

# Information Structuring in Discourse

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BRILL

LEIDEN | BOSTON

Library of Congress Cataloging-in-Publication Data

Names: Deutsche Gesellschaft für Sprachwissenschaft. Jahrestagung (39th : 2017 : Saarbrücken, Germany) | Holler, Anke, editor. | Suckow, Katja, editor. | de la Fuente, Israel, editor.

Title: Information structuring in discourse / edited by Anke Holler, Katja Suckow, Israel de la Fuente.

Description: Leiden ; Boston : Brill, 2020. | Series: Current research in the semantics/pragmatics interface, 14727870 ; volume 40 | Papers presented at the workshop, "Information Structuring in Discourse", held in 2017 at the 39th Annual Conference of the German Linguistics Society (DGfS) in Saarbrücken (Germany). | Includes bibliographical references.

Identifiers: LCCN 2020045249 (print) | LCCN 2020045250 (ebook) | ISBN 9789004436718 (hardback) | ISBN 9789004436725 (ebook)

Subjects: LCSH: Discourse analysis--Congresses. | Discourse markers--Congresses. | Grammar, Comparative and general--Semantics--Congresses. | Grammar, Compartaive and general--Syntax--Congresses. | Pragmatics--Congresses.

Classification: LCC P302 .D42253 2017 (print) | LCC P302 (ebook) | DDC 401/.41--dc23

LC record available at <https://lccn.loc.gov/2020045249>

LC ebook record available at <https://lccn.loc.gov/2020045250>

Typeface for the Latin, Greek, and Cyrillic scripts: "Brill". See and download: [brill.com/brill-typeface](http://brill.com/brill-typeface).

ISSN 1472-7870

ISBN 978-90-04-43671-8 (hardback)

ISBN 978-90-04-43672-5 (e-book)

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# Contents

- List of Figures and Tables VII  
Notes on Contributors IX
- 1 Structuring Information in Discourse: Topics and Methods 1  
*Israel de la Fuente, Anke Holler and Katja Suckow*
  - 2 Coherence and the Interpretation of Personal and Demonstrative  
Pronouns in German 24  
*Yvonne Portele and Markus Bader*
  - 3 Cleft Focus and Antecedent Accessibility: The Emergence of the Anti-focus  
Effect 56  
*Clare Patterson and Claudia Felser*
  - 4 Topics and Subjects in German Newspaper Editorials: A Corpus Study 86  
*Peter Bourgonje and Manfred Stede*
  - 5 Inferable and Partitive Indefinites in Topic Position 112  
*Klaus von Heusinger and Umut Özge*
  - 6 Projection to the Speaker: Non-restrictive Relatives Meet Coherence  
Relations 141  
*Katja Jasinskaja and Claudia Poschmann*
  - 7 Central Adverbial Clauses and the Derivation of Subject-Initial V2 163  
*Liliane Haegeman*
  - 8 Discourse Conditions on Relative Clauses: A Crosslinguistic and  
Diachronic Study on the Interaction between Mood, Verb Position and  
Information Structure 201  
*Marco Coniglio and Roland Hinterhölzl*
  - 9 What's in an Act? Towards a Functional Discourse Grammar of Platonic  
Dialogue and a Linguistic Commentary on Plato's *Protagoras* 234  
*Cassandra Freiberg*

# Discourse Conditions on Relative Clauses: A Crosslinguistic and Diachronic Study on the Interaction between Mood, Verb Position and Information Structure

*Marco Coniglio and Roland Hinterhölzl*

## 1 Verb Placement and Discourse Relations in Relative Clauses

It is standardly assumed that, in restrictive relative clauses, the relative clause specifies a property that restricts the reference of the head noun, as in the German example in (1).

- (1) *Das Blatt hat eine Seite, die ganz schwarz ist*  
the sheet has a side that completely black is  
'The sheet has a side that is completely black' (Gärtner, 2001, p. 98)

In German relative clauses, the finite verb is typically in final position. However, Gärtner's groundbreaking works (2001, 2002) prove the existence of a special class of (restrictive) relative clauses that exhibit Verb Second order (V<sub>2</sub> relatives). Gärtner argues that V<sub>2</sub> relatives have a discourse structure that is quite different from the one of verb-final relative clauses (verb-final relatives). In particular, he surmises that, in V<sub>2</sub> relatives, the main clause establishes a topic that is elaborated on by the comment represented by the relative clause, as in (2) (cf. Bourgonje & Stede, this volume, for a definition of the notions of topic and comment).

- (2) [<sub>Topic</sub> Das Blatt hat eine Seite,] [<sub>Comment</sub> die ist wohl ganz schwarz] (cf. Ebert, Endriss & Gärtner, 2007)

In this paper, we discuss the properties of verb placement in Modern German relative clauses and link it synchronically to mood alternations as can be observed in the Romance languages, in particular to Italian. Then, starting from the observation that Old High German (OHG) also exhibits mood alternations—like Italian—and alternations in verb placement—like Modern

German—, we will provide a diachronic account for the development of the language from a system similar to that displayed by the Romance languages to the one displayed by Modern German.

The paper is organized in the following way. Section 2 briefly summarizes the most important properties of V<sub>2</sub> relatives. Section 3 presents the standard account of V<sub>2</sub> relatives by Gärtner. Section 4 presents data that strongly indicate that the distinction between V<sub>2</sub> relatives and verb-final relatives is synchronically paralleled by mood alternation in relative clauses in Italian. Section 5 discusses mood alternations in relative clauses from the perspective of Information Structure, while Section 6 accounts for their syntactic properties. From the diachronic perspective, Section 7 and 8 present a corpus-based investigation and discussion of the different properties of mood and verb placement in OHG relative clauses. In Section 9, a scenario accounting for the diachronic development is sketched.

