VERB POSITIONS AND BASIC CLAUSE STRUCTURE IN GERMANIC

1. GERMANIC CLAUSE STRUCTURE: THE V2-PHENOMENON

1.1 The Basic Pattern. The modern Germanic languages are characterized by a clause structure pattern in which the verb can appear in various positions, depending on the type of clause. "Verb second" or "V2" refers to the word order pattern whereby a finite verb appears in the second position of the clause. In the unmarked case, this applies in *main (independent) clauses* only, while the verb appears further to the right (often referred to as "V-last") in all other types of clauses, most notably embedded clauses. This state of affairs results in a main-embedded clause asymmetry that is characteristic of the clausal syntax of many Germanic languages.

(1)

Dutch, main clause

a. Tasman **ontdek-te** in 1642 Nieuw-Zeeland
Tasman discover-PAST.SG in 1642 New Zealand
'Tasman discovered New Zealand in 1642.'

b. * Tasman in 1642 Nieuw-Zeeland **ontdek-te**
Tasman in 1642 New Zealand discover-PAST.SG

(2)

Dutch, embedded clause

a. … dat Tasman in 1642 Nieuw-Zeeland **ontdek-te**
COMP Tasman in 1642 New Zealand discover-PAST.SG
'…that Tasman discovered New Zealand in 1642.'

b. * … dat Tasman **ontdek-te** in 1642 Nieuw-Zeeland
COMP Tasman discover-PAST.SG in 1642 New Zealand

"Second position" is defined in terms of constituents, the finite verb in V2-clauses appearing after the first *constituent*, not after the first *word*:

(3)

Dutch, main clause

a. Weinig mens-en **wet-en** dat
few human-PL know-PL DEM.DIST
'Few people know that.'

b. *Weinig **wet-en** mens-en dat
few know-PL human-PL DEM.DIST

We refer to the second position in the V2 pattern as the *V2 position*.

The V2 pattern is (typically) not sensitive to the nature of the first constituent. The fronting of any non-subject constituent will also be accompanied by V2:

(4)

Dutch, non-subject first constituent

a. In 1642 **ontdek-te** Tasman Nieuw-Zeeland
in 1642 discover-PAST.SG Tasman New Zealand
'Tasman discovered New Zealand in 1642.'

b. Welk land **ontdek-te** Tasman in 1642?
which country discover-PAST.SG Tasman in 1642
'Which country did Tasman discover in 1642?'

Non-finite verbs do not appear in the V2 position. As a result, a verbal piece consisting of a finite auxiliary and one or more non-finite verbs, appearing as a verb cluster in embedded clauses, will be split up by the V2 pattern in main clauses:

(5)

Dutch, verb clusters in embedded (a) and main (b/c) clauses

a. … dat Tasman in 1642 Nieuw-Zeeland **heeft** **ontdek-t**
COMP Tasman in 1642 New Zealand AUX.SG discover-PTCP
'…that Tasman discovered New Zealand in 1642.'

b. Tasman **heeft** in 1642 Nieuw-Zeeland **ontdek-t**
Tasman AUX.SG in 1642 New Zealand discover-PTCP
'Tasman discovered New Zealand in 1642.'

c. *Tasman **heeft** **ontdek-t** in 1642 Nieuw-Zeeland
Tasman AUX.SG discover-PTCP in 1642 New Zealand

(The verb cluster *heeft ontdekt* consists of a finite auxiliary and a nonfinite past participle.)

This article focuses on the distribution of the verb in Germanic clauses, more particularly on the phenomenon of verb second and its analysis within the generative linguistic tradition of the 1970s onward.

1.2 Distribution. The *canonical* V2 pattern described earlier is found in the standard varieties of (High and Low) German, Dutch, Afrikaans, and Frisian (all Continental West Germanic) and in the Mainland Scandinavian languages Swedish, Danish, and Norwegian (North Germanic). In North Germanic, where the object does not precede the verb, the asymmetry between main and embedded clauses is not always immediately apparent and needs to be brought out by negation or adverbs:

(6)

Danish, main vs. embedded clause

a. Johan **spis-er** (ofte) tomat-er
John eat-PRES often tomato-PL
'John often eats tomatoes.'

b. …at Johan (ofte) **spi-ser** tomat-er
COMP John often eat-PRES tomato-PL
'…that John often eats tomatoes.'

All these languages can, under specific conditions, treat embedded clauses like main clauses, as a result of which the V2 pattern shows up in embedded clauses as well (see Section 4.3). In Mainland Scandinavian and Frisian, embedded V2 occurs in the contexts identified by Hooper and Thompson (1973) as allowing embedded root phenomena in English. Roughly, in these contexts the embedded clause expresses the main assertion of the utterance, leading to restrictions on the nature of the main clause (e.g., it must not be negative or nonrealis):

(7)

Frisian, embedded V2 allowed

a. Pyt sei dat hy my sjoe-n **hie**
Pete say:PAST.3SG COMP 3SG.NOM 1SG.ACC see-PTCP have:PAST.3SG
'Pete said that he saw me.'

b. *Pyt sei dat hy **hie** my sjoe-n
Pete say:PAST.3SG COMP 3SG.NOM have:PAST.3SG 1SG.ACC see-PTCP
'Pete said that he saw me.'

(8)

Frisian, embedded V2 not allowed

a. Pyt betreur-et dat hy my sjoe-n **hie**
Pete regret-3SG COMP 3SG.NOM 1SG.ACC see-PTCP have:PAST.3SG
'Pete regrets that he saw me.'

b. *Pyt betreur-et dat hy **hie** my sjoe-n
Pete regret-3SG COMP 3SG.NOM have:PAST.3SG 1SG.ACC see-PTCP
'Pete regrets that he saw me.'

This is also the case in colloquial Dutch (Zwart, 2011, p. 123) and colloquial Afrikaans (Biberauer, 2002). In Standard German, embedded V2 occurs in similar contexts (Freywald, 2013, p. 327f) but always without the complementizer:

(9)

German, embedded V2

a. Maria glaub-t dass Peter nach Hause **geh-t**
Mary believe-3SG COMP Peter to house go-3SG
'Mary believes that Peter is going home.'

b. Maria glaub-t (*dass) Peter **geh-t** nach Hause
Mary believe-3SG COMP Peter go-3SG to house
'Mary believes that Peter is going home.'

Standard German also shows (optional) embedded V2 in adjunct clauses introduced by *weil* 'because'.

In Yiddish (Continental West Germanic) and Icelandic (Insular North Germanic), V2 occurs in both main and embedded clauses:

(10)

Icelandic, no main/embedded clause asymmetry

a. Jón **borð-ar** oft tómat-a
John eat-PRES.3SG often tomato-INDEF.ACC.PL
'John often eats tomatoes.'

b. … að Jón **borð-ar** oft tómat-a
COMP John eat-PRES.3SG often tomato-INDEF.ACC.PL
'…that John often eats tomatoes.'

The asymmetry between main and embedded clauses returns, however, with interrogatives, where the finite verbs invert with the subject in main clauses but not in embedded clauses (Thráinsson, 2007, p. 28; cf. also Den Besten & Moed-van Walraven, 1986, pp. 114–116):

(11)

Icelandic, main/embedded clause asymmetry with interrogatives

a. **Las** Jón ekki bók-ina?
read-PAST.3SG John NEG book-DEF.ACC.SG
'Didn't John read the book?'

b. … hvort Jón **læsi** aldei bók-ina
whether John read:SUBJ.PAST.3SG never book-DEF.ACC.SG
'…whether John never read the book.'

The status of Faroese (Insular North Germanic but heavily influenced by Danish) appears to be in flux (Heycock et al., 2012).

In English declarative clauses, the V2 pattern is entirely absent, but here, too, it returns in (nonembedded) interrogative clauses and is limited to auxiliaries (*residual V2*, also with focused negative phrases, cf. (39); see Woods, 2020, p. 298f, on the grammaticality of (12b) in varieties of English):

(12)

English, residual V2

a. When **did** Cook visit the Cook Islands?

b. *I wonder when **did** Cook visit the Cook Islands

2. ANALYSIS OF THE V2 PATTERN

2.1 Derivation. The V2 position is occupied by the verb only when two specific conditions are met: the verb must be finite, and the clause must be independent. In structuralist terms, this makes the V2 pattern a *marked* pattern, a deviation from the unmarked pattern whereby the verb appears toward the end of the clause.

In terms of a derivational model of grammar, this entails that the V2 position is a derived position and that the position of the verb toward the end of the clause is the more basic one. In the generative tradition, the derived nature of the V2 position was argued for as early as Bach (1962, p. 268f) and was universally adopted on the strength of the argumentation in Koster (1975).

