (2) raise the following questions: (A) What is the status of V2 in a grammar that allows also for V1- and V3-orders in the same environments? (B) What is the proper characterization of V2? (C) What are the reasons that caused the generalization of the V2-pattern in declarative clauses in German and what are the reasons that led to the retention of the residual V2-pattern in English?

These issues have been in the center of diachronic generative studies of word order regularities in Germanic since the seminal study of Kemenade (1987) (cf. among others Haeblerli, 2002a,b; Fuß, 1998). In this paper we provide new answers to these questions showing that word order variation in the older stages of Germanic is determined by the discourse properties of the sentence in its context. Furthermore, we argue that we can gain a better understanding of the pertinent changes, if we take into consideration the complex interaction between grammar and information structure.

2. The variation between V1- and V2-clauses in OHG

In this section, we will concentrate on investigating the variation between the V1- and the V2-pattern in declarative clauses in OHG, since the V3/Vlater pattern constitutes a very rare declining pattern that will not be further discussed in this paper (but see Tomaselli, 1995 on the analysis of V3-clauses in OHG).

The V2-pattern was already generalized in interrogative clauses in the oldest OHG texts (Petrova and Solf, 2009). But we find systematic variation between V1- and V2-orders in declarative clauses in OHG. Taking into account the discourse properties of clauses in their contexts, four different patterns relevant for the distribution of V1- and V2-clauses can be distinguished in OHG.

(A) V1-clauses serve to introduce a new discourse referent (henceforth DR) and therefore are typically used in presentational sentences, foremost in the beginning of texts or episodes.¹

(B) V2-clauses serve to provide additional information about an already established discourse referent that is to be interpreted as the aboutness topic (in the sense of Reinhart, 1981) of the sentence, as is illustrated in (3) and schematized in (4).

- (3) a. *uuarun thô hirta In therō lantskeffi* (T 35, 29)
 were there shepherds in that area
 ‘There were shepherds in that region’
- b. *[ih bin guot hirti = ‘I am good shepherd’]
 guot hirti tuot sina sela furi siniu scaph* (T 225, 16)
 good shepherd gives his soul for his sheep
- (4) a. FOC[Vfin ... DR_{new} ...] V1
 b. FOC[DR_{giv}] FOC[Vfin ...] V2 *elaboration*

So far, it seems that V1- and V2-clauses are distinguished by the presence or the absence of a given discourse referent. However, we also find a pattern (C) in which a V1-clause contains a given discourse referent, as is illustrated

¹ This function of V1 is preserved in modern German in some colloquial registers or dialectal variations even to our days. So, e.g. V1 is typical at the beginning of some orally transmitted genres like jokes, etc. (Lenerz, 1984:153; Önnerfors, 1997:53). Additionally, Simon (1998:145) reports that V1 in Bavarian is used to open a new dialogue or to continue a dialogue after a break.

in (5a). In (5a), the use of a demonstrative pronoun (a system of definite determiners was not yet grammaticalized at this stage of the language) indicates that the discourse referent *kneht* was introduced in the previous context. We will argue below that these V1-clauses serve to introduce a new situation into the discourse.²

(D) We find an alternative pattern in the same contexts that regularly license occurrences of V1-clauses: As is illustrated in (5b), this pattern involves a V2-clause with the sentence initial adverb *tho* ‘then’ (*thô*+V2). The latter two patterns can be schematically represented, as given in (6) below.

Hinterhölzl and Petrova (t.a.) investigate in detail the word order patterns in the OHG Tatian translation. This text source has been deliberately chosen for the study on the interaction between syntax and information structure in OHG for a number of reasons. First, the Tatian represents the largest prose texts from the beginning of the OHG period. Second, it provides a large number of cases in which the word order of the OHG sentence deviates from the word order of the underlying Latin original. These instances are viewed as evidence for genuine OHG structures (see also Dittmer and Dittmer, 1998; Fleischer et al., 2008) and therefore constitute the corpus of the above mentioned study.

In considering the role of V1 and V2 in such deviations from the Latin source, Hinterhözl and Petrova (t.a.) show that the variation between V1- and V2-clauses systematically correlates with the formal expression of two main types of discourse relations in the theory of Asher and Lascarides (2003), namely coordinating and subordinating discourse relations. According to them, clauses expressing subordinating relations serve to introduce a hierarchical structure in the discourse. A typical example of subordination is the discourse relation of *elaboration* in which a unit *a* provides further information on a unit *b* situated on higher level of discourse hierarchy. On the other hand, coordinating relations indicate that two discourse situations belong to the same level of discourse hierarchy. A typical example of coordination is the discourse relation of *narration* in which two situations occur in a temporal sequence.

In our view, coordinating discourse relations are used to establish new discourse situations, thus serve to push forward the main story line on the same level of discourse organization, and are expressed predominantly by V1-clauses in the Tatian translation. This generalization fits well into the picture provided by previous descriptive accounts on the conditions triggering V1 in OHG. It has been observed before that V1 occurs either at the beginning of a new episode or with certain types of predicates like verbs of motion, *verba dicendi* and the like (cf. Schrot, 2004:144–145). If we assume that discourse situations are indexed for variables like speaker, speaking time, location and participants, then we predict the occurrence of V1-clauses with exactly these classes of verbs, since *verba dicendi* and verbs of movement signal a change of speaker or location, while existential constructions and presentational sentences introduce new participants to the context. Thus we can account for all occurrences of V1-clauses by assuming that they establish a new discourse situation that is relevant for the development of the main story line.

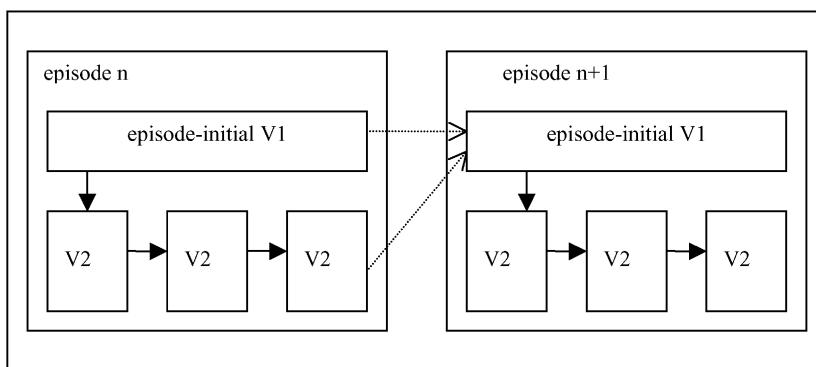
By contrast, clauses expressing subordinating discourse relations provide additional information on an already given discourse referent and are encoded by V2-clauses in the Tatian translation. In these sentences, the finite verb serves to separate the aboutness topic from the rest of the clause.