## 2 Properties of V<sub>2</sub> Relative Clauses

This section is entirely based on Gärtner and colleagues' seminal work on V<sub>2</sub> relatives (cf. Gärtner 2001, 2002; Ebert, Endriss & Gärtner, 2007) and serves as the background for the discussion of the properties of relative clauses in Italian (see the discussion in Catasso & Hinterhölzl, 2016, pp. 99 ff.) and in OHG. The first property concerns the fact that the content of the relative clause is asserted licensing the occurrence of modal particles (cf. Coniglio, 2011), as has been illustrated in (2) above. Second, a V<sub>2</sub> relative is subject to obligatory extraposition, as is illustrated in (3) (cf. Holler, 2005; Jasinskaja & Poschmann, this volume, for the interaction between discourse relations and the attachment of appositive relative clauses).

- (3) a. *Hans hat eine Frau, die {\*hat} blaue Augen {hat}, getroffen*  
       Hans has a woman that has blue eyes has met  
       'Hans met a woman that has blue eyes.'
- b. *Hans hat eine Frau getroffen, die {hat} blaue Augen {hat}*

The third property concerns the fact that the head noun cannot be in the scope of a negative, interrogative or conditional operator, as is illustrated in (4).

- (4) a. *Kein Professor mag eine Studentin, die {\*zitiert} ihn nicht*  
 no professor likes a student.FEM who cites him NEG  
 {zitiert}.  
 cites  
 'No professor likes a student who doesn't cite him.' (cf. Gärtner, 2002,  
 p. 107)
- b. *Mag Professor Müller eine Studentin, die {\*zitiert} ihn nicht*  
 likes professor Müller a student.FEM who cites him NEG  
 {zitiert}?  
 cites  
 'Does Professor Müller like a student who doesn't cite him?' (Catasso  
 & Hinterhölzl, 2016, p. 102)

The fourth property concerns a restriction on the determiner of the head noun. The latter must be an indefinite or weak DP, as is illustrated in (5) and (6) below (data from Catasso & Hinterhölzl, 2016).

- (5) a. *Das ist ein Buch, das hat keinen Punkt und kein Komma.*  
 this is a book that.NOM has no full-stop and no comma  
 'This is a book that has no full stops and no commas.' (DLF, Sept. 9th,  
 2010)
- b. *Es gibt (viele) Leute, die haben tolle Ideen–*  
 EXIST many people that.NOM have great ideas  
*nur es passiert relativ wenig.*  
 only EXPL happens quite little  
 'There are (many) people who have great ideas—however, very little is  
 going on.' (tlz, Jul. 6th, 2014)
- (6) a. *Ich kenne einen, dem hat ein Zugunglück das Leben*  
 I know one that.DAT has a train-accident the life  
*gerettet.*  
 saved  
 'I know a man whose life was saved by a train accident.' (character's  
 direct speech from Eckhard Bahr, 2007, p. 111)

- b. *Es gibt auch einige, die würde man gerne aus der*  
 EXIST also some that.ACC would one gladly out the  
*Geschichte schubsen.*  
 story nudge  
 ‘There are some [passages] that one would just love to strike out.’  
 (amazon.de, online user’s comment, Jun. 30th, 2012)

The fifth property concerns a restriction on the relative pronoun. The latter must be a *d*-pronoun, as is illustrated in (7).

- (7) a. *Es gibt Probleme, die /\*welche sind nicht lösbar.*  
 EXIST problems that.NOM which.NOM are not solvable
- b. *Es gibt Probleme, die /welche nicht lösbar sind.*  
 EXIST problems that.NOM which.NOM not solvable are  
 ‘There are problems that are not solvable.’ (Wiener Zeitung, Mar. 28th, 2013)

### 3 The Standard Analysis

Gärtner (2001, 2002) posits an analysis of V2 relatives that accounts for all these properties in a very elegant way. In particular, he surmises that in V2 relatives two (main) clauses are coordinated, accounting for the presence of V2 in the relative clause and relating it to the proto-assertional force of the relative, as is illustrated in (8).

- (8) [ $\pi_P$  [ $_{CP1}$  Das Blatt hat eine Seite [ $_{\pi^\circ \text{ REL}}$  [ $_{CP2}$  die ist ganz schwarz]]]]  
 ‘The sheet has one side that is all black.’ (cf. Gärtner, 2001, p. 105)

The strength of Gärtner’s original analysis of V2 relatives is that he convincingly argues that the contexts in which V2 relatives are excluded are those that fail to set up a discourse referent for the interpretation of the weak demonstrative element introducing V2 relatives, thereby connecting the properties 1–3 to property 4: V2 relatives must be headed by a discourse-anaphoric *d*-pronoun that is only licensed if—after processing the main clause (hence the obligatory extraposition of the relative clause)—a discourse referent has been established in the semantic representation, excluding definite head nouns and indefinite head nouns in the scope of a negative, interrogative or conditional operator.

The problem with this approach is that this syntactic analysis renders the semantic interpretation of V2 relatives a rather complex issue (cf. Catasso & Hinterhölzl, 2016, pp. 99 ff.), since the content of the relative clause must be integrated into the interpretation of the DP heading it during the computation of the matrix clause to derive the correct restrictive interpretation, as is illustrated by the difference in interpretation between (9a) and (9b). While (9a) states that many of the houses in Apfeldorf are empty, but does not state that Apfeldorf has many houses, (9b) asserts that Apfeldorf has many houses and that all of them are empty.

- (9) a. Apfeldorf hat viele Häuser, die stehen leer.  
 'Apfeldorf has many houses that are empty.'
- b. Apfeldorf hat viele Häuser. Diese stehen leer.  
 'Apfeldorf has many houses. These are empty.'