One of Koster's arguments involved particle verbs in Dutch, in which the particle appears adjacent to the verb in embedded clauses but not in main clauses:

(13)

Dutch, V2 with particle verbs

a. … dat Tasman Cook op bel-t
COMP Tasman Cook up ring-3SG
'…that Tasman calls Cook.' [*op-bellen* 'call, telephone']

b. Tasman bel-t Cook op
Tasman call-3SG Cook up
'Tasman calls Cook.'

On the assumption that the particle verb is a lexical item, the word order in (13b) must be the result of a movement operation, either moving the particle *op* 'up' to the right from a basic position still occupied by the finite verb *belt* 'calls' (the V2 position), or moving the finite verb *belt* 'calls' to the left from a basic position still occupied by the particle *op* 'up.' In the first scenario, we need *both* particle movement and verb movement to derive the embedded clause order (13a), while in the second scenario, we need no movement at all to describe the embedded clause pattern. The second scenario, involving verb movement to the left, is more economical and therefore the more eligible one.

This argument, among others pointing in the same direction (see Zwart, 2011, p. 248f, for more discussion), leads to the conclusion that *the V2 pattern is derived by verb movement to the left*.

2.2 The Connection With the C-Position. The observation that the V2 pattern is derived by verb movement to the left naturally leads to further questions: (a) What is the nature of the V2 position? and (b) Why does the verb move there?

These questions were insightfully addressed as early as Paardekooper (1961), who noted that the verb in inversion constructions (such as (4)) has the same distributional properties as the complementizer introducing finite embedded clauses, and that the complementizer, like the verb, expresses tense and mood features (and sometimes even subject agreement features; on the phenomenon of complementizer agreement, see Section 4.2). These considerations were later replicated and augmented in Den Besten (1977), leading to the conclusion that (a) the V2 position is the complementizer position and (b) verb movement is really the movement of tense/mood features, carried by the verb (Den Besten, 1981; also Evers, 1981).

The parallel distribution of the complementizer and the verb (in inversion) can be illustrated by facts like the following, showing adjacency of the verb/complementizer and subject clitics (SCL):

(14)

Dutch, similar distribution verb in inversion and complementizer

a.	…	**dat**	(*in 1642)	**ie**	Nieuw-Zeeland	ontdek-t	heeft
		COMP	in 1642	SCL:3SG.NOM	New Zealand	discover-PTCP	AUX:3SG
	'…that he discovered New Zealand (in 1642).'						
b.	**Heeft**	(*in 1642)	**ie**	Nieuw-Zeeland	ontdek-t?		
	AUX:3SG	in 1642	SCL:3SG.NOM	New Zealand	discover-PTCP		
	'Did he discover New Zealand (in 1642)?'						

Also, the verb could be shown to occupy the same position as the interrogative complementizer in pairs like those in (15):

(15)

Dutch, similar distribution verb in inversion and complementizer

a.	(ik vraag me af)	welk	land	**of**	Tasman	ontdek-t	heeft
	I wonder	which	land	COMP:INT	Tasman	discover-PTCP	AUX:3SG
	'(I wonder) which land Tasman discovered.'						

b. Welk land **heeft** Tasman ontdek-t?
which land AUX:3SG Tasman discover-PTCP
'Which land did Tasman discover?'

To describe the V2 pattern, then, we needed a rule moving the finite verb to the complementizer position (initially COMP, later, with the articulation of the clausal structure in Chomsky, 1986, the head of the complementizer phrase [CP], C):

(16)

Verb second part 1

Move the finite verb to C

To obtain the V2 pattern, (16) must be supplemented with another rule, moving either the subject or in fact any other phrase into the position preceding the finite verb (initially, this position was part of the COMP-complex, but in the CP-inflection phrase [IP] structure of Chomsky, 1986, it was naturally identified as the specifier position of CP):

(17)

Verb second part 2

Move "XP to Spec,CP

Only the conjunction of (16) and (17) yields the V2 pattern.

It was immediately clear (as pointed out by both Paardekooper and Den Besten) that the evidence in (14) and (15) supporting (16) has no direct bearing on the V2 position in subject-initial clauses (like (1a)). But in the context of the (Revised) Extended Standard Theory of generative grammar, in which phenomena were derived via construction-specific transformations, and it was considered desirable to keep the number of those to a minimum, it was fully justified to maximize the scope of (16) and consider it to apply to subject-initial clauses as well (Den Besten, 1977, p. 9). As a result, (17) does not specify the nature of the phrase moving into the Spec,CP position: any phrase (XP) must be the subject in subject-initial main clauses or any other XP in inversion constructions.

Consequently, the term *V2 constraint* can be found in the literature to refer not only to the conjunction of (16) and (17) but also more narrowly to (17), an operation not involving the verb at all.

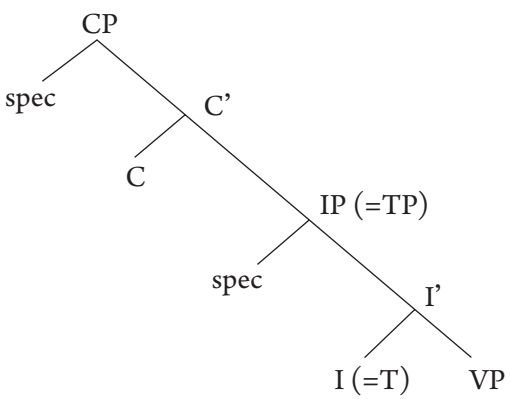
2.3 Doubts About Generalized V-to-C Movement. When the (Revised) Extended Standard Theory of generative grammar was succeeded by the Government and Binding theory (GB theory; Chomsky, 1981, 1982), the automatic support for the generalized V-to-C analysis of the V2 pattern disappeared. In GB theory, individual construction-specific transformations were replaced by the general movement operation Move α, and the need to reduce the number of transformations could no longer be formulated. Instead, all and

any number of movements (applications of Move-α) were acceptable as long as they helped satisfy the constraints of the modules of grammar (case theory, theta theory, binding theory, etc.).

Part of the new theory was a renewed conception of clause structure, in which functional elements (C, Tense, D [for determiner], Agr [for agreement], and potentially myriad others) projected fully fledged phrases (CP, Tense Phrase [TP], determiner phrase [DP], agreement phrase [AgrP], etc.) constituting a functional domain of regularly organized phrase structure on top of the lexical domains of the verb phrase (VP) and noun phrase (NP). Minimally, a clause consisted of an IP (later called TP—here and in what follows, IP and TP are used interchangeably) and a CP on top of VP, even if IP was quickly split up in TP and one or more AgrPs (CP was likewise split up in a number of layers but not before the GB theory was replaced by the minimalist program in 1991; see Section 2.4).

The minimal clause structure of the GB theory is given in (18), where the structural subject position is Spec,IP and the structural position for fronted material is Spec,CP.

(18)



This now made it possible to formulate a new account of the V2 pattern, proposed in Travis (1984), in which the random XP-movement operation (17) could be abandoned. In the new approach, the verb would still move to C in inversion constructions (like (4)), as motivated by the parallel distribution of the complementizer and the verb in inversion, but in subject-initial constructions (like (1a)), where this parallel distribution does not hold, the verb could be taken to move no higher than I (the head of IP). This assumes that Spec,CP and Spec,IP are the structural positions for fronted XPs and subjects, respectively, so that a rule like (17) governing the placement of XPs and subjects becomes largely redundant. If we then assume that the verb moves to I or C, the V2 pattern can be derived without recourse to a random XP-movement rule like (17).

Immediate support for this alternative approach was found in the distribution of weak pronouns in Yiddish (Travis, 1984, p. 117). Weak (non-subject) pronouns cannot be fronted (19), suggesting a generalization that states that no weak pronouns can occupy the Spec,CP

position (*ge-* is a completive prefix featuring in the morphological construction of past participles in Continental West Germanic).

(19)

Yiddish, weak pronouns cannot move to Spec,CP

a.	Di	froy	hot	**es**	ge-leyen-t	
	DEF.F	woman	have:3SG	3SG:INAN	GE-read-PTCP	
	'The woman read it.'					
b.	* **Es**	hot	di	froy	ge-leyen-t	
	3SG:INAN	have:3SG	DEF.F	woman	GE-read-PTCP	

But weak subject pronouns *can* appear in the first position:

(20)

Yiddish, weak subject pronouns appearing in first position

Es	hot	ge-ges-n	dos	brot
3SG:INAN	have:3SG	GE-eat-PTCP	DEF.N.SG	bread

'It ate the bread.'