This implies that verb placement in the left periphery in OHG was originally a means of discourse organization and rhetorical explicitness. V1 occurs in a text-opening sentence providing the basis for further elaboration expressed by V2-clauses. A new occurrence of V1 signals that the previous informational unit is completed and that the discourse proceeds on a higher level of text structure opening a new informational unit in the text. Provided that no elaborative statements intervene, the result is a chronological succession of events on the same discourse level, as is the

² An anonymous reviewer points out that pattern (A) and (C) are instances of the same basic property. If the ontology is taken to contain also events as individuals, both patterns involve the introduction of a new discourse referent. Note that this generalization amounts to the same account that we are arguing for below, namely that V1-clauses introduce a new discourse situation.

case in the chain of V1-clauses in (11) below. These effects of verb placement in discourse structure may be schematically represented as indicated in (7).

(7) Information flow in OHG V1 and V2 clauses



3. Verb placement in Old English and Old Saxon

Petrova (2006) and Petrova and Solf (2008) discuss in detail the distributional properties of V1-clauses in the older stages of the other West Germanic languages. They show that V1-clauses in Old English (OE) and Old Saxon (OS) also favor contexts which bear properties of coordination in the discourse. First, V1-clauses typically appear discourse-initially, e.g. at the beginning of new episodes called ‘fits’ and marked by Roman numbers in the manuscripts of Beowulf and Heliand. By their very nature, episode-initial sentences are not likely to elaborate on a previous entity but rather serve to introduce a novel participant or discourse setting. In this sense, they establish a coordinating relation to a preceding event or episode. Examples for episode-initial V1-clauses in OE and OS are given in (8a and b):

- (8) a. *Nolde eorla hleo [...] cwealm-cuman cwicne forlætan* (Beo 791)
 not wanted noblemen_{Gen} protector murderous visitor_{Akk} alive let go
 ‘The protector of the warriors did not wish to let the murderer go alive’
- b. *Stod imu tho fora themu uuiche uualdandeo Crist* (Hel 3758)
 stood PrRefl then in-front-of the temple almighty Chrsit
 ‘The almighty Christ stood in front of the temple’

Second, V1-clauses in OE and OS appear in high numbers in presentational sentences (9a) and with the predicate classes shown to trigger V1 in OHG as well, e.g. with motion verbs (9b) or verba dicendi (9c). As in OHG, there is variation between V1-clauses and V2-clauses with the sentence initial adverbial *tha* (then) (*tho*+V2) in these contexts, cf. (10).

- (9) a. *Lag thař ēn felis biořan* (Hel 4075)
 lay there a stone upon
 ‘A stone lay there upon [the entry of the tomb]’
- b. *eode wealhþeow forð cwen hroðgares* (Beo 613)
 went Wealhtheow forth wife Hrothgar_{Gen}
 ‘Then came Wealhtheow, Hrothgar’s wife’
- c. *Spræc ða ides scyldinga* (Beo 1168)
 spoke then queen Danes_{GenPI}
 ‘Then the queen of the Danes spoke’
- (10) *Tho sprak thař en gifrodot man* (Hel 208)
 then spoke there a wise man
 ‘Then, a wise man spoke’

Finally, the V1-pattern is used to link together clauses that describe a sequence of closely related events. Note that the temporal relation of succession is among the distinctive properties of units establishing the rhetorical relation of coordination in the discourse (Asher and Lascarides, 2003). An ample example for this function of V1 in early West Germanic is given in (11).

- (11) a. *Thô uuard thar an thene gastseli megin craft mikil manno gesamnod [...]*
 then became there in the guesthall crowd big men_{Gen} gathered
 b. *Quâmun managa Iudeon an thene gastseli;*
 came many Jews_{Gen} in this guesthall
 c. *uuard im thar gladmôd hugi, bliði an iro breostun: [...]*
 became they there gladhearted mind happy in their hearts
 d. *Drôg man uuîn an flet skîri mid scâlun [...]*
 carry PronIndef wine in room pure with bowls
 e. *Uuas thes an lustun landes hirdi, [...]*
 was PronDem on desire (to) of country herdsman
 f. *Hêt he thô gangen forð gêla thiornun*
 ordered he then go_{Inf} forth gay maiden
- (Hel 2733–2745)

‘There was a mighty crowd of men gathered together in the guest hall [...] Many people came into that guest hall; there they became glad-hearted [...]. Wine was brought to the room [...]. The herdsman of the land bethought him with joy [...]. He hight to go forth the gay maiden’

However, when we look at the expression of subordinating discourse relations in OE and OS, we find a pattern that differs from the one found in OHG. In OHG, the placement of the finite verb in sentences expressing subordinate discourse relations serves to separate the aboutness topic from the rest of the clause. In other words, the verb indicates the beginning of the comment (about the initial topic) which consists of the focus domain of the clause but may also contain background material, that is, constituents that represent given discourse referents. In OE and in OS, verb placement in subordinating discourse relations does not have the function of singling out a specific type of topic, like the the aboutness topic (A-Topic) in OHG, but serves to separate the aboutness topic plus other background elements from the focus domain of the clause. This means that subordinating relations in OE and OS declaratives do not trigger V2-clauses of the type that appear in interrogative clauses. Rather a V2-clause appears on the surface, so to speak by accident, just in case the clause happens to contain only one background (or only one non-focused) element.