This means that in the course of the derivation the *d*-pronoun must be re-interpreted as a relative pronoun, implying that the relative pronoun in a V2 relative must have the presupposition of a *d*-pronoun, but the denotation of a regular relative operator. In the following section, we will show that the distributional differences of V2 relatives and verb-final relatives in German are paralleled by relative clauses marked with the indicative and the subjunctive mood in Italian.

We will show that these correspondences are not accidental and argue that while German V2 indicates that the embedded proposition is epistemically anchored to the speaker, the alternation between the indicative and the subjunctive in Italian has essentially the same function, indicating whether the embedded proposition is anchored to the utterance event or to the event denoted by the matrix verb.

#### 4 Indicative versus Subjunctive and V2

To start out with, we illustrate an interpretational effect of German V2 relatives that Gärtner (2001, 2002) detected, but has not been discussed in the previous section (see also the discussion in Catasso & Hinterhölzl, 2016, pp. 99 ff.). While a verb-final relative is compatible with a *de re* and a *de dicto* interpretation of the head noun, a V2 relative only permits its interpretation as *de re*, as is illustrated in (10).

- (10) a. *Hans sucht eine Frau, die blaue Augen hat.* (*de re, de dicto*)  
 Hans looks.for a woman who blue eyes has
- b. *Hans sucht eine Frau die hat blaue Augen.* (*de re, \*de dicto*)  
 Hans looks.for a woman who has blue eyes  
 'John is looking for a woman who has blue eyes.'

The verb-final relative clause in (10a) is compatible with the interpretation that Hans has a specific person in mind (*de re*) or that he does not have a specific person in mind but only cares about the fact that the relevant woman, whoever she may be, has blue eyes (*de dicto*). In contrast, the V2 relative in (10b) is only compatible with the interpretation that Hans has a specific person in mind (*de re*).

As for Italian, (11a) shows that a relative clause marked with the subjunctive mood permits a *de dicto* (i.e. non-specific) interpretation of its head noun, while the relative clause marked with the indicative mood in (11b) is only compatible with its *de re* interpretation, requiring a specific interpretation of the head noun, at least in written Standard Italian (data from Catasso & Hinterhölzl, 2016, p. 109; cf. Farkas, 1992; Quer, 1998; Giannakidou, 2009, 2013).

- (11) a. *Gianni cerca una donna che abbia gli occhi blu.* (*de dicto*)  
 John looks.for a woman who has.SUB the eyes blue
- b. *Gianni cerca una donna che ha gli occhi blu.* (*de re*)  
 John looks.for a woman who has.IND the eyes blue  
 'John is looking for a woman who has blue eyes.'

These facts raise the question whether this parallelism is accidental. The following data however indicate that the parallelism between V2 relatives and verb-final relatives in German and the mood alternations in Italian relatives is quite systematic, calling for a unified account.

First, Catasso and Hinterhölzl (2016) note that contexts that require the subjunctive mood in Italian, namely relative clauses with a final or a consecutive interpretation, exclude V2 order in German (cf. Meinunger, 2004, 2006), as is illustrated in (12) and (13), taken from Catasso and Hinterhölzl (2016, p. 110).

- (12) a. *Prendo un autobus che mi porti in centro.*  
 [I] take a bus that me take.SUB to center
- b. *Ich nehme einen Bus, der mich ins Zentrum bringt.*  
 I take a bus that me to-the center takes
- c. *\*Ich nehme einen Bus, der bringt mich ins Zentrum.*  
 I take a bus that takes me to-the centre  
 'I take a bus that takes me downtown.'
- (13) a. *È difficile trovare un vestito che lei non possa indossare.*  
 is difficult find a dress that she NEG can.SUB wear
- b. *Es ist schwierig, ein Kleid zu finden, das ihr nicht steht.*  
 it is difficult a dress to find that her NEG suits
- c. *\*Es ist schwierig, ein Kleid zu finden, das steht ihr nicht.*  
 it is difficult a dress to find that suits her NEG  
 'It is difficult to find a dress that doesn't suit her.'

Second, they note that the contexts that we discussed in the previous section which exclude V<sub>2</sub> in German require the subjunctive in Italian, as is illustrated for head nouns in the scope of a negative or interrogative operator in (14) and (15) respectively (cf. Catasso & Hinterhölzl, 2016, p. 111).

- (14) a. *Non c'è nessuno che sia meglio di te.*  
 NEG EXIST nobody who is.SUB better than you
- b. *Es gibt niemanden, der besser ist als du.*  
 EXIST nobody who better is than you
- c. *\*Es gibt niemanden, der ist besser als du.*  
 EXIST nobody who is better than you  
 'There is nobody who is better than you.'
- (15) a. *Esiste un vestito che ti piaccia veramente?*  
 exists a dress that you.DAT pleases.SUB really
- b. *Gibt es überhaupt ein Kleid, das dir gefällt?*  
 EXIST MOD.PRT a dress that you.DAT pleases

- c. *\*Gibt es überhaupt ein Kleid, das gefällt dir?*  
 EXIST MOD.PRT a dress that pleases you.DAT  
 'Is there a dress that you like anyway?'

To sum up, we have seen that the overlap in interpretative and distributional effects between mood alternations in Italian relatives and the positional alternation of the finite verb in German relatives is significant, calling for a unified account. This parallelism is complemented by information-structural considerations, as is briefly discussed in the following section.

## 5 Indicative versus Subjunctive and Information Structure

Catasso and Hinterhölzl (2016, p. 113) show that, as is illustrated in (16), the content of the relative clause is mapped into the restriction of the quantifier in subjunctive-marked clauses, as the paraphrase in (17a) indicates, while the content of the relative clause can be mapped into the nuclear scope of the quantifier in indicative-marked clauses, as the paraphrase in (17b) indicates. In particular, the latter mapping is obligatory, if the relative clause contains a focused element, as is indicated by capital letters in (16b) (data from Catasso & Hinterhölzl, 2016, p. 113).