This is accounted for if weak subject pronouns (and in fact all subjects) occupy a lower position, Spec,IP, and therefore are not subject to the rule banning weak pronouns from Spec,CP. But if that is the correct analysis, the V2 pattern is not a unique property of the CP level but can be instantiated at the lower IP level as well.

Travis's analysis of the V2 pattern led to a new question that was not satisfactorily answered at the time, leading most Germanicists to abandon the approach and stick to the pre-GB analysis in terms of a "V2 constraint." This is the question of what blocks the verb from moving to I in embedded clauses, yielding embedded V2 across the board.

However, if Den Besten (1981) and Evers (1981) are right in deriving verb movement from the need to express the tense/mood features in C and if the complementizer itself is already capable of expressing these features, it follows that nothing would compel the verb to move in embedded clauses. Formally, we may assume that the complementizer comes to host tense/mood features as a result of I-to-C movement (Hoekstra & Marácz, 1989, p. 77), an analysis that was further developed by Zwart (1993a) in the context of the minimalist program (cf. Chomsky, 1995). These analyses assume that subject-initial main clauses are not CPs but IPs and must describe the V2 pattern as the movement of the verb to the highest functional head of the clause: I in subject-initial main clauses, and C in inversion constructions (relativizing (16) and abandoning (17)).

The idea that embedded clauses in canonical V2 languages are characterized by I-to-C movement (obviating embedded V-to-I movement), received further support from the phenomenon of complementizer agreement (already noted in this connection by both Den Besten, 1977; Paardekooper, 1961). Complementizer agreement is the expression of subject agreement (for person and/or number) on the complementizer, in addition to the regular subject agreement on the finite verb.

(21)

Frisian, complementizer agreement

Heit	sei	dat-**st**	do	soks	net	leauw-e	moat-**st**
dad	say:PAST.SG	COMP-2SG	2SG	such	NEG	believe-INF	must-2SG

'Dad said that you should not believe such things.'

Since the subject agreement features originate in I, a plausible account of complementizer agreement would be that it is the result of the agreement features moving from I to C (first proposed by Hoekstra & Marácz, 1989), which would remove I as a target for verb movement. Crucially, in the embedded V2 clauses of Frisian, complementizer agreement is absent (Van der Meer, 1991; Zwart, 1993a, p. 291):

(22)

Frisian, no complementizer agreement with embedded V2

Heit	sei	dat(*-**st**)	do	moat-**st**	soks	net	leauw-e
dad	say:PAST.SG	COMP-2SG	2SG	must-2SG	such	NEG	believe-INF

'Dad said that you should not believe such things.'

These observations suggest that when C carries the features of tense and/or agreement, which (in GB theory) originate in lower functional heads (either I or, when IP is split up, Agr and T), these lower functional heads are no longer available for the verb to move to, and the asymmetry between main and embedded clauses is the result of this inability of the verb to move.

2.4 Views on Clause Structure in Relation to the V2 Pattern. While Den Besten's (1977) analysis of the V2 pattern, identifying positions for heads and phrases in the COMP domain, was instrumental to the development of the CP-structure in Chomsky (1986), conversely the entire CP-IP structure of (18) was not enthusiastically adopted among students of (non-English) Germanic syntax (see Zwart, 2011, p. 252f, for a survey). A common position to take was that IP in Germanic languages other than English was either nonexistent or conflated with CP (e.g., Platzack, 1983). Alternatively, IP was taken to be present but head-final in Object-Verb (OV) languages like Dutch, German, and Frisian (in spite of CP and DP being clearly head-initial), allowing for vacuous verb movement to the right in embedded clauses (e.g., Den Besten, 1986, p. 247). All these views converged on the notion that C was the only functional head in the left periphery of the clause in V2 languages, strengthening (16), and, by implication, (17) as key elements of the analysis of the V2 pattern.

Ironically, the CP-IP structure in (18) receives much clearer support from canonical V2 languages than from English. In English, the only elements appearing in I are auxiliaries—finite lexical verbs remain in V, leaving I unfilled and hard to demonstrate (and, in fact, even auxiliaries may be in a lower functional head in the IP system, as they are not necessarily adjacent to the subject in English). In contrast, every subject-initial main clause in a canonical V2 language has the finite verb in a position right-adjacent to the subject. Since Spec,IP is the canonical subject position in GB theory, this immediately provides strong empirical evidence for head-initial IP in canonical V2 languages (Zwart, 1994).

The idea that there must be head-initial functional projections in the Germanic canonical V2 languages gained further support from the distribution of object clitics (Haegeman, 1991; Jaspers, 1989; Zwart, 1991). The normal order of objects in Dutch is indirect object–direct object (23a), but when the direct object is a clitic, it shifts to the left and attaches to the finite verb (23b).

(23)

Dutch, direct object clitic placement

a. Hij heeft mijn vader **het** **boek** ge-gev-en
   3SG.M.NOM have:3SG POSS:1SG father DEF.N.SG book GE-give-PTCP
   'He gave my father the book.'

b. Hij heeft **'t** mijn vader ge-gev-en
   3SG.M.NOM have:3SG OCL.N.SG POSS:1SG father GE-give-PTCP
   'He gave it to my father.'

At the time, it was a common assumption that clitics adjoin to functional heads (e.g., Kayne, 1991) and can hence be used to probe the existence of functional heads. Crucially, the object clitic also shifts to the left when the finite verb is located elsewhere:

(24)

Dutch, direct object clitic placement

a. **Heeft** hij **'t** mijn vader ge-gev-en?
   have:3SG 3SG.M.NOM OCL.N.SG POSS:1SG father GE-give-PTCP
   'Did he give it to my father?'

b. … dat hij **'t** mijn vader **heeft** ge-gev-en
   COMP 3SG.M.NOM OCL.N.SG POSS:1SG father have:3SG GE-give-PTCP
   '… that he gave it to my father.'

It follows that there is a functional head position to the right of the subject in (24), and juxtaposing (24) and (23) shows that the finite verb can be in that position as well.

The reluctance to adopt (18) for Germanic V2 languages became considerably more exceptionalist after Kayne (1994) argued that syntactic phrase structure is universally head-initial and that movement is universally leftward. This put analyses of West Germanic canonical V2 languages (Dutch, German, Frisian) involving a head-final IP—with (vacuous) rightward V-to-I movement in embedded clauses—in need of additional justification, which was not forthcoming.

In a parallel development, it was argued (initially on the basis of data from German and Dutch, by Hoekstra & Zwart, 1994; Müller & Sternefeld, 1993, later on the basis of data from Northern Italian dialects, by Rizzi, 1997), that CP is, in fact, a complex of functional phrases, providing a range of specifier and head positions to the left of the structural subject position, including (at least) ForceP, TopicP, FocusP, and FinP. These proposals would seem to make it impossible to maintain (16) without further elaboration, as it is unclear which functional head

is intended by "C." Also, it raises the question of why only a single XP can precede the verb were it to occupy any but the highest functional head position in the CP domain.

A popular implementation of the split-CP structure identifies a finiteness phrase or FinP as the lowest rung in the CP domain (Rizzi, 1997, pp. 283–284). In justifying FinP inside the CP system, Rizzi explicitly leans on Den Besten (1977) and Holmberg and Platzack (1988), authors who acknowledged the tense and mood features of complementizers but not a separate I-head as the source of these features. In Rizzi's proposal, FinP exists *next to* IP, and Fin (the head of FinP) "agrees" with the tense, mood, and agreement features of the IP system but is itself "more rudimentary" (see Zagona, 2013, for a more probing elaboration of FinP in this context).

In the more recent literature on the V2 pattern (cf. Lohnstein & Tsiknakis, 2020; Woods, 2020), FinP acts like the CP of earlier V2 analyses so that it is Fin that attracts the verb according to (16), and Spec,Fin that attracts a random XP according to (17) (going back to Haegeman, 1997). In subject-initial main clauses, that XP is the subject, elsewhere it can be any other type of XP. These XPs will then have to be expedited to designated specifier positions higher up in the CP domain (having to do with topic, focus, etc.), raising the "bottleneck" question of how to block more than one XP from moving to the left of the verb (see Holmberg, 2020). Other proposals exist as well, distinguishing "low V2 languages," where the C of (16)/(17) equals Fin, from "high V2 languages," where C equals Force (the highest functional head in the CP-system; e.g., Grewendorf, 2010). Modulo the replacement of C by Fin/Force, these analyses all stay within the paradigm of (16)/(17).