This is illustrated by the contrast in (12) for OS. In the context of (12a), Jesus and his disciples arrive in the region of Tyre and Sidon. In (12a), there are two constituents which refer to entities already established in the previous context: the pronoun *imu* refers to Jesus, while the adverbial *thar* takes up the location specified in the preceding sentence. The indefinite subject is placed after the finite verb since it represents a new participant in the discourse setting. Thus, two constituents are placed in a preverbal position triggering a V3-pattern.

In the context of (12b), only the referent of the subject is given. The pronoun refers to the prophetess Anna, while the other DR has not been activated in the immediately preceding sentences (cf. Chafe, 1976; Prince, 1981). In this case, only one constituent is placed preverbally triggering (a superficial case of) V2.

- (12) a. *Thar imu tegegenes quam en idis fan adrom thiodun*
 there him against came a woman from a different tribe
 ‘There, a woman from another tribe approached him’
- b. *siu habde ira drohtine uuel githionod te thanca*
 she had her Lord well served to gratitude
 ‘She had served her Lord well in gratitude’
- (Hel 2984)
- (Hel 505)

The generalizations to be drawn from these observations are a) that the verb stays in a lower position in declaratives clauses that represent subordination discourse relations in OS and b) whether a V2-clause appears on the surface or not depends on the number of background elements in the clause.

While very little is known about the syntax of OS, this characterization of V2-clauses fits very well with observations that have been made about the status of V2 in OE by many researchers. Already Kemenade (1987) – although she

claims that OE is a V2-language like modern German or modern Dutch – observes that pronouns regularly give rise to V3-orders. Since pronouns represent discourse-given elements in the clause, their placement in preverbal position as background elements follows straightforwardly from our generalization. Kemenade (1987) attributed the preverbal placement of pronouns to their status as (pro-)clitic elements. However, Haeblerli (2002b:248f.) observes that V3-orders are not restricted to the occurrence of preverbal pronouns, as is illustrated in (13) and claims that one finds free variation between V2- and V3-orders with full DPs in the entire OE period.

- (13) *Dysne yrming æfter his forðsiðe wurðodon þa hæðenan eac for healicne god* (Wulfstan, 223.58)
 this poor-wretch after his decease worshiped the heathens also instead-of high God
 ‘After his decease, the heathens also worshiped this poor wretch instead of God’

Bech (1998) and Westergaard (2005) then resolve this puzzle in noting that if the subject was focused or new information, V2-order (XVS) arises, while if the subject is given, V3-orders are found independently of whether the subject is a full DP or a pronoun, providing independent evidence for our generalization. (14) summarizes our generalizations concerning verb placement in the three sister languages.

(14) Patterns of Verb placement in older West Germanic

discourse relation	OHG	syntactic realisation	OE
		OS	
coordination	(i) V1 (ii) PRT+V2 (PRT) [FOC Vfin...]	(i) V1 (ii) PRT+V2 (PRT) [FOC Vfin...]	(i) V1 (ii) PRT+V2 (PRT) [FOC Vfin...]
subordination	A-Topic+V2 [TOPXP] [FOC Vfin...]	A-Topic+bgr Vlate focus [BGRXP ₁ ...XP _n] [FOC Vfin...]	A-Topic+bgr Vlate focus [BGRXP ₁ ...XP _n] [FOC Vfin...]

In the following sections we will discuss how the generalizations in (14) can be cast in phrase structures rules and more specifically, how they can be embedded into Rizzi's (1997) split CP-hypothesis. In the next section, we will discuss how V2 in modern German can be represented in a minimalist framework that acknowledges the syntactic status of information-structural categories.

4. The analysis of V2 in the split C-domain

Assuming that the C-domain serves to embed the proposition expressed by the IP in the relevant context, under a matrix predicate for embedded clauses and into the discourse for matrix clauses, Rizzi's (1997) proposes the C-domain as the syntactic locus for accomodating information-structural categories. In his study of topic and focus constructions in Italian, he identifies two recursive domains for topics, one below and one above a specified focus position, as is illustrated in (15).

- (15) [TopP Topic* [FocP [TopP Topic* [IP ...[VP]]]]]

To determine whether topics in German are represented in a similar way as topics in Italian, Frascarelli and Hinterhözl (2007) present a corpus study that investigates the syntactic and phonological realization of topics in natural spoken discourse in German and Italian and reveals a systematic correlation between discourse properties and grammatical properties of topics. The basis of this study is the insight that topics have different functions in the discourse. So far at least three types of topics have been identified in the literature, namely:

- (a) ABOUTNESS TOPIC: “what the sentence is about” (Reinhart, 1981; Lambrecht, 1994), “what is a matter of standing and current interest or concern” (Strawson, 1964);
- (b) CONTRASTIVE TOPIC: an element that induces alternatives which have no impact on the focus value and creates oppositional pairs with respect to other topics (Kuno, 1976; Büring, 1999);

- (c) FAMILIAR TOPIC: a given, D-linked constituent, which is typically destressed and realised in a pronominal form (Pesetsky, 1987), generally used for “topic continuity” (Givón, 1983).

Frascarelli and Hinterhözl (2007) show that the two languages distinguish the same three types of topics in their syntax and phonology: shifting topics, which constitute new aboutness topics, contrastive topics and familiar topics, which include continuing or non-new aboutness topics.³ These topics are realized in a hierarchical order in the C-domain, as is illustrated in (16).⁴

- (16) Topic hierarchy
 Shifting topic [+aboutness] > Contrastive topic > Focus > Familiar topic

Given this hierarchy of topic constituents in the C-domain of German and Italian, the question arises of how V2 in modern German can be accommodated in a split CP-system. In principle, there are two types of possible solutions for this problem. (A) One could assume that the verb always lexicalizes the highest functional head in the C-domain that is activated. This would mean that – depending on their information structural roles – clauses come in different sizes. In this account, a clause containing a SHIFTING Topic would be larger than a clause with a FAMILIAR Topic, with the verb moving into different functional projections in each case. The other possibility is to assume that (B) the verb always moves to the same functional head and that this head has a phonological EPP feature. This would mean that the clause – independently of its information-structural contribution to the discourse – has a unique format. This unique head must be defined independently of IS-categories. A plausible candidate is the syntactic head representing clausal force (cf. Rizzi, 1997; Truckenbrodt, 2006). This head occurs even higher than the functional projections responsible for licensing Topics in (16). One can then assume that it is this position in which a Complementizer is merged in embedded clauses and the finite verb is moved to in matrix V2-clauses, as is illustrated in (17). In (17), it is assumed that the I-domain, whose edge is represented by the subject, is separated by sentential adverbs from the C-domain.