- (16) a. *In quel periodo ho incontrato poche persone che fossero ricche.*  
 in that period I.have met few persons who were.SUB  
 rich
- b. *In quel periodo ho incontrato poche persone che ERANO ricche.*  
 in that period I.have met few persons who were.IND  
 rich  
 'At that time, I met few people that were rich.'

- (17) a. for few people that were rich, it holds that I have met them  
 b. for few people that I encountered, it holds that they were rich

In other words, we are dealing with an effect of quantificational variability induced by focus (cf. among many others Herburger, 2000). Herburger (2000) argues that the quantificational NP undergoes quantifier raising (henceforth: QR) to IP (following May, 1977). In this process, focused material is interpreted

in the VP and is thus mapped onto the nuclear scope, as is illustrated in (18) (Catasso & Hinterhölzl, 2016, p. 113).

- (18) a. We hired few incompetent cooks  
 (= for few incompetent cooks, it holds that we hired them)  
 b. We hired few INCOMPETENT cooks.  
 (= for few cooks we hired, it holds that they were incompetent)

The content of a restrictive relative clause is typically presupposed, or at least taken to be not at issue, in order to guarantee its function to narrow down the reference of the head noun successfully. As is illustrated in (19), the content of the relative clause cannot be directly refuted, but is subject to rejection of a presupposition.

- (19) A: The woman that moved in downstairs is a lawyer.  
 B: That is not true. She is a secretary.  
 B: % That is not true. Nobody moved in downstairs  
 B: Wait a minute! Who moved in downstairs?

Along this line, we account for the above effect in our approach by surmising that the subjunctive in the relative clause indicates that its content (which has the function of characterizing an individual) is not at issue and is mapped into the restriction of the determiner. This implies that the relative clause marked with the subjunctive is obligatorily pied-piped by QR of the quantifier in the head noun, while the indicative indicates that the relative clause is mapped into the nuclear scope of the determiner and is asserted. This could be achieved by assuming that a relative clause marked with the indicative mood must be obligatorily extraposed (but see also the discussion in the following section). We conclude that also this interpretative effect of indicative-marked relative clauses in Italian parallels the interpretative effect of V2 in German relative clauses, since we noted in Section 2 above, that the content of V2 relatives is generally taken to be asserted (cf. Catasso & Hinterhölzl, 2016, p. 113).

Now let us address the question of what could be the reason for these parallel effects between verb position in German and mood alternation in Italian. In Hinterhölzl (2020), it is shown that adverbial clauses in German and complementizer-introduced complement clauses with V2 (V2C) in North-Germanic (cf. Vikner, 1995), Frisian (cf. de Haan & Weerman, 1986) and German (cf. Freywald, 2008) share the distributional properties (1–3) discussed in Section 2 above with V2 relatives, calling for a uniform analysis. In Gärtner (2001, 2002), the distributional properties of V2 relatives are derived from the require-

ments imposed by the *d*-pronoun. A unified analysis of these cases, however, calls for an alternative explanation that derives these distributional properties from the impact of V<sub>2</sub> that these constructions share.

V<sub>2</sub>Cs also show that the position targeted by the finite verb in these cases of embedded V<sub>2</sub> is lower than the position targeted by the finite verb in matrix clauses. It is thus plausible that this lower position is to be identified with a Mood projection between ForceP and FinP in the system of Rizzi (1997). Consequently, Hinterhölzl (2020) argues that V<sub>2</sub> relatives—like V<sub>2</sub> adverbials and V<sub>2</sub>Cs—are regular embedded clauses and that embedded V<sub>2</sub> indicates the assertive potential of the embedded clause. In particular, Hinterhölzl (2020) proposes that V<sub>2</sub> indicates that the speaker (alone) has evidence for the embedded proposition. This needs to be licensed by a real speech act—in this case by an assertive operator—by entering into a local relation with the Force head in the matrix clause, triggering extraposition of the V<sub>2</sub>-clause to a position in the local C-domain of the matrix clause (cf. Hinterhölzl, 2020).

Assuming that the alternation between the indicative and the subjunctive in Italian indicates that the embedded proposition is anchored with respect to the utterance situation, to its participants—in particular to the speaker—, and to the event denoted by the matrix verb—in particular to its subject—, the indicative mood in embedded clauses in Italian and embedded V<sub>2</sub> in German share the property of being linked to the utterance situation and the speaker.

If this approach is on the right track, then an alternative account of V<sub>2</sub> relatives in German is in order that explains a) the restriction to indefinite and weak determiners in the head noun, b) the restriction of the relative pronoun to *d*-pronouns in the relative clause and c) the parallel impact of mood alternation on the *de re* and *de dicto* interpretation of the head noun in Italian. Such an alternative account is sketched in following section.

## 6 A Matching Analysis of Restrictive Relative Clauses

On the basis of the data discussed in Section 4 and 5 above, the question arises as to how mood distinctions can become relevant for the interpretation of the head noun. A possible account has been developed in Catasso and Hinterhölzl (2016), the most important tenets of which we will sketch below. The interested reader is referred to this paper for a full account.

The answer to the questions raised at the end of the last section involves the assumption of a matching analysis of relative clauses plus the notion of individual concepts, i.e. the assumption that a nominal is individuated with respect to a situation (cf. Carnap, 1928; Elbourne, 2005), as is illustrated in (20).

In this approach, a relative clause specifies the situation with respect to which the head noun is evaluated in the main clause, as is illustrated in (21b) for the clause in (21a).

- (20) the book( $x, s$ ) denotes the unique individual  $x$  such that  $x$  is a book in  $s$
- (21) a. John read the book that Mary recommended.  
 b. in  $s_j$  John read the unique book  $x$  in  $s_2$  such that Mary recommended  $x$  in  $s_2$

The determiner restriction in V<sub>2</sub> relatives follows from a matching analysis à la Cinque and the conditions on phonological deletion, as is illustrated in (22). In a matching analysis, the external head must be matched by a relative-clause-internal copy of its NP part, where the lower copy is subject to phonological deletion under semantic identity (cf. Hulsey & Sauerland, 2006).