3. THEORETICAL ISSUES

3.1 Triggers for Movement. Since the V2 pattern involves displacement of two elements, the verb (16) and some XP (17), a central question is which of these movements comes first. Implicit in the paradigm of (16)/(17) is that verb movement to C (or Fin) comes first, forcing additional XP movement because of the V2 constraint (17). This ordering is inherited from the pre-GB analysis of Den Besten (1977), which hinges on the observation that the verb shares the distributional properties of the complementizer (at least in inversion constructions) and therefore *must* be in C, forcing us to postulate an additional random XP movement (17) to derive the V2 pattern.

However, in GB theory, standards for explanatory adequacy were raised, forcing us to come up with triggers for movements, to be formulated in terms of constraints belonging to the various modules of grammar (such as the case filter, the theta criterion, the empty category principle, etc.). As discussed at length in Weerman (1989) and Vikner (1995), coming up with such a trigger for (16) was not obvious.

Moreover, the V2 constraint itself was not an acceptable trigger for the XP movement in (17), as it did not refer to any known requirement of the GB modules. In fact, the placement of the subject in Spec,IP (Inflection Phrase; either by movement or base-generation) was fully motivated by the case-assignment rules of GB case theory (according to which the subject is assigned the nominative case by I via Spec-Head agreement). Likewise, Spec,CP was considered a designated landing site for A'-movement of topics and focused elements and a locus for

checking the wh-features of question words. (The split-CP proposals referred to earlier were mainly motivated by the need to further articulate the loci in the left periphery of the clause where features of A'-moved elements could be checked.)

Since the GB theory had bona fide triggers for XP movements to the left periphery of the clause, the XP-fronting rule (17) became redundant. Combined with the unclear trigger for verb movement, this made the alternative ordering of verb movement *following* XP movement vastly more attractive (e.g., Poletto, 2000, p. 94). This entailed eliminating (17) and abandoning (16) in favor of something like (25).

(25)

Verb-second

Move the finite verb to the head of the highest functional projection hosting an XP.

Since "the highest functional projection hosting an XP" varies with the kind of XP (subject, topic, focus phrase, wh-element), it followed that the V2 pattern could no longer be rigidly tied to any particular functional projection. It was not generally recognized that this amounts to a justification of the approach advocated by Travis (1984).

3.2 Verb Second in Minimalism. The minimalist program for linguistic theory, introduced by Chomsky in 1991 (see Chomsky, 1995), takes syntax to be the optimal resolution of conditions imposed by the interfaces dealing with sound and meaning. The only syntactic operation left is Merge, the derivational step that combines two elements in a set. Merge can be applied recursively, yielding a hierarchical structure.

A condition on Merge is that one of the elements involved must be the entire structure at that point in the derivation (i.e., the "root" of the tree structure):

(26)

Extension condition

When α merges with β, β must be a root

In (26), α can be a new element (external Merge) or can be a subpart of β (internal Merge = movement).

The structure generated by Merge must be interpretable to the interface components (i.e., the terminal nodes in the tree structure carry features that the interface components must be able to "read"). One assumption is that for a derivation to converge, features that are not interpretable to the interface components must be eliminated and that movement is the way to eliminate these features via a local feature-checking operation. While this leaves the rationale for XP movement largely intact (subjects still move to Spec,IP—now referred to as TP, for Tense Phrase—and topics, focused elements, and wh-elements still move to A'-positions in the CP-domain), it does affect the status of verb movement, or head movement more generally, as head movement never targets the root of a clause but the head of the root (Chomsky, 2001).

Chomsky (2001, p. 37f) therefore argues that verb movement (including verb second) cannot be a rule of syntax and must instead be the effect of some linearization requirement of the interface component dealing with morphology and phonology (the phonetic form or PF of earlier stages of generative grammar). In this connection, Chomsky notes that verb second typically does not affect meaning (see also Freitag, 2021, chapter 3) and therefore should not be thought of as a rule of syntax (now called "narrow syntax," excluding syntactic phenomena that ought to be relegated to PF).

The observation that verb second does not affect meaning has been challenged, most notably by Lechner (2006) and Truckenbrodt (2006), the latter more specifically relevant to verb second in Germanic. Truckenbrodt observes that minimal pairs of declarative, interrogative, and imperative clauses that differ in the position of the finite verb, such as interrogative (27), differ in that only the clause type with the finite verb fronted expresses a certain illocutionary force (see also Wechsler, 1991):

(27)

Fronted verb expressing illocutionary force in German

a. **Regne-t** es?
   rain-3SG 3SG.NTR
   'Is it raining?'

b. Ob es **regne-t**?
   COMP:INT 3SG.NTR rain-3SG
   'I wonder whether it is raining.'

Only in (27a) does the question have the illocutionary force of an appeal to the addressee. However, the correlation of illocutionary force with verb movement does not entail that one is caused by the other. In other words, the features relevant to the interpretation may trigger verb movement, as Truckenbrodt supposes, or they may be inherent properties of certain main clauses, which coincidentally also display verb movement. As a matter of fact, the correlation between finite verb fronting and illocutionary force breaks down in other verb-second languages such as Kashmiri (Freitag, 2021, p. 61f) and Dutch, in which (27b) is realized with a fronted modal verb (*Zou het regenen?* [would it rain] 'I wonder whether it is raining').

The problem that head movement does not target the root was addressed by Matushansky (2006) and Fanselow (2009), who explore the idea that a head, in fact, does merge to the root when it moves, after which some readjustment takes place (morphological merger of the moved head with the head of the root in Matushansky's analysis, reprojection of the categorial features of the moved head in Fanselow's analysis) to bring the resulting structure in line with minimalist phrase structure. These proposals would have the effect of salvaging the syntactic nature of head movement, but the cost of introducing additional mechanisms would have to be weighed as well.

The post-syntactic perspective on verb second has not been fully explored, although a first outline was proposed by Zwart (2005). Since verb second positions the finite verb to the immediate right of the first constituent, verb movement could be reformulated as a spell-out rule, forcing the finiteness features (carried by the verbal morphology) to be realized at the left

edge of the first constituent's sister (see also the discussion in Fanselow, 2009, who attributes the concept of "squeezing in" the verb behind the first constituent to Bierwisch, 1963; see also Thiersch, 1978, p. 21). This approach would have the advantage of connecting verb second directly to Merge, even if it is de facto a post-syntactic linearization operation.

4. EMPIRICAL ISSUES

Notwithstanding the general uniformity of verb-second phenomena across canonical verb-second languages, there is no shortage of facts deviating from the common pattern in one way or another. The literature on these topics is growing (see, e.g., Wiese, & Müller, 2018; Woods, 2020), and what follows can be no more than an indication of the relevant phenomena and their consequences for the analysis of verb second and for clause structure more generally.

4.1 Verb-Second Deviations. All Germanic verb-second languages also allow verb-first word orders in circumscribed contexts, including yes/no questions, imperatives, conditionals, topic drop, and connected narratives.

(28)

Verb-first constructions

a. *Yes/no-questions, Yiddish* (Den Besten & Moed-van Walraven, 1986, p. 114)
   (Tsi) **hot** er ge-leien-t dos bux?
   Q AUX:3SG 3SG.M.NOM GE-read-PTCP DET.N book
   'Has he read the book?'

b. *Imperatives, Dutch* (Bennis, 2007, p. 121)
   Kom jij eens hier!
   come:SG.IMP 2SG.NOM once here
   'Come here, you!'

c. *Conditionals, Swedish* (Platzack, 1986, p. 47)
   Kommer hon, så går jag
   come 3SG.F.NOM so go 1SG.NOM
   'If she comes, I go.'

d. *Topic drop, German* (Cardinaletti, 1990, p. 75)
   Hab ich gestern ge-kauf-t
   have:1SG 1SG.NOM yesterday GE-buy-PTCP
   'I bought it yesterday.'

e. *Narrative inversion, Icelandic* (Thráinsson, 1986, p. 173)
   Kom-a þeir nú að stór-um hell-i …
   come-3PL 3PL.NOM now to big-M.DAT.SG cave-DAT.SG
   'Then they get to a big cave…'

These are generally brought in line with the verb-second pattern by assuming an empty operator as the first constituent (in fact, a different empty operator for each type), optionally

made overt in yes/no questions in Yiddish (28a). The various empty operators assumed in this connection show a complementary distribution so that, for example, a topic drop example cannot at the same time receive any of the other interpretations associated with verb-first word order.

The empty operators involved with the verb-first pattern are typically assumed to be base generated in the specifier position of the CP (or of a particular phrase within a split CP), instead of being moved there from inside the clause. This means that (17) does not apply unless "move" were to be reformulated as "move or merge (externally)." But clearly the empty operator is not merged in Spec,CP to satisfy (17) but to express relevant features of clausal semantics. A more natural analysis, then, would take the verb movement to be triggered by the presence of the empty operator, rather than the other way around (see Section 3.1).