- (17) **Vfin-Force** SHIFTING Topics CONTRAST Topics FAMILIAR Topics **S-Adverbs** Subject

The above choice, in fact, represents an old issue and re-addresses the question of whether subject initial clauses should be analysed as IPs, as originally proposed by Travis (1984) and supported by Zwart (1997), or as CPs, as vividly defended by Vikner (1995). One of the main issues in this debate was the observation that clauses with initial subjects are fine in out of the blue contexts, while object initial clauses are not felicitous in the same environment, as is illustrated in (18). (18) is problematic for an analysis that assumes that V2-clauses are uniformly represented by CPs.

- (18) Q: What happened?
 a. Der Peter hat gestern die Maria getroffen
 Peter-NOM has yesterday Mary-ACC met
 b. ??Die Maria hat gestern der Peter getroffen
 Mary-ACC has yesterday Peter-NOM met

The data in (18), together with the observation that unaccented object pronouns in contradistinction to unaccented subject pronouns cannot appear in sentence initial position, was taken as evidence that subject initial clauses are IPs that have different properties from object initial clauses that must be analysed as CPs. Furthermore, the data in (18) was taken to indicate that [Spec, CP] is connected with special features that require a topic interpretation of its filler phrase: an interpretation that is unwarranted in a context without a pre-established topic in (18b).

³ An anonymous reviewer takes issue with the definition of shifting topics as new aboutness topics, pointing out that the notions given versus new, background versus focus and topic versus comment are not equivalent. We are well aware of this issue and distinguish between these three levels of information packaging (cf. Molnár, 1993; Krifka, 2007 for further discussion). Note, however, that the notion new aboutness topic is taken to indicate a topic change where the new topic may correspond to a discourse given or discourse new entity.

⁴ Since the distinction between new (shifting) and non-new (continuing) aboutness topics is irrelevant for the purposes of this paper, we will simply use the term aboutness topic for both of them in the remainder of this paper.

The above choice also addresses the question of what is the nature of the V2-rule. The first approach (A) above assumes that the filling of the head position is secondary: V2 is a requirement that the head of the highest projection activated in the clause be lexicalized (cf. Zwart, 1997). The second approach (B) above assumes that head movement of the verb is primary and V2 comes about due to the requirement that the specifier of this head contains phonological material (within minimalism this is called phonological EPP).

We will present both synchronic and diachronic arguments that option (B) is the correct characterization of the V2-property. The diachronic argument will be developed in the following sections. There, we show that V2-clauses derive from V1-clauses. In particular, we will argue that the generalization of the V2-property in German came about due to the IS-neutralization of the sentence initial position. In this section, we will argue that the first approach cannot account for the properties of V2 in modern German.

The first approach must be discarded, since it makes wrong predictions about word order, as is argued in Frascarelli and Hinterhözl (2007). For instance, it predicts that in a sentence with a SHIFTING Topic, no other material can precede this topic. It is very easy to find or construct examples that prove the contrary. (19) is a constructed and completely natural example in which a frame adverbial precedes a topic constituent that is marked with the typical intonational contour of an aboutness topic (the L+H* tone). (20a) and (20b) are taken from the corpus. (20a) shows that a focused element marked with the H* tone may precede an ABOUTNESS Topic, while (20b) indicates that a sentence adverbial (the time adverbial *da*) may precede a FAMILIAR Topic that continues the topic established in the matrix clause.

- (19) *Gestern hat der Hans die Maria getroffen.*
yesterday have.3sg the Hans the Maria met
 L+H*
 ‘Yesterday Hans met Maria’

- (20) a. *wir wissen im Westen hier immer alles besser*
we know.1PL in the West here always everything better
H* **L+H***
‘We here in the West always know everything better’
b. *(Putin hat gemerkt) da hab ich mich falsch verhalten*
Putin has realized there have I me wrongly behaved
 FLAT **FAMILIAR Topic**
‘Putin realized in this situation I behaved wrongly’

How can we account in the second approach for the data in (18)? It is important to note that the V2-constraint can also be fulfilled by formal movement (cf. Fanselow, 2003). Formal movement is an operation that allows for the satisfaction of an EPP-feature without being triggered by a specific syntactic or interpretational feature. Formal movement, however, may only attract the closest element within a certain domain, explaining why the subject in (18), as the highest element in the clause can satisfy the V2-constraint (that boils down to the requirement of a head that its specifier be filled with phonological material) without any specific discourse feature, while the object in order to take precedence over the subject needs a specific discourse license, in the case of (18), it has to be given information which in the above context is not deducible.

Now that we have developed an analysis of the C-domain of modern German and given an account of the V2-constraint in a split-CP system (see (17) above), we are in a position to address issues of word order variation in the C-domain, including the important question of how the V2-constraint came about in the history of West Germanic in the following section.

5. The development of generalized V2 in German

In section 2, we showed that 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. In this context, the question arises how and why this functional opposition was lost in the course of language development and V2 became generalized in main clauses.

We propose 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). Moreover, as we have seen above, there is variation in one functional domain of the opposition described for V1 and V2, namely in the domain of the coordinative type of discourse relations. As illustrated in (21a and b), V1-clauses and V2-clauses with a sentence-initial adverbial, mainly *thō* ‘then’ as a connective marking the coordinative relation to the previous event, co-occur, signalling that there is competition between these two patterns in OHG.