- (22) [<sub>DP</sub> the [<sub>NP</sub> book] [<sub>CP</sub> [<sub>NP</sub> book] [<sub>C</sub> that John read t]]] (Hulsey & Sauerland, 2006)

This partial matching requirement follows from Cinque's (2013) comparative investigation of relative clauses in the languages of the world. In particular, Cinque argues that finite restrictive relative clauses (and amount relatives) are merged above weak determiners, in Milsark's (1974) sense. That is, relative clauses are merged above multal and paucal quantifiers, cardinals, the indefinite determiner and adjectives, and below strong determiners (definite articles, demonstratives, universal quantifiers, etc.). The structure that Cinque thereby assumes is a single double-headed structure, as is illustrated in (23). This structure is assumed to underlie the different types of relative clauses—head-internal and head-external ones—that are attested cross-linguistically. This explains the determiner restriction in V<sub>2</sub> relatives in a syntactic manner and, as we will see, in a more accurate way than Gärtner's original account.

- (23) John read [the [<sub>CP</sub> book<sub>1</sub> that Mary recommended t<sub>1</sub>] book]

In our approach using individual concepts, phonological deletion under semantic identity is guaranteed if the external and internal head are interpreted with respect to the same situation. There are basically two possibilities to achieve this: a) via a relative operator in a verb-final relative and b) via coreference in the case of V<sub>2</sub> relatives.

1) In the first case, a restrictive relative clause specifies via a relative operator the situation with respect to which the head noun in the main clause is interpreted. The relative operator that should not be identified with the relative pronoun binds the event argument of the verb that has been anchored via Tense and Mood, accounting for the relevance of the mood distinction: the situation will be either a situation introduced by the matrix verb, hence a situation in an alternative world (subjunctive) or the utterance situation, hence a situation in the actual world (indicative).

Catasso and Hinterhölzl (2016, p. 116) identify the relative operator with a relative head in C that is realized as *wo* in various German dialects, like Bavarian and Hessian, but is silent in Standard German and blocks V2 (cf. (24), adapted from Bayer, 1984, p. 216). Bavarian shows that the relative pronoun is semantically empty and only functions as host of the phi-features of the deleted internal NP that are not recoverable from the context. In the case of a verb-final relative, the determiner/quantifier of the head noun is interpreted in the matrix clause.

- (24) a. *I sog's dem Mō (der) wo im Gartn arwat*  
 I say-it to.the man.DAT who.NOM *wo* in.the garden works
- b. *Der Mantl \*(den) wo i kaffd hob wor z'rissn*  
 The coat.NOM which.AKK *wo* I bought have was torn
- c. *Die Lampn (die) wo i geseng hob wor greißlich*  
 The lamp.NOM which.AKK *wo* I seen have was ugly

In the case in (25), which reproduces a typical example in Gärtner (2001, 2002), this means that the relative clause denotes the set of objects  $x$  and the set of situations  $s$  such that  $x$  is a house in  $s$  and  $s$  is a situation in the actual world and  $x$  is empty in  $s$  (cf. (25b)). When the relative clause is combined with the head noun, predicate modification ensures that the individual variable and the situation variable of the external head are identified with the set of objects and the set of situations denoted by the relative clause, allowing for phonological deletion of the lower NP under semantic identity. The rest of the main clause in (25) then specifies that many of these houses  $x$  that are empty in  $s$  belong to Apfeldorf.

- (25) a. *Apfeldorf hat viele Häuser, die (wo) leer stehen.*  
 Apfeldorf has many houses which *wo* empty are  
 'Apfeldorf has many houses that are empty.'

- b.  $\lambda s \lambda x$  house ( $x, s$ ) &  $s$  in  $w_a$  & empty( $x, s$ ) (meaning of the relative clause)

2) In the V<sub>2</sub> case, illustrated in (26), identity under coreference is achieved if the embedded NP (deleted under semantic identity) is discourse-anaphoric and the matrix clause establishes a discourse referent—a set of houses in a given situation—that is taken up by the head noun in the relative clause.

- (26) *Apfeldorf hat viele Häuser, die stehen leer.*  
 Apfeldorf has many houses which are empty  
 ‘Apfeldorf has many houses that are empty.’

In this case, the embedded NP enters an Agree relation with a context operator that is valued with the most salient discourse referent that matches its phi-features (cf. Hinterhölzl, 2019). We leave it open at this point whether the *d*-pronoun is a spell-out of this topic head binding the discourse-anaphoric NP (cf. Portele & Bader, this volume) or serves as a host for the phi-features within the embedded NP. For the sake of simplicity, we assume that the *d*-pronoun is spelled out in the head position of  $\varphi$ P of the embedded head noun in (27) below. Most importantly, there is no relative operator blocking verb movement into the C-domain in the embedded clause. It is the configuration of matching NPs that ensures that coreference with a discourse antecedent, which otherwise is an optional phenomenon, leads to the parallel evaluation of the arguments of the external and internal NP.

As argued above, extraposition of the relative clause is taken to be triggered by V<sub>2</sub>. For the illocutionary interpretation as an asserted clause, it is sufficient that extraposition of the relative clause takes place at LF. In the case at hand, however, extraposition of the relative clause already occurs in overt syntax such that the entire matrix clause has been processed and the relevant discourse referent been established, when the extraposed relative clause is processed.

Due to extraposition, the quantifier/determiner of the head noun must be interpreted in the relative clause, as is illustrated in (27c). (27a) displays the basic matching structure at the beginning of the derivation: the relative clause is a sub-constituent of the external head in the matrix clause. (27b) displays the structure at PF, after phonological deletion of the internal matching head. (27c) displays the relevant structure at LF, after the relative clause has been extraposed to a high position in the matrix clause. (27d) specifies the LF after the quantifier has undergone QR in the relative clause, accounting for its strong proportional reading as is discussed below.