More interesting are cases of verb third, where the finite verb is preceded by two constituents (see Wiese & Müller, 2018, for a recent survey). Here, various types need to be distinguished, depending on the nature of the constituents preceding the finite verb.

(29)

(Typically) subject-XP-verb

a. *Discourse particles, Dutch* (Zwart, 2005, p. 28)
   Dit voorstel echter **is** onacceptabel
   DEM.SG proposal however be:3SG unacceptable
   'This proposal however is unacceptable.'

b. *Focus particles, Norwegian* (Nilsen, 2002, p. 152)
   Jens bare **gikk**
   Jens just go:PAST
   'Jens just left.'

(30)

XP-subject-verb

a. *German urban vernacular (Kiezdeutsch;* Wiese, 2009, p. 787)
   Morgen ich **geh** Arbeitsamt
   tomorrow 1SG.NOM go:1SG job.center
   'Tomorrow I'll be going to the job center.'

b. *West Flemish* (Haegeman & Greco, 2018, p. 228)
   Tegen de avond 't **begost** te smor-en
   toward DET evening it begin:PAST.SG INF fog-INF
   'Toward the evening, the fog set in.' [lit. 'it started to fog']

c. *Short wh-element questions, Tromsø Norwegian* (Westergaard & Vangsnes, 2005)
   Ka ho **sa**?
   what 3SG.F say:PAST
   'What did she say?'

(31)

XP-XP-verb

a. *Frame-setting adverbial clauses, Dutch* (after Haegeman & Greco, 2018, p. 235)
Als mijn handout klaar is, aanwie **moet** ik hem
when POSS.1SG handout ready be:3SG to who must:SG 1SG.NOM 3SG.ACC
dan gev-en?
then give-INF
'Once my handout is done, who should I give it to?'

b. *Resumption, Dutch* (Broekhuis & Carver, 2016, p. 1702)
Deze jongen-s, die kenn ik niet
DEM:PL boy-PL DEM know:1SG 1SG.NOM NEG
'There boys, I don't know them.'

c. *Resumption, Norwegian* (Meklenborg, 2020, p. 99)
Derfor, så har jeg ikke glort det ennå
therefore so AUX:PRES 1SG.NOM NEG do:PTCP 3SG.N yet
'Therefore, I haven't done it yet.'

The question posed by these verb-third orders is to what extent their existence forces us to assume more positions than the standard structure in (18) allows. Typically, analyses capitalize on the larger number of positions afforded by the split-CP proposal of Rizzi (1997; e.g., Grewendorf, 2010; Walkden, 2017), but that creates the potentially more serious problem of how to account for the strict verb-second pattern in the first place (see the discussion in Holmberg, 2020).

The type in (29) involves discourse (29a) or focus (29b) particles whose distribution is prosodically conditioned. The type of *echter* in (29a) is enclitic on the first constituent (Zwart, 2005, p. 28), which must not be a weak pronoun; the type of *bare* must immediately precede a focused predicate (Nilsen, 2002). These observations make it somewhat plausible that the position of the relevant elements is due to post-syntactic linearization requirements. If so, no revision of the clause structure underlying the verb-second pattern appears to be called for.

The type in (30) is significant in that the second constituent preceding the verb must be the subject. The pattern in (30a) is described in Walkden (2017) for a range of Germanic urban vernaculars (Walkden, 2017, p. 59, while noting that the second constituent in the Kiezdeutsch cases is overwhelmingly the subject, hesitates to conclude that it *must* be the subject, in view of a limited number of cases where the second constituent is a weak adverb, but his examples involve locatives, which we know can appear as subjects; cf. Hoekstra & Mulder, 1992).

The pattern in (30a, b) can be straightforwardly described starting from the structure in (18), with the subject in Spec,TP (Tense Phrase) and the first constituent in Spec,CP, on the assumption that in the relevant varieties, (some) additional fronted categories fail to trigger subject–verb inversion (T-to-C movement). This pattern, then, can be taken to reveal an instance of verb movement in canonical verb-second languages (V-to-T movement) that is normally obscured by the subject–verb inversion that occurs when an additional category is fronted. This is consistent with the analysis of verb second advanced by Travis (1984), while the traditional analysis involving the conjunction of (16) and (17) lacks a straightforward account.

In the North Norwegian pattern in (30c), the wh-element is monosyllabic, and "the subject is virtually always familiar or given information" (Westergaard & Vangsnes, 2005, p. 126). Based on the distribution of subjects vis-à-vis adverbs, Westergaard and Vangsnes (2005, p. 136) assume different subject positions for given and new subjects, both within the IP system (containing TP and AgrP). If correct, the pattern in (30c) would again support an analysis of verb third where the finite verb stays within the IP system.

The type in (31a) appears to be best analyzed as asyndetic juxtaposition of a frame-setting adverbial and a full-fledged independent clause (Haegeman & Greco, 2018). If an additional functional projection must be assumed to accommodate the first constituent in these cases, such as the FrameP proposed by Haegeman and Greco (2018), that projection must be outside CP (whether split or not; Haegeman & Greco, 2018, pp. 35–36).

Next to (31a), West Flemish (but not Standard Dutch) has cases like (30b), where a clause-initial adverbial is followed by a subject-initial main clause. Here again, just like with the type in (30a), the simplest analysis has the subject in Spec,TP and the adverb in Spec,CP, with the finite verb staying in T instead of moving on to C.

Finally, the type in (31b, c) involves resumption of an initial constituent (which can be a subject or a non-subject) by a demonstrative. This pattern is typically analyzed as involving a combination of movement (of the demonstrative) and base generation (external Merge) of the initial constituent (see Broekhuis & Corver, 2016, p. 1704, and subsequent discussion). If so, these may be structurally similar to the type in (31a), involving asyndetic juxtaposition of an initial element and a full-fledged finite clause, or some additional projection outside the CP-system hosting the initial constituent.

In general, then, verb-second deviations in the form of verb-third word orders do not compel us to complicate the structure of the clause beyond what needs to be minimally assumed in (18).

4.2 Doubling Phenomena. Various doubling phenomena in verb-second clauses may be taken to shed light on the structure of the clause. These include complementizer agreement, doubling person and number features on the complementizer (32), doubling or displaced tense marking in Dutch child language and certain dialects (33), and apokoinou, that is, finite verb doubling (34):

(32)

Complementizer agreement

a. *South Hollandic Dutch* (Zwart, 1993b, p. 318)

…	dat-**te**	ze	kom-me
	COMP-PL	3PL	come-PL

'…that they are coming.'

b. *West Flemish* (Ackema & Neeleman, 2004, p. 240)

…	da-**n**	zunder	tegen	under	wil	ge-werk-t	ee-n
	COMP-3PL	3PL.NOM	against	POSS:3PL	will	GE-work-PTCP	AUX-3PL

'…that they worked against their will.'

(33)

Displaced tense-marking (Barbiers & Van Koppen, 2006, p. 29)

a. *Dutch child language*

Dat	lust-ik-**te**	niet
DEM	like-1SG.NOM-PAST.SG	NEG

'I couldn't eat that.'

b. *Strijen Dutch*

Gisteren	wandel-die-**de**	door	het	park
yesterday	walk-SCL:3SG-PAST.SG	through	DET.N	park

'He walked through the park yesterday.'

(34)

Apokoinou, Rotterdam Colloquial Dutch (Zwart, 2005, p. 21)

Dan	**was**	je	tegenstander	**was**	neer
then	be:PAST.SG	POSS:2SG	opponent	be:PAST.SG	down

'Then your opponent was down.'

Of these, the complementizer agreement facts (cf. Van Koppen, 2020) appear to be the most relevant, as already observed by Paardekooper (1961) and Den Besten (1981, p. ii). At issue is the question of whether the agreement is a syntactic or morphological phenomenon (cf. Goeman, 1980).

From a syntactic perspective, complementizer agreement suggests a connection between the heads of the IP and CP systems (Hoekstra & Marácz, 1989; Zwart, 1993a), which is severed not only in embedded verb-second constructions (see (21) and (22)), but also when the complementizer and TP/AgrP are not adjacent (Ackema & Neeleman, 2004, p. 240; but see Van Alem, 2022, chapter 3, for much pertinent discussion):

(35)

West Flemish, complementizer agreement subject to adjacency

…	da(*-**n**)	op	den	warm-st-e	dag	van	't	jaar	zunder	tegen
	COMP-3PL	on	DET.M	warm-SUP-AGR	day	of	DET.N	year	3PL.NOM	against
	under	wil	ge-werk-t	ee-n						
	POSS:3PL	will	GE-work-PTCP	AUX-3PL						

'…that on the hottest day of the year they worked against their will.'