(21) Coordination in discourse:

- a. [Vfin...DR_{new/giv...}]FOCUS (V1)
- b. *thō* [Vfin...DR_{new/giv...}]FOCUS (*thō*+V2)

A plausible analysis of this variation in OHG is that the V1-clauses, which are present with the same discourse functions in all older stages of West Germanic, represent the older pattern and that the *thō*+V2-pattern constitutes an innovation that has become a frequent alternative to the V1-pattern in the oldest German texts. In this scenario, we can assume that the pattern of subordinating V2-clauses is used as the basis of analogy in a process of extending this pattern to clauses expressing coordinating discourse relations. In other words, we are envisaging a process in which the reference of the clause initial topic to a previously introduced individual in subordinating discourse relations is extended to reference to the previous discourse situation by the adverbial *thō* in coordinating discourse relations. This implies that *thō* is analysed as a basic discourse linker that expresses the temporal sequence of two discourse situations in coordinated discourse situations, normally signalled by V1-clauses, by referring back to the previous situation just like an aboutness topic can be taken to connect the ensuing comment with the previous discourse by referring back to a pre-established discourse referent.

If the use of the pattern (21b) in coordinating discourse relations stabilizes and reaches a certain threshold, it will have two major effects: (a) it will blur the formal distinction in the expression of coordinating and subordinating discourse relations and (b) it will lead to the information-structural neutralization of the initial position for the following reasons. In interrogatives, the initial position is occupied by a wh-element that is IS-categorized as [+focus]. In subordinating declaratives, the initial position is occupied by an element that is IS-categorized as [+topic] and in coordinating declaratives, the initial position is occupied by an adverbial that can be classified neither as focal nor as topical element, that is, it is categorized as [−focus, −topic].

This scenario implies that – although the V2-pattern was arguably brought about by aboutness topics – the extension of the V2-pattern from subordinating discourse relations onto coordinating discourse relations led to the information-structural neutralization of the sentence initial position, paving the way to the modern German V2-construction: as we have argued in the previous section, the information-structurally defined positions occur below the position of the finite verb in the Force head, with [Spec, ForceP] being filled with any category capable of satisfying its phonological EPP-feature (see (17) above).

It is important to keep in mind that despite the IS-neutralization of the sentence initial position, there is evidence that a specialized position for aboutness topics (cf. Frey, 2000; Frascarelli and Hinterhözl, 2007) did not get lost in this historic development. This implies that, at least after the process of reanalysis described above, verb placement in coordinating and subordinating clauses in OHG is to be described as given in (22) in an approach adopting Rizzi's (1997) split CP-hypothesis.

- (22) a. [ForceP V_{fin} [familiar topics [IP new DR [VP t]]]]
- b. [ForceP Aboutness_i V_{fin} [t_i familiar topics [IP new DR [VP t]]]]]

In a V1-clause (22a), the finite verb moves into the highest head in the C-domain, that is, Force⁰ and therefore precedes both given (familiar topics) and new discourse referents. The sentence lacks an aboutness topic and serves to express a new discourse situation on the same level of discourse organization. In a V2-clause, the aboutness topic is promoted into the sentence initial position followed by the finite verb that separates it from the rest of the clause. The crucial point here is that the aboutness topic is moved from a sentence internal position to the sentence initial position after reanalysis, that is, neutralization of [Spec, ForceP] and is not taken to be base generated in this position. It is important to stress the qualification *after the reanalysis* since it is plausible to assume that the historical source of a complex topic comment

structure had the topic generated outside of the ForceP of the comment (cf. Kiparsky, 1995). We will come back to this point in the final section in which the developments of German and English are evaluated with respect to each other.

6. The development of verb placement in English and Low German

We have seen in section 3 that there is a categorical difference in the expression of subordinating discourse relations between OE and OS, on the one hand, and OHG, on the other hand. While the finite verb in OHG serves to separate a special kind of topic, namely the aboutness topic, from the rest of the clause that functions as comment on the topic, the finite verb in OE and OS serves to separate background elements including the aboutness topic from the focus domain of the clause. Thus, depending on whether the subject is given or represents new information we find V3- or V2-clauses in the former two languages.

This characterization of verb placement in OE and OS squares well with Kemenade and Los's (2006) observation that there are two subject positions in embedded clauses in OE, with the higher one (above *þa/bonne*) preferred by discourse-given elements, as is illustrated in (23a and b); both examples are taken from Kemenade and Los (2006:231):

- (23) a. *He ne mihte swatheah aefre libban, theah de hi hine þa ut alysde*
he not could nevertheless ever live though that they him then released
'Nevertheless, he could not live although they had released him'
(ÆLS[Ash_Wed]:119.2763)
b. *Gif him bonne God ryhtlice & straeclice deman wile*
if him then God justly and strictly judge will
'If God judged him fairly and strictly' (CP.5.45.20)

We propose that the pronouns in (23a and b) occupy the positions of familiar topics in the C-domain. Given the data in (12) and (13) in section 3 and the analysis of V1- and V2-clauses in OHG in (22) above, we propose that the finite verb in OE (and OS) moves into the C-domain only in clauses expressing coordinating discourse relations, while the verb stays in a deeper position (within the IP-domain) in clauses expressing subordinating discourse relations, as is illustrated in (24).

- (24) a. [ForceP *þa* V [[familiar topics [TP t DR-new]]]] coordination
b. [ForceP [Aboutness [familiar topics [TP V DR-new]]]] subordination

The case of OS is very interesting since clauses expressing subordinating discourse relations pattern with OE rather than with OHG. In the course of its history, Low German has developed a generalized V2 rule. This development may have been influenced by language contact, since Low German is not the direct successor of OS, but results from a mix of Saxonian and Low Franconian dialects (Bischoff, 1983:98f.; Peters, 2000:1409).

For sure, the development of English has taken a different path. This development can be characterized as an impoverishment of the C-domain, as we will argue below. What we already see in OE/ME is that the *þa*+V2 construction that replaces V1-clauses also gives rise to V3-clauses. Bech (1998) reports that V3-clauses in OE/EME come in two varieties: a) the pattern *XP_{old} XP_{old} V* which conforms to (14) above and b) the pattern *AdvP XP_{old} V* in which the adverb may provide new information and which does not conform to any of the patterns in (14). If a speaker wants to use a more specific expression instead of *then* to signal a certain discourse relation, say, the adverbial phrase *after the battle* and if both *þa* and the aboutness topic in (24) are interpreted as discourse linkers, then a clause with an initial AdvP has two patterns to be built after: (24a) giving rise to a V2-clause and (24b) where the adverbial phrase occupies the special topic position giving rise to a V3-clause. It is not easy to tell which factor caused the increasingly preferential use of the pattern in (24b).⁵

⁵ As an anonymous reviewer points out an adverbial phrase like *after the battle* is non-committal as to at least two types of discourse relations: narration, as illustrated in (ia), and background, as illustrated in (ib). While narration is clearly coordinating, background has been argued to be subordinating (cf. Vieu and Prévot, 2005).