In this structure, the quantifier cannot be interpreted in the main clause, since it would leave us with unbound traces in the relative clause and is thus interpreted in the embedded clause (Fig. 8.1). In this clause, the constituent *viele Häuser* is discourse-anaphoric yielding the strong reading: many of the houses in *s*—where *s* is the situation containing the houses in Apfeldorf—are empty. In this case, the phi-features cannot be deleted since they indicate the presupposition of the internal head noun that a discourse referent with the corresponding phi-features has been established.

(27) Apfeldorf hat viele Häuser, die stehen leer.

- a. [<sub>CP</sub> Apfeldorf hat [<sub>DP</sub> [<sub>CP</sub> [<sub>φP</sub> [<sub>CardP</sub> viele Häuser]]] [<sub>C</sub> stehen [<sub>IP</sub> leer ]]]] [<sub>CardP</sub> viele Häuser]]
- b. [<sub>CP</sub> [<sub>CP</sub> Apfeldorf hat [<sub>DP</sub> *t*<sub>i</sub> [<sub>CardP</sub> viele Häuser]]] [<sub>CP</sub> [<sub>φP</sub> die [<sub>CardP</sub> viele Häuser]]] [<sub>C</sub> stehen [<sub>IP</sub> leer ]]]]<sub>i</sub> ]
- c. [<sub>CP</sub> [<sub>CP</sub> Apfeldorf hat [<sub>DP</sub> *t*<sub>i</sub> [<sub>CardP</sub> viele Häuser]]] [<sub>CP</sub> [<sub>φP</sub> [<sub>CardP</sub> viele Häuser]]] [<sub>C</sub> stehen [<sub>IP</sub> leer ]]]]<sub>i</sub> ]
- d. [<sub>CP</sub> [<sub>CP</sub> Apfeldorf hat [<sub>DP</sub> *t*<sub>i</sub> [<sub>CardP</sub> viele Häuser]]] [<sub>CP</sub> viele [<sub>φP</sub> die [<sub>CardP</sub> viele Häuser]]] [<sub>C</sub> stehen [<sub>IP</sub> leer ]]]]<sub>i</sub> ]

This account is superior to Gärtner's original proposal since the determiner *viele* in (27) has a strong interpretation, requiring that the set of houses is given in (27). This observation weakens Gärtner's solution for the exclusion of definite determiners in V<sub>2</sub> relatives: he proposes that only indefinite and weak determiners can introduce the discourse referent that serves as antecedent for the *d*-pronoun in the relative clause. Note that besides this, it is also completely unclear why this *d*-pronoun cannot have an antecedent in the matrix clause, let's say, a definite DP whose referent was introduced in a previous clause in the discourse. In our syntactic account of the determiner restriction in V<sub>2</sub> relatives, this question does not even arise. Moreover, the present account can also explain why downward entailing weak determiners like *wenige* 'few' are excluded from V<sub>2</sub> relatives:

(28) \*Apfeldorf hat wenige Häuser, die stehen leer.  
'Apfeldorf has few houses that are empty.'

This follows from the condition of deletion of the determiner in the higher copy in (29), since the proposition *Apfeldorf hat viele Häuser* 'Apfeldorf has many houses' entails the proposition *Apfeldorf hat Häuser* 'Apfeldorf has houses', quantifier deletion in the main clause is possible in (27).



*viele* ‘many’ differs from the topic status of the determiner *wenige* ‘few’, since both of them require a given discourse antecedent and can thus be said to be topical.

To conclude, the puzzle consists in the fact that the determiners are required to be indefinite or weak ones in V<sub>2</sub> relatives, but receive a strong or a specific interpretation (in case of an indefinite). In the present approach this complex property is explained by the syntactic account of the determiner restriction and a treatment as an effect of quantification variability—(27) is interpreted as many of the houses of Apfeldorf are empty—that is only possible with proportional readings that open up a flexible domain of quantifier restriction and nuclear scope determined by other grammatical factors. Embedded V<sub>2</sub> like indicative plus focus thereby indicates that the relative clause is mapped into the nuclear scope of the quantifier, while the subjunctive indicates that the relative clause is mapped into its restrictor.

Having sketched an account that explains why mood alternations in Italian have the same function as word order alternations in modern German, we will now turn to OHG and to the diachronic scenario. Since this stage of the German language displayed both mood alternations and the alternation between V<sub>2</sub> and verb-final orders in relative clauses, the obvious question arises whether OHG behaved like Italian (and the Romance languages) or like Modern German. In the following section, we address this question.

## 7 The Situation in Old High German

As is well-known, Modern German has almost completely lost mood distinctions in relative clauses in the course of its history. In contrast, OHG relative clauses allowed for both V<sub>2</sub>/verb-final orders like Modern German, on the one hand, and mood distinctions like the Romance languages, on the other (cf. Erdmann, 1886, p. 164; Behaghel, 1928, pp. 618 ff.; Ebert, Reichmann & Solms, 1993, p. 450; Paul, 2007, p. 435; Axel-Tober, 2012). The contrast between (30a) and (30b) exemplifies possible alternations in the position of the finite verb, while (30c) shows that mood alternations are also attested.<sup>3</sup>

- (30) a. [...] *osee propheta, dher quhad heilegu gheistu:*  
           Hosea prophet who said.IND Holy.INSTR Ghost.INSTR  
           ‘[...] Prophet Hosea, who said inspired by the Holy Spirit!’ (1 DF, 8, 3)

<sup>3</sup> The following data are taken from the *Referenzkorpus Altdeutsch*, presented in 7.1.