Also relevant appears the fact that the agreement on the complementizer, while expressing the same features as agreement on the verb, may receive a different morphological realization from agreement on the verb. Crucially, in dialects that show this discrepancy, the verb in inversion shows the complementizer agreement form, while the verb in subject-initial verb-second clauses shows the verbal agreement form (Zwart, 1993a, p. 179f):

(36)

Double agreement, East Netherlandic Dutch

a. Wie speul-**t**/*-e
1PL.NOM play-PL
'We are playing.'

b. Waor speul-**e**/*-t wie?
where play-PL 1PL.NOM
'Where do we play?'

c. … dat-**te** wie speul-**t**/*-e
COMP-PL 1PL.NOM play-PL
'…that we are playing.'

If the agreement realization is a function of the syntactic position of the verb, the absence of the *-e* ending in (31a) suggests that the verb is not always in C in verb-second constructions (see also Van Alem, 2022, p. 22f).

From a morphological perspective, Goeman (2000) and De Vogelaer et al. (2006) observe a similarity between agreement on the complementizer and on the auxiliary in subject–verb inversion constructions, suggesting that complementizer agreement is merely the effect of an analogical extension of the auxiliary agreement pattern. This calls into question whether any syntactic mechanism underlying complementizer agreement needs to be assumed and hence whether any conclusions regarding the structure of the clause can be based on it (see Zwart, 2006, for discussion). Likewise, the adjacency effect in (33) may be taken to indicate that complementizer agreement is a post-syntactic spell-out phenomenon (cf. Fuß, 2003).

The child language tense-marking facts (first discussed in Flikweert, 1994) appear to have a similar uncertain status. The phenomenon is limited to subject–verb inversion constructions, where the verb is in C and the subject is a pronoun. Barbiers and Van Koppen (2006, p. 29) argue that the position of the tense suffix following the subject pronoun shows that TP is head-initial, on the assumption that the verb, moving through T on its way to C, strands the tense suffix there. But this assumes the pre-minimalist notion of inflectional affixes being present in narrow syntax, rather than being introduced in a post-syntactic morphology component. Assuming morphology after syntax, the position of the tense suffix in (33) merely reflects properties of inflectional paradigm construction in the morphological component (where the pronoun is taken to be part of the inflected verb form), not necessarily related to the structure of the functional domain of the clause.

The apokoinou example (34), where the subject *je tegenstander* 'your opponent' is the apokoinou or *pivot* element, at first blush reveals the existence of two head-initial functional projections in the left periphery of the clause, consistent with the structure in (18). However, as further examples in Zwart (2005, pp. 21–23) show, the pivot can also be a time adverbial or a focused constituent, in which case the subject appears twice:

(37)

Apokoinou, non-subject pivot, Rotterdam Colloquial Dutch

Ik	**heb**	nooit	van	mijn	leven	**heb**	ik	een	wedstrijd
1SG.NOM	AUX:1SG	never	of	POSS:1SG	life	AUX:1SG	1SG.NOM	INDEF.SG	match
ge-boks-t	die	ge-maak-t	was						
GE-fight-PTCP	REL:CG	GE-fix-PTCP	AUX:PAST.SG						

'Never in my lifetime have I fought a match that was fixed.'

Unlike (34), (37) cannot simply be mapped onto the structure in (18), suggesting that these colloquial phenomena require a different kind of approach.

4.3 Embedded Verb Second. As mentioned earlier, and as documented in detail in Vikner (1995, chapter 4), two types of embedded verb second in Germanic languages must be distinguished:

(38)

Embedded verb-second types in Germanic languages

a. Embedded verb-second in all (declarative) embedded clauses
   Icelandic, Yiddish
b. Embedded verb-second in circumscribed (declarative) embedded clauses
   Danish, Norwegian, Swedish; Frisian; Dutch, Afrikaans; German

Historically, the Mainland Scandinavian languages were more like Icelandic (Platzack, 1988, p. 215), still visible in conservative dialects like Älvdalsmålet (Levander, 1909, p. 133; but see Angantýsson, 2017, for an update), and Yiddish was more like German (Santorini, 1995, p. 54), so that neither group should necessarily be expected to show uniform behavior (cf. Santorini, 1994, on Icelandic vs. Yiddish).

A key difference between the two types of embedded verb second is that long-distance wh-movement is allowed in the Icelandic/Yiddish type but not in the Danish (etc.) type (Vikner, 1995, p. 108ff):

(39)

Long-distance extraction in the two types of embedded verb-second clauses

a. Icelandic

[Hvaða	mynd]$_i$	sagði	hún	að	börn-in
which:ACC.SG	film:ACC.SG	say:PAST.3SG	3SG.F.NOM	COMP	child-DEF.NOM.PL
hef-ðu	þegar	séð	t_i?		
AUX-SUBJ.PAST.3PL	already	see:PTCP			

'Which film did she say that the children had already seen?'

b. *Danish*

[Hvilken	film]$_i$	sagde	hun	at	børn-ene	(***hav-de**)
which	film	say:PAST	3SG.F.NOM	COMP	child:PL-DEF	AUX-PAST
allerede	(hav-de)	se-t	t_i?			
already	AUX-PAST	see-PTCP				

'Which film did she say that the children had already seen?'

The transparent Icelandic/Yiddish type (38a) shows the nexus of regular complementation constructions and can simply be mapped as in (18), with the embedded verb occupying the T-position (Holmberg, 1988, p. 123; Santorini, 1995, p. 56; pace Vikner, 1995, p. 138).

The opacity of the embedded verb-second clause in languages of the Danish type (38b) suggests that this is not a regular complementation structure. This is confirmed by the observation that in embedded verb-second clauses in Frisian, unlike regular complement clauses, weak subject pronouns do not cliticize onto the complementizer (De Haan & Weerman, 1986, p. 85), and complementizer agreement is absent (22). An analysis of the special character of embedded verb-second clauses of this type generally involves positing more structure ("CP-recursion" in Vikner, 1995, p. 65f; an "Illocutionary Act Phrase" in Woods, 2020), but alternatively, the crucial factor is not the amount of structure but the absence of the required nexus between the complementizer and the following clause (e.g., Zwart, 1997, p. 236). This alternative ties in with the observation in Hooper and Thompson (1973) that embedded clauses with root phenomena contain the main assertion of the sentence as a whole, reducing the matrix clause to parenthetical status.

For all intents and purposes, then, the embedded clause in (39b) starts a new clause, which may be a CP or a TP, depending on one's analysis of subject-initial main clauses (see the earlier discussion). But nothing compels us to analyze embedded verb-second clauses in languages of the Danish type (38b) as CPs, except when they involve additional subject–verb inversion (which at least in modern spoken Afrikaans is exceedingly rare; cf. Biberauer, 2002, p. 40).

5. CONCLUSION

The modern Germanic languages are characterized by a word order pattern where the finite verb appears to the immediate right of the first constituent ("verb second"). In canonical verb-second languages (German, Dutch, Afrikaans, Frisian, Danish, Norwegian, Swedish), verb second is limited to main clauses, yielding a main-embedded clause asymmetry, although embedded clauses containing the main assertion of the sentence may also display the verb-second phenomenon, sometimes limited to colloquial varieties. In other verb-second languages (Icelandic and Yiddish), verb second occurs in both main and embedded clauses. In the analysis of the verb-second pattern in generative grammar, the verb-second position is a derived position, obtained by the finite verb via head movement. In the standard analysis, the derivation involves two ordered steps: (a) verb movement to the complementizer position C and (b) XP movement of an arbitrary constituent to the specifier position of CP. We discussed the validity of this standard analysis from the perspective of GB theory and minimalism, arguing

that Step 1 must be thought of as following Step 2, that verb movement may target various landing sites depending on the construction, and that Step 2 (a random XP-movement operation needed to satisfy a "verb-second constraint") can be abandoned altogether. In this context, views on phrase structure relevant to the syntax of the Germanic languages were also discussed, hinging on the question of whether the standard CP-IP structure of the clause can be applied to Germanic and, if so, whether IP should be head-initial or head-final. More recent developments, assuming a split-CP structure, were also discussed with a view to their relevance to the analysis of the verb-second pattern. Finally, we touched on a range of deviations from the verb-second pattern, including verb-first and verb-third word orders, doubling phenomena (including complementizer agreement), and embedded verb second, noting that these can generally be described without complicating the structure of the clausal left periphery.