(i) a. After the battle, they cleaned their swords and went home
b. After the battle, hundreds of dead bodies were lying on the ground

In this respect note that topics serve as address for the storing of information provided by the comment of the clause, raising the question of how sentences without aboutness topics are stored. One strategy seems to be to relate events simply within a temporal sequence with respect to each other, as is happening in coordinating discourse relations.⁶ Another strategy could be to use also locative and temporal adverbials as addresses for storing information of thetic sentences. In this case, the information expressed by the clause would be located with respect to the temporal landmark *the battle*, instantiating a subordinating discourse relation. This strategy would then be significant for a general move towards making (implicit) discourse relations explicit by placing the relevant linker in the position of the aboutness topic and copying the word order pattern of topic comment structures. We will have to leave this issue for further research (cf. also section 7 below).

Whatever the actual motivation for the increasing preference for V3-structure turns out to be, we can envisage the following development in the above scenario: Westergaard (2005) argues in favor of a development in which English lost the lower subject position. In the present account, we can assume that [Spec, FamP] – after the loss of Case and the failure of object pronouns to appear in this position – was reanalysed as the default subject position (= Spec, TP). The modern English pattern in (25) then follows if topicalized constituents and sentence-initial adverb phrases are analysed as occupying [Spec, ForceP] that henceforth is given the interpretation of a discourse linker in (non-negative) declaratives in English.

- (25) [ForceP AdvP [TP Su V...]]

The pattern (24a) has survived the longest in existential and presentational constructions, illustrated in (26a and b), with *there* and the locative occupying [Spec, ForceP] and the finite verb occupying the head of this projection. In modern English, these elements are analysed as occupying [Spec, TP] (cf. Pollock, 1989; Broekhuis, 2005).

- (26) a. *there is a unicorn in the garden*
b. *into the room came a man who ...*

So far we have provided separate accounts of the development of verb placement in the left periphery in German and English that taken individually are quite plausible but taken together are not fully consistent with each other. In the final section, we sketch a common account that tries to embed these changes into a broader picture of the development of topic-comment structure in Germanic.

7. The development of topic-comment structures in Germanic

In section 5, we have argued that the pattern *thô+V2* in sentences expressing coordinative discourse relations is derived in analogy to the pattern *topic+V2* in sentences expressing subordinating discourse relations in OHG. This scenario cannot be completely correct, given the fact that the pattern *pa+V2* is found in OE as well in the absence of the pattern *topic+V2*. Therefore we have to slightly revise the scenario given for German in order to do justice to the state of affairs we found in OE.

Embedding these changes in a broader picture of the development of topic-comment structures, we can envisage the following three stages. In the first stage, aboutness topic and comment are juxtaposed, that is to say, the topic is outside of the clause projected by the comment (cf. Kiparsky, 1995). For OHG, we assume that the comment involves a V1-clause with the finite verb in the head position of ForceP, as is illustrated in (27a). After prosodic integration of topic and comment, the topic is reanalysed as occupying [Spec, ForceP]. This constitutes the second stage illustrated in (27b).⁷ In this stage, the topic in [Spec, ForceP] may serve as analogical basis for sentences expressing coordinative relations: the topic in sentence initial position analysed as discourse linker in clauses expressing subordinating

⁶ As stated above, this simple strategy has survived till the present day in jokes in German. As is pointed out by an anonymous reviewer, the formal expression of coordinating discourse relations in jokes parallels the relevant OHG-data (as well as the parallel data in OS and OE) (cf. examples (3a) and (5a) for OHG and examples (8) and (11) for OE and OS). We may assume that this pattern became intrinsically connected with this genre, possibly because the relevant discourse relation often constitutes the actual pun that is better left implicit to be inferred by the hearer.

⁷ An anonymous reviewer asks whether there are any attested examples of Stage II in the history of German. At this point it is important to point out that Stage II functions as a constructed bridge to Stage III. Evidence is hard if not impossible to come by, since in historic texts clues as to whether an initial constituent is integrated into the clause (Stage II) or not (Stage I) are typically not present.

relations triggers the preposing of *thô* into [Spec, ForceP] which in a parallel way serves as discourse linker in sentences expressing coordinative discourse relations. The expansion of the latter pattern leads to the neutralization of the sentence initial position in German which marks the third stage illustrated in (27c). In this stage, the aboutness topic in sentence initial position, like the sentence adverbial *thô*, is analysed as having been moved there from a lower position in the C-domain.

- (27) a. Stage I: [Aboutness] [ForceP V_{fin} [TP . . .]] topic + V1
b. Stage II: [ForceP [Aboutness] V_{fin} [TP . . .]]
c. Stage III: [ForceP [Aboutness]_i V_{fin} [t_i [TP . . .]]]

In English, the development of topic comment structures proceeds in a parallel fashion. In the first stage, however the juxtaposed topic must be assumed to combine not with a V1-clause, with the finite verb in the head of ForceP, but with a clause in which the verb stays within TP and separates background elements from the focus domain, as is illustrated in (28a). After prosodic integration of the topic and the following clause, the topic in [Spec, ForceP], interpreted as discourse linker in clauses expressing subordination discourse relations, serves as model for the preposing of *pa*, which acts as discourse linker in sentences expressing coordinating discourse relations, as is illustrated in (28b). Thus, the very same analogy as in OHG brings about *thô+V2* clauses that express coordinative discourse relations in OE. Then the development of topic constructions in German and English take the paths that we have outlined in sections 5 and 6 with the result that in the third stage the topic in initial position in English is analysed as having moved there from an IP-internal argument position with the subject and the verb occupying specifier and head position in TP, as is illustrated in (28c).