- b. [...] *so ih fona dhemu nam, dher ær fora dhir uuas.*  
 as I from that took who before before you was.IND  
 '[...] as I took it away from the one who came before you.' (1 DF, 9, 2)
- c. *Huer ist dher dhiz al ni chisehe*  
 who is who this all NEG sees.SUB  
*in im selbem nu uesan arfullit?*  
 in him himself now be fulfilled  
 'Who is that does not see all this now fulfilled in his person?' (1 DF, 8, 3)

Given that both types of alternations are attested in OHG, the following questions arise:

- a. How is mood alternation in OHG relative clauses to be interpreted as set against the facts in the Romance languages?
- b. How are OHG V2 relatives to be interpreted as set against the Modern German facts?
- c. How was it possible for German to develop from the situation attested in OHG to the one attested at the present day?

These and other issues will be tackled in the following sections, based on a corpus study of some OHG texts (cf. Coniglio, 2017).

### 7.1 *Corpus-Based Investigation*

This pilot study is based on the following early OHG texts from the 8th and 9th century (i.e. on the major texts of the reference corpus that were available at the time the research was conducted):

- a. Isidor (2nd half of the 8th c.)
- b. Benediktinerregel (ca. 800)
- c. Monseer Fragmente (2nd half of the 8th c.)
- d. Tatian (ca. 830)
- e. Otfrids Evangelienbuch (2nd half of the 9th c.)

All the texts considered were already linguistically annotated in the *Referenzkorpus Altdeutsch*, which is available online<sup>4</sup> and searchable via ANNIS (Krause & Zeldes, 2016).<sup>5</sup>

4 Donhauser, Karin, Gippert, J., & Lühr, R.; ddd-ad (Version 1.0), Humboldt-Universität zu Berlin. <http://www.deutschdiachrondigital.de/>. <http://hdl.handle.net/11022/0000-0003-37E5-D>.

5 <http://corpus-tools.org/annis/>.

For reasons of comparability, we randomly selected the same number of relative clauses, namely 50, with a total of 250 tokens. Since the corpus is not annotated with respect to verb placement and to the specificity (*de re* vs. *de dicto* interpretation) of the referent, the 227 indicative and 23 subjunctive clauses were further enriched with annotation of relevant syntactic and semantic information.<sup>6</sup> The following sections will present some results of this survey (originally presented in Coniglio, 2017).

## 7.2 Mood Alternation and Specificity

A first question arises as to whether the (non-)specific (*de dicto* vs. *de re*) reading of the head noun of OHG relative clauses is expressed by means of verbal mood or by verb placement (or by both). Let us consider the first hypothesis. If this interpretative effect of the head noun can be explained in terms of verbal mood as in the Romance languages, then we would expect that the indicative mood correlates with the specificity (*de re* interpretation) of the head noun (31) and that the subjunctive mood appears when the head noun has a non-specific (*de dicto*) interpretation (32), as is exemplified by the following examples from the corpus.

(31) [...] *drúhtin got* [...], *ther únsih irlósta*  
 Lord god who us redeemed.IND  
 'God, our Lord, [...] who redeemed us' (O 110, 3f.)

(32) [...] *er* [...] *then lésan iz gilústi*  
 he whom read it pleased.SUBJ  
 'he who felt/should feel like reading.' (O 11, 10)

The distribution of mood alternations in the presence of specific or non-specific referents is shown in Table 8.1 (cf. Coniglio, 2017, p. 254).<sup>7</sup> While it is clear that the indicative is the preferred mood in the case of both specific and non-specific referents, the subjunctive tends to be preferably used in cases in which the referent is non-specific, i.e. the distribution indicates that the subjunctive mood is more frequently used in relative clauses referring to non-specific entities than in relative clauses with specific referents. This is the same situation that we observed in modern Italian.

<sup>6</sup> We would like to thank Gohar Schnelle and Marten Santjer for helping us with the annotation of the data.

<sup>7</sup> The na-cases are cases for which no clear interpretation could be provided.

TABLE 8.1 Specificity of the referent and mood in the relative clause

	Indicative	Subjunctive	na
<b>specific</b>	105	4	2
<b>non-specific</b>	84	18	0
<b>na</b>	33	2	2

Fisher Exact  $p = .0012$ ;  $\phi: 0.23$

TABLE 8.2 Specificity of the referents of all subjunctive relative clauses in the *Referenzkorpus Altdeutsch*

	Subjunctive
<b>specific</b>	21
<b>non-specific</b>	340
<b>na</b>	61

Not surprisingly, the four exceptional cases with the subjunctive in a relative clause with specific referents can be explained on different grounds. They are all cases in which rhyme plays a role and/or in which a modalizing element occurs, as is the case in (33). Furthermore, the Latin original could also have influenced the mood alternations.

- (33) [...] *thio brústi, thio Kríst io gikústi*  
 the breasts that Christ ever kissed.SUBJ  
 'the breasts that Christ ever kissed' (O I 11,39)

The exceptionality of such cases is confirmed by an ongoing investigation of all OHG relative clauses in the *Referenzkorpus Altdeutsch*, for which only the results referring to the subjunctive relative clauses are available at the present time ( $n = 422$ ). The distribution of specific and non-specific referents is represented in Table 8.2.

If we exclude the ambiguous cases, about 94% of subjunctive relative clauses are associated with a non-specific referent. This result is even clearer than in the pilot study above and conclusively indicates a strong interaction

between the (non-)specific (i.e. *de re* vs. *de dicto*) interpretation of the referent and mood in OHG relative clauses, exactly as observed in the modern Romance languages.