FURTHER READING

Antomo, M., & Müller, S. (Eds.). (2018). *Non-canonical verb positioning in main clauses* (Linguistische Berichte Sonderheft 25). Hamburg, Germany: Buske Verlag.

Freitag, C. (2021). *Verb-second as a reconstruction phenomenon: Evidence from grammar and processing*. Berlin, Germany: de Gruyter. (Chapter 2 is a good recent summary of verb-second research).

Haider, H., & Prinzhorn, M. (1986). *Verb second phenomena in Germanic languages*. Dordrecht, The Netherlands: Foris.

Holmberg, A. (2015). Verb second. In T. Kiss & A. Alexiadou (Eds.), *Syntax—Theory and analysis: An international handbook* (Vol. 1, pp. 342–383). Berlin, Germany: Mouton De Gruyter.

Putnam, M. T., & Page, B. R. (Eds.). (2000). *The Cambridge handbook of Germanic linguistics*. Cambridge, UK: Cambridge University Press. (In particular chapter 14, by Van Koppen on complementizer agreement, and chapter 16, by Vikner on verb placement).

Vikner, S. (1995). *Verb movement and the licensing of NP-positions in the Germanic languages*. New York: Oxford University Press.

Woods, R., & Wolfe, S. (Eds.). (2020). *Rethinking verb second*. Oxford, UK: Oxford University Press.

Zwart, J.-W. (1997). *Morphosyntax of verb movement: A minimalist approach to the syntax of Dutch*. Dordrecht, The Netherlands: Kluwer.

Zwart, J.-W. (2005). Verb second as a function of merge. In M. den Dikken & C. M. Tortora (Eds.), *The function of function words and functional categories* (pp. 11–40). Amsterdam, The Netherlands: John Benjamins.

REFERENCES

Ackema, P., & Neeleman, A. (2004). *Beyond morphology: Interface conditions on word formation*.Oxford, UK: Oxford University Press.

Angantýsson, Á. (2017). Subordinate V2 and verbal morphology in Övdalian. *Working Papers in Scandinavian Syntax, 98*, 83–104.

Bach, E. (1962). The order of elements in a transformational grammar of German. *Language, 38*, 263–269.

Barbiers, S., & van Koppen, M. (2006). Een plaats voor tijd in het middenveld van het Nederlands. *Taal en Tongval themanummer, 19*, 24–39.

Bennis, H. (2007). Featuring the subject in Dutch imperatives. In W. van der Wurff (Ed.), *Imperative clauses in generative grammar* (pp. 113–134). Amsterdam, The Netherlands: John Benjamins.

Biberauer, T. (2002). Verb second in Afrikaans: Is this a unitary phenomenon? *Stellenbosch Papers in Linguistics*, *34*, 19–69.

Bierwisch, M. (1963). *Grammatik des deutschen verbs*. Berlin, Germany: Akademie Verlag.

Broekhuis, H., & Corver, N. (2016). *Syntax of Dutch: Verbs and verb phrases volume 3*. Amsterdam: Amsterdam University Press.

Cardinaletti, A. (1990). Subject/object asymmetries in German null-topic constructions and the status of CP. In J. Mascaró & M. Nespor (Eds.), *Grammar in progress: GLOW essays for Henk van Riemsdijk* (pp. 75–84). Dordrecht, The Netherlands: Foris.

Chomsky, N. (1981). *Lectures on government and binding*. Dordrecht, The Netherlands: Foris.

Chomsky, N. (1982). *Some concepts and consequences of the theory of government and binding*. Cambridge, MA: MIT Press.

Chomsky, N. (1986). *Barriers*. Cambridge, MA: MIT Press.

Chomsky, N. (1995). *The minimalist program*. Cambridge, MA: MIT Press.

Chomsky, N. (2001). Derivation by phase. In M. Kenstowicz (Ed.), *Ken Hale: A life in language* (pp. 1–52). Cambridge, MA: MIT Press.

de Haan, G., & Weerman, F. (1986). Finiteness and verb fronting in Frisian. In H. Haider & M. Prinzhorn (Eds.), *Verb second phenomena in Germanic languages* (pp. 77–110). Dordrecht, The Netherlands: Foris.

De Vogelaer, G., Devos, M., & Van der Auwera, J. (2006). Voegwoordvervoeging: Morfologisch of syntactisch verschijnsel? *Taal en Tongval themanummer*, *19*, 212–230.

den Besten, H. (1977). On the interaction of root transformations and lexical deletive rules: Ms. MIT, Cambridge, MA and University of Amsterdam, Amsterdam, The Netherlands. *Groninger Arbeiten zur germanistischen Linguistik*, *20*(1981), 1–78.

den Besten, H. (1981). Introductory remarks to Den Besten (1977). *Groninger Arbeiten zur germanistischen Linguistik*, *20*, i–iii.

den Besten, H. (1986). Decidability in the syntax of verbs in (not necessarily) West-Germanic languages. *Groninger Arbeiten zur germanistischen Linguistik*, *28*, 232–256.

den Besten, H., & Moed-van Walraven, C. (1986). The syntax of verbs in Yiddish. In H. Haider & M. Prinzhorn (Eds.), *Verb second phenomena in Germanic languages* (pp. 111–135). Dordrecht, The Netherlands: Foris.

Evers, A. (1981). Two functional principles for the rule 'move V'. *Groninger Arbeiten zur germanistischen Linguistik*, *19*, 96–110.

Fanselow, G. (2009). Bootstrapping verb movement and the clausal architecture of German (and other languages). In A. Alexiadou, J. Hankamer, T. McFadden, J. Nuger, & F. Schäfer (Eds.), *Advances in comparative Germanic syntax* (pp. 85–118). Amsterdam, The Netherlands: John Benjamins.

Flikweert, M. (1994). *Wat hoor-ik-te jou zeggen? Over het verschijnsel van een pronomen tussen werkwoordsstam en flexie-morfeem, in kindertaal en enkele Nederlandse dialecten* [Master's thesis, Utrecht University, Utrecht, The Netherlands].

Freitag, C. (2021). *Verb-second as a reconstruction phenomenon: Evidence from grammar and processing*. Berlin, Germany: de Gruyter.

Freywald, U. (2013). Uneingeleiteter V1- und V2-Satz. In J. Meibauer, M. Steinbach, & H. Altmann (Eds.), *Satztypen des Deutschen* (pp. 317–337). Berlin, Germany: de Gruyter.

Fuß, E. (2003). Post-syntactic operations: Evidence from complementizer agreement. *Linguistic Analysis*, *33*, 267–302.

Goeman, T. (1980). COMP-agreement? In W. Zonneveld & F. Weerman (Eds.), *Linguistics in the Netherlands 1977–1979* (pp. 291–306). Dordrecht, The Netherlands: Foris.

Goeman, T. (2000). Structurele aspecten van de morfologie van voegwoordvervoeging: Mogelijkheden en beperkingen, morfologisch gewicht en MCGG. In V. de Tier, M. Devos, & J. van Keymeulen (Eds.),

Nochtans was scherp van zin: Huldealbum Hugo Ryckeboer (pp. 269–294). Gent, Belgium: Universiteit Gent.

Grewendorf, G. (2010). On the typology of verb second. In T. Hanneforth & G. Fanselow (Eds.), *Language and logos: Studies in theoretical and computational linguistics* (pp. 72–96). Berlin, Germany: Akademie Verlag.

Haegeman, L. (1991). On the relevance of clitic placement for the analysis of subject-initial verb second in West Flemish. *Groninger Arbeiten zur germanistischen Linguistik*, *34*, 29–66.

Haegeman, L. (1997). *Negative inversion and the structure of CP* [Paper presentation]. The Linguistic Colloquium, University of Wuppertal, Wuppertal, Germany.

Haegeman, L., & Greco, C. (2018). West Flemish V3 and the interaction of syntax and discourse. *Journal of Comparative Germanic Linguistics*, *21*, 1–56.

Heycock, C., Sorace, A., Hansen, Z. S., Wilson, F., & Vikner, S. (2012). Detecting the late stages of syntactic change: The loss of V-to-T in Faroese. *Language*, *88*, 558–600.

Hoekstra, E., & Zwart, J.-W. (1994). De structuur van CP: Functionele projecties voor topics en vraagwoorden in het Nederlands. *Spektator*, *23*, 191–212.

Hoekstra, J., & Marácz, L. (1989). On the position on inflection in West-Germanic. *Working Papers in Scandinavian Syntax*, *44*, 75–88.