- (28) a. Stage I: [Aboutness] [ForceP (familiar topic) [TP . . . V_{fin} . . .]] topic + non-V1
b. Stage II: [ForceP [Aboutness] (familiar topic) [TP . . . V_{fin} . . .]]
c. Stage III: [ForceP [Aboutness]_i [TP Subject V_{fin} t_i] . . .]]

Though this scenario is rather speculative, it indicates where in the present approach the important turning points in the development of the V2-rule in German and English have to be assumed: while V2-clauses derive from a combination of a topic plus a V1-clause, the combination of a topic plus a non-V1-clause, evidenced by the majority of declarative clauses in OE, fails to trigger generalized V2 in the history of English.

8. Conclusions

In this paper, we have presented historical data showing that the V2-pattern in modern German was initiated by aboutness topics in sentences expresses subordinating discourse relations. We have sketched various extension processes that led to the generalization of the V2-pattern and consequently to the information-structural neutralization of the sentence initial position in German supporting an analysis of V2 as verb movement to a unique head position with an EPP-feature.

Then we approached the question of why English did not develop a generalized V2-rule as well. We have argued that the relevant factor is constituted by the original intrinsic motivation of verb placement in subordinating discourse relations in the two languages: while the finite verb in OHG serves to separate the aboutness topic from the comment, the finite verb in OE serves to separate the background domain from the focus domain of the clause. While OE displayed a V2-pattern in declarative clauses expressing coordinating discourse relations, we argued that a general tendency towards explicit discourse linkers led to the extension of the V3-pattern typical for clauses expressing subordinating discourse relations. This issue deserves further investigation in the future.

Though many questions remain, we hope to have shown with the present account that the consideration of information structure opens alternative research paths which promise new insights into processes that are little understood to the present day.

Appendix Primary texts

- [Beo] Beowulf, reproduced in facsimile from the unique manuscript British Museum Ms. Cotton Vitelius A, XV by Julius Zupitza, 2nd ed. by Norman Davis, Oxford University Press, London, New York and Toronto, 1959.
- [Hel] Heliand, hg. von Eduard Sievers, Germanistische Handbibliothek IV, Buchhandlung des Waisenhauses, Halle (Saale) und Berlin, 1935.
- [I] Der althochdeutsche Isidor. Nach der Pariser Handschrift und den Monseer Fragmenten. hg. Hans Eggers, Niemeyer, Tübingen, 1964.
- [O] Otfrids Evangelienbuch, hg. von Oskar Erdmann, Altdeutsche Textbibliothek 49, Niemeyer, Tübingen, 1973.
- [T] Die lateinisch-althochdeutsche Tatianabilingue Stiftsbibliothek St. Gallen Cod. 56, hg. von Achim Masser, Studien zum Althochdeutschen 25, Vandenhoeck & Ruprecht, Göttingen, 1994.

References

- Asher, N., Lascarides, A., 2003. Logics of Conversation. Cambridge University Press, Cambridge.
- Bech, K., 1998. Pragmatic factors in language change: XVS and XSV clauses in Old and Middle English. *Folia Historica Linguistica* 19, 79–102.
- Bischoff, K., 1983. Mittelniederdeutsch. In: Cordes, G., Möhn, D. (Eds.), *Handbuch der niederdeutschen Sprach- und Literaturwissenschaft*. Erich Schmidt, Berlin, pp. 98–118.
- Broekhuis, H., 2005. Locative inversion in English. In: Doetjes, J., Weijer, J., van de, (Eds.), *Linguistics in the Netherlands*. John Benjamins, Amsterdam/Philadelphia, pp. 49–60.
- Büring, D., 1999. Topic. In: Bosch, P., van der Sand, R. (Eds.), *Focus – Linguistic, Cognitive and Computational Perspectives*. Cambridge University Press, Cambridge, pp. 142–165.
- Chafe, W.L., 1976. Givenness, Contrastiveness, Definiteness, Subjects, Topics, and Point of View. In: Li, Ch.N. (Ed.), *Subject and Topic*. Academic Press, New York, pp. 25–55.
- Dittmer, A., Dittmer, E., 1998. Studien zur Wortstellung—Satzgliedstellung in der althochdeutschen Tatianübersetzung. Vandenhoeck & Ruprecht, Göttingen.
- Fanselow, G., 2003. Münchhausen-style head movement and the analysis of verb-second. In: Mahajan, A. (Ed.), *Syntax at Sunset: Head movement and Syntactic Theory*, UCLA Working Papers in Linguistics, pp. 40–76.
- Fleischer, J., Hinterhözl, R., Solf, M. Zum, 2008. Quellenwert des AHD-Tatian für die Syntaxforschung: Überlegungen auf der Basis von Wortstellungsphänomenen. *Zeitschrift für germanistische Linguistik* 36 (2), 211–239.
- Frascarelli, M., Hinterhözl, R., 2007. Types of topics in German and Italian. In: Winkler, S., Schwabe, K. (Eds.), *On Information Structure, Meaning and Form*. John Benjamins, Amsterdam and Philadelphia, pp. 87–116.
- Frey, W., 2000. Über die syntaktische Position der Satztopiks im Deutschen. *ZAS Papers in Linguistics* 20, 137–172.
- Fuß, E., 1998. Zur Diachronie von Verbzweit. Die Entwicklung von Verbstellungsvarianten im Deutschen und Englischen. Diplomarbeit, Institut für deutsche Sprache und Literatur II, Johann Wolfgang Goethe-Universität.
- Givón, T., 1983. Topic continuity in discourse: an introduction. In: Givón, T. (Ed.), *Topic Continuity in Discourse: A Quantitative Crosslanguage Study*. John Benjamins, Amsterdam and Philadelphia, pp. 5–41.
- Haeberli, E., 2002a. Features, Categories and the Syntax of A-Positions. *Cross-Linguistic Variation in the Germanic Languages*. Kluwer Academic Publishers, Dordrecht.
- Haeberli, E., 2002b. Observations on the loss of Verb Second in the history of English. In: Zwart, C.J.-W., Abraham, W. (Eds.), *Studies in Comparative Germanic Syntax. Proceedings from the 15th Workshop on Comparative Germanic Syntax*. John Benjamins, Amsterdam and Philadelphia, pp. 245–272.
- Hinterhözl, R., Petrova, S., t.a. Rhetorical relations and verb placement in Old High German. In: Chiarosc, C., Claus, B., Grabski, M. (Eds.), *Salience—Multidisciplinary Perspectives on its Function in Discourse*. Mouton de Gruyter, Berlin.
- Kemenade, A. van, 1987. Syntactic Case and Morphological Case in the History of English. Foris Publications, Dordrecht.
- Kemenade, A. van, Los, B., 2006. Discourse adverbs and clausal syntax in Old and Middle English. In: Kemenade, A. van, Los, B. (Eds.), *The Handbook of the History of English*. Blackwell, Malden, MA and Oxford, pp. 224–248.
- Kiparsky, P., 1995. Indo-European origins of Germanic Syntax. In: Battye, A., Roberts, I. (Eds.), *Clause Structure and Language Change*. Oxford University Press, New York and Oxford, pp. 140–169.
- Krifka, M., 2007. Basic notions of information structure. In: Féry, C., Fanselow, G., Krifka, M. (Eds.), *The Notions of Information Structure. Interdisciplinary Studies on Information Structure (ISIS)* 6, 13–55.
- Kuno, S., 1976. Subject, theme, and the speaker's empathy—a reexamination of relativization phenomena. In: Li, Ch. N. (Ed.), *Subject and Topic*. Academic Press, New York, pp. 417–444.
- Lambrecht, K., 1994. *Information Structure and Sentence Form. Topic, Focus and the Mental Representations of Discourse Referents*. Cambridge University Press, Cambridge.
- Lenerz, J., 1984. Syntaktischer Wandel und Grammatiktheorie. Eine Untersuchung an Beispielen aus der Sprachgeschichte des Deutschen. Max Niemeyer, Tübingen.
- Molnár, V., 1993. Zur Pragmatik und Grammatik des TOPIK-Begriffs. In: Reis, M. (Ed.), *Wortstellung und Informationsstruktur*. Max Niemeyer, Tübingen, pp. 155–202.

- Önnerfors, O., 1997. Verb-erst-Deklarativsätze. Grammatik und Pragmatik. Almquist & Wiskell International, Stockholm.
- Pesetsky, D., 1987. Wh-in-situ: movement and unselective binding. In: Reuland, E., ter Meulen, A. (Eds.), *The Representation of (In)Definiteness*. MIT Press, Cambridge, MA, pp. 98–129.
- Peters, R., 2000. Soziokulturelle Voraussetzungen und Sprachraum des Mittelniederdeutschen. In: Besch, W., et al. (Eds.), *Sprachgeschichte. Ein Handbuch zur Geschichte der deutschen Sprache und ihrer Erforschung*, 2nd ed., vol. 2. Mouton de Gruyter, Berlin and New York, pp. 1409–1422.
- Petrova, S., 2006. A discourse-based approach to verb placement in early West-Germanic. *Interdisciplinary Studies on Information Structure (ISIS)* 5, 153–185.
- Petrova, S., Solf, M., 2008. Rhetorical relations and verb placement in early Germanic. A cross linguistic study. In: Fabricius-Hansen, C., Ramm, W. (Eds.), ‘Subordination’ vs. ‘Coordination’ in Sentence and Text. A Cross-linguistic Perspective. John Benjamins, Amsterdam and Philadelphia, pp. 333–351.
- Petrova, S., Solf, M., 2009. Zur Entwicklung von Verbzweit im Fragesatz. Die Evidenz des Althochdeutschen. *Beiträge zur Geschichte der deutschen Sprache und Literatur* 131 (3), 1–41.
- Pollock, J.Y., 1989. Verb movement, UG and the structure of IP. *Linguistic Inquiry* 20, 365–424.
- Prince, E.F., 1981. Toward a taxonomy of given-new information. In: Cole, P. (Ed.), *Radical Pragmatics*. Academic Press, New York, pp. 223–255.
- Reinhart, T., 1981. Pragmatics and linguistics: an analysis of sentence topics. *Philosophica* 27, 53–94.
- Rizzi, L., 1997. The fine structure of the left periphery. In: Haegeman, L. (Ed.), *Elements of Grammar. Handbook in Generative Syntax*. Kluwer, Dordrecht, pp. 281–337.
- Schrodt, R., 2004. Althochdeutsche Grammatik II. Syntax: Sammlung kurzer Grammatiken germanischer Dialekte, A. Hauptreihe, Nr. 5/2, Max Niemeyer, Tübingen.
- Simon, H.J., 1998. “KinnanS Eahna fei heid gfrein.”—Über einen Typ von Verb-Erst-Aussagesätzen im Bairischen. In: Donhauser, K., Eichinger, L.M. (Eds.), *Deutsche Grammatik—Thema in Variationen. Festschrift für Hans-Werner Eroms zum 60. Geburtstag*, Carl Winter, Heidelberg, pp. 137–153.
- Strawson, P., 1964. Identifying reference and truth values. *Theoria* 30, 96–118.
- Tomaselli, A., 1995. Cases of verb third in Old High German. In: Battye, A., Roberts, I. (Eds.), *Clause Structure and Language Change*. Oxford University Press, New York and Oxford, pp. 345–369.
- Travis, L., 1984. Parameters and effects of word order variation. Dissertation. MIT.
- Truckenbrodt, H., 2006. On the semantic motivation of syntactic verb movement in German. *Theoretical Linguistics* 32 (3), 257–306.
- Vieu, L., Prévot, L., 2005. Background in SDRT. In: Proceedings of the Conference “Traitement Automatique du Langage Naturel”, Fez, Morocco, pp. 485–494.
- Vikner, S., 1995. Verb Movement and Expletive Subjects in the Germanic Languages. Oxford University Press, New York.
- Westergaard, M., 2005. Norwegian child language and the history of English: the interaction of syntax and information structure in the development of word order. In: McCafferty, K., Bull, T., Killie, K. (Eds.), *Contexts—Historical, Social, Linguistic. Studies in Celebration of Toril Swan*. Peter Lang, Bern, pp. 293–410.
- Zwart, J.-W., 1997. *Morphosyntax of Verb Movement: A Minimalist Analysis of the Syntax of Dutch*. Kluwer, Dordrecht.