Hoekstra, T., & Mulder, R. (1992). Unergatives as copular verbs: Locational and existential predication. *The Linguistic Review*, *7*, 1–79.

Holmberg, A. (1988). *The head of S in Scandinavian and English. McGill working papers in Linguistics: Special issue on Comparative Germanic Syntax* (pp. 123–155). Toronto, CA: McGill University.

Holmberg, A. (2020). On the bottleneck hypothesis of verb second in Swedish. In R. Woods & S. Wolfe (Eds.), *Rethinking verb second* (pp. 40–60). Oxford, UK: Oxford University Press.

Holmberg, A., & Platzack, C. (1988). On the role of inflection in Scandinavian syntax. *Working Papers in Scandinavian Syntax*, *42*, 25–42.

Hooper, J. B., & Thompson, S. A. (1973). On the applicability of root transformations. *Linguistic Inquiry*, *4*, 465–497.

Jaspers, D. (1989). A head position for Dutch clitics, or: Wilma, Wim and Wackernagel. In D. Jaspers, W. Klooster, Y. Putseys, & P. Seuren (Eds.), *Sentential complementation and the lexicon: Studies in honour of Wim de Geest* (pp. 241–252). Dordrecht, The Netherlands: Foris.

Kayne, R. S. (1991). Romance clitics, verb movement, and PRO. *Linguistic Inquiry*, *22*, 647–686.

Kayne, R. S. (1994). *The antisymmetry of syntax*. Cambridge, MA: MIT Press.

Koster, J. (1975). Dutch as an SOV language. *Linguistic Analysis*, *1*, 111–136.

Lechner, W. (2006). An interpretive effect of head movement. In M. Frascarelli (Ed.), *Phases of interpretation* (pp. 45–69). Berlin, Germany: Mouton De Gruyter.

Levander, L. (1909). *Älvdalsmålet i Dalarna: ordböjning och syntax* [Doctoral dissertation, University of Uppsala, Uppsala, Sweden].

Lohstein, H., & Tsiknakis, A. (Eds.). (2020). *Verb second: Grammar internal and grammar external interfaces*. Berlin, Germany: De Gruyter Mouton.

Matushansky, O. (2006). Head movement in linguistic theory. *Linguistic Inquiry*, *37*, 69–109.

Meklenborg, C. (2020). Adverbial resumptive particles and verb second. In R. Woods & S. Wolfe (Eds.), *Rethinking verb second* (pp. 90–125). Oxford, UK: Oxford University Press.

Müller, G., & Sternefeld, W. (1993). Improper movement and unambiguous binding. *Linguistic Inquiry*, *24*, 461–507.

Nilsen, Ø. (2002). V2 and Holmberg's generalization. In J.-W. Zwart & W. Abraham (Eds.), *Studies in comparative Germanic syntax: Proceedings from the 15th Workshop on Comparative Germanic Syntax* (pp. 151–173). Amsterdam, The Netherlands: John Benjamins.

Paardekooper, P. C. (1961). Persoonsvorm en voegwoord. *Nieuwe Taalgids, 54*, 296–301.
Platzack, C. (1983). Germanic word order and the COMP/INFL parameter. *Working Papers in Scandinavian Syntax, 2*.
Platzack, C. (1986). The position of the finite verb in Swedish. In H. Haider & M. Prinzhorn (Eds.), *Verb second phenomena in Germanic languages* (pp. 27–47). Dordrecht, The Netherlands: Foris.
Platzack, C. (1988). The emergence of a word order difference in Scandinavian subordinate clauses. In *McGill working papers in linguistics: Special issue on comparative Germanic Syntax* (pp. 215–238). Toronto, CA: McGill University.
Poletto, C. (2000). *The higher functional field: Evidence from northern Italian dialects*. New York: Oxford University Press.
Rizzi, L. (1997). The fine structure of the left periphery. In L. Haegeman (Ed.), *Elements of grammar* (pp. 281–337). Dordrecht, The Netherlands: Kluwer.
Santorini, B. (1994). Some similarities and differences between Icelandic and Yiddish. In D. Lightfoot & N. Hornstein (Eds.), *Verb movement* (pp. 87–106). Cambridge, UK: Cambridge University Press.
Santorini, B. (1995). Two types of verb second in the history of Yiddish. In A. Battye & I. Roberts (Eds.), *Clause structure and language change* (pp. 53–79). New York: Oxford University Press.
Thiersch, C. (1978). *Topics in German syntax* [Doctoral dissertation, Massachusetts Institute of Technology, Cambridge, MA].
Thráinsson, H. (1986). V1, V2, V3 in Icelandic. In H. Haider & M. Prinzhorn (Eds.), *Verb second phenomena in Germanic languages* (pp. 169–194). Dordrecht, The Netherlands: Foris.
Thráinsson, H. (2007). *The syntax of Icelandic*. Cambridge, UK: Cambridge University Press.
Travis, L. (1984). *Parameters and effects of word order variation* [Doctoral dissertation, Massachusetts Institute of Technology, Cambridge, MA].
Truckenbrodt, H. (2006). On the semantic motivation of syntactic verb movement to C in German. *Theoretical Linguistics, 32*, 257–306.
van Alem, A. (2022). *Life of phi: φ-Features in West Germanic* [Doctoral dissertation, Leiden University, Leiden, The Netherlands].
van der Meer, G. (1991). The 'conjugation' of subclause introducers: Frisian *-st*. *North-Western European Language Evolution, 17*, 63–84.
van Koppen, M. (2020). Complementizer agreement. In M. T. Putnam & B. Richard Page (Eds.), *The Cambridge handbook of Germanic linguistics* (pp. 313–336). Cambridge, UK: Cambridge University Press.
Vikner, S. (1995). *Verb movement and the licensing of NP-positions in the Germanic languages*. New York: Oxford University Press.
Walkden, G. (2017). Language contact and V3 in Germanic varieties new and old. *Journal of Comparative Germanic Linguistics, 20*, 49–81.
Wechsler, S. (1991). Verb second and illocutionary force. In K. Leffel & D. Bouchard (Eds.), *Views on phrase structure* (pp. 177–191). Dordrecht, The Netherlands: Kluwer.
Weerman, F. (1989). *The V2 conspiracy*. Dordrecht, The Netherlands: Foris.
Westergaard, M. R., & Vangsnes, Ø. A. (2005). *Wh*-questions, V2, and the left periphery of three Norwegian dialect types. *Journal of Comparative Germanic Linguistics, 8*, 117–158.
Wiese, H. (2009). Grammatical innovation in multiethnic urban Europe: New linguistic practices among adolescents. *Lingua, 119*, 782–806.
Wiese, H., & Müller, H. G. (2018). The hidden life of V3: An overlooked word order variant on verb-second. In M. Antomo & S. Müller (Eds.), *Non-canonical verb positioning in main clauses (Linguistische Berichte Sonderheft 25)* (pp. 201–223). Hamburg, Germany: Buske Verlag.
Woods, R. (2020). A different perspective on embedded V2. In R. Woods & S. Wolfe (Eds.), *Rethinking verb second* (pp. 297–322). Oxford, UK: Oxford University Press.

Zagona, K. (2013). Tense, aspect, and modality. In M. den Dikken (Ed.), *The Cambridge handbook of generative syntax* (pp. 746–792). Cambridge, UK: Cambridge University Press.
Zwart, J.-W. (1991). Clitics in Dutch: Evidence for the position of INFL. *Groninger Arbeiten zur germanistischen Linguistik*, *33*, 71–92.
Zwart, J.-W. (1993a). *Dutch syntax: A minimalist approach* [Doctoral dissertation, University of Groningen, Groningen, The Netherlands].
Zwart, J.-W. (1993b). Verb movement and complementizer agreement. *MIT Working Papers in Linguistics*, *18*, 297–340.
Zwart, J.-W. (1994). Dutch is head-initial. *The Linguistic Review*, *11*, 377–406.
Zwart, J.-W. (1997). *Morphosyntax of verb movement: A minimalist approach to the syntax of Dutch*. Dordrecht, The Netherlands: Kluwer.
Zwart, J.-W. (2005). Verb second as a function of merge. In M. den Dikken & C. M. Tortora (Eds.), *The function of function words and functional categories* (pp. 11–40). Amsterdam, The Netherlands: John Benjamins.
Zwart, J.-W. (2006). Complementizer agreement and dependency marking typology. *Leiden Working Papers in Linguistics*, *3*(2), 53–72.
Zwart, J.-W. (2011). *The syntax of Dutch*. Cambridge, UK: Cambridge University Press.

Jan-Wouter Zwart