### 7.3 *Verb Position and Specificity*

The second hypothesis we would like to explore is whether verb placement in OHG relative clauses is linked to the (non-)specific interpretation of the head noun, as is the case in Modern German. As we have seen in the previous sections, a large amount of literature describes the properties of V<sub>2</sub> relatives in Modern German (cf. Gärtner, 2001, 2002). Interestingly, Axel-Tober (2012, pp. 207 ff.) shows that this special type of clause already existed in OHG and was particularly frequent in Middle High German (MHG). In particular, she argues that the properties of older V<sub>2</sub> relatives are exactly the same as in Modern German. Thus, the question is whether a correlation between the type of head noun and the position of the verb can be empirically shown based on the reference corpus (cf. Coniglio, 2017, p. 255).

In general, we must be careful when analyzing the verb position in the OHG texts considered here because these texts are mostly translations from Latin sources or poetic texts. Nonetheless, we found some clear cases that are reminiscent of the V<sub>2</sub> relatives discussed by Gärtner (2001, 2002, etc.) for Modern German and by Axel-Tober (2012) for historical German, as in the following example:

- (34) [...] *chuningē · der frumita bruthlauft sinemo sune* [...]   
           king.DAT that made wedding.feast his.DAT son.DAT   
           ‘[...] to a king that prepared a wedding feast for his son [...]’ (MF XV, 5 f.)

In this case, we have a specific indefinite antecedent for the relative clause and at the same time a V<sub>2</sub> order. Much more frequent is the case of other types of antecedents, as in the following example, in which a non-specific indefinite antecedent is associated with a verb-final (or at least verb-late)<sup>8</sup> order in the relative clause:

8 In a verb-late order (not to be confused with V<sub>3</sub> orders, see Haegeman, this volume), the finite verb is neither in the second, nor in the final position of the clause. This order is typical of subordinate clauses in which for example one or more constituents have been extraposed to the right of the verb for information-structural reasons (Hinterhölzl & Petrova, 2009), thus giving the impression that the verb has moved to their left, as for example in (30c) above. These cases have been analyzed on a par with verb-final orders since they do not feature V-to-C movement as V<sub>2</sub> orders do. Also cf. the discussion about (36) below.

TABLE 8.3 Specificity of the referent and verb position in the relative clause

	V2	Verb-late/final	na
specific indefinite	3	2	0
other type	33	104	5
na	20	73	10

Fisher Exact  $p = .10$ ;  $\phi: 0.15$

- (35) *neouueht* [...], *daz fer si*,  
 nothing that far is.SUBJ  
 ‘nothing [...] that is far away/abstracted’ (Ben.Reg. 2)

Table 8.3 summarizes the distribution of verb ordering with respect to the different types of antecedent (cf. Coniglio, 2017, p. 255). In the table, we decided to clearly distinguish between specific indefinite antecedents and other types of antecedents because their *de re* or specific interpretations alone are not sufficient for them to qualify as antecedents of V2 relative clauses. According to Gärtner (2001, 2002, etc.), they must be specific and indefinite at the same time, as we have seen in Sections 2–4.

The distribution is not statistically significant, so we could conclude that specific indefinite antecedent are not more often associated with a V2 order in the relative clauses than other types of antecedents (cf. Coniglio, 2017, p. 255). This would mean that the situation in OHG is different from the one in Modern German. However, unfortunately, only five relative clauses with a specific indefinite antecedent could be found in the small group of clauses considered. Thus, the observed distribution could be just due to chance (3 V2 vs. 2 non-V2 cases). Much more interesting is the fact that we have a clear preference for verb-late/final orders with other types of antecedents (104 vs. 33).

#### 7.4 *Mood Alternation and Verb Position*

Let us now turn to one last question, i.e. whether a direct correlation between mood and verb position can be observed in OHG (cf. Coniglio, 2017, p. 256). Given the parallel facts observed in the previous sections for Modern German and Italian, the subjunctive should be typically found in OHG verb-late/final clauses, while V2 relatives should only display the indicative. This would be a logic expectation in a language like OHG, which displays both mood and verb placement alternations.

TABLE 8.4 Verb position in the relative clause and mood alternation

	Indicative	Subjunctive	na
V2	51	5	0
verb-late/final	162	17	1
na	9	2	3

Fisher Exact  $p = 1$ ;  $\phi: 0.01$

In order to investigate the interaction between the two variables, Table 8.4 was generated. As can be observed, there does not seem to be a clear difference between V2 and verb-late/final relative clauses with respect to the realization of mood. In both cases, the indicative is preferred and the ratio of indicative and subjunctive cases is about 10:1. The Fisher Exact test indicates that V2 relatives do not exhibit the indicative more often than verb-late/final relative clauses (cf. Coniglio, 2017, p. 256). This seems to confirm that, in OHG, verb placement does not interact with mood in determining the interpretation of the head noun of relative clauses (as is the case in Modern German).

## 8 Discussion of the Data

The discussion above pointed out that the situation in OHG is very different from the one in Modern German, but pretty much similar to the one observed for Italian. While, in Modern German, we can postulate a correlation between the specificity (*de re* vs. *de dicto* interpretation) of the referent and position of the finite verb based on modern theoretical approaches (cf. Gärtner, 2001, 2002, etc.), such correlation could not be empirically demonstrated for OHG. For this stage of the language, the specificity of the referent correlates with the verbal mood as in Italian (and in some other modern Romance languages). The initial and the final situations are represented in Fig. 8.2, where we see the correlation observable or postulated for OHG and Modern German, respectively.

For OHG, there is no empirical evidence in the corpus for a correlation between the verb position and either specificity of the referent or mood. One could conclude that this is a typical scenario of diachronic change: the language starts from a situation in which mood correlates with the specificity of



FIGURE 8.2 Correlations in OHG and Modern German (respectively)

the referent of a relative clause and changes to a system in which the position of the verb depends on the properties of the referent.

Note, however, that the empirical facts are based on a theory-neutral annotation of the examples in our dataset, but some theoretical considerations are necessary at this point. As discussed in Coniglio (2017, pp. 256 ff.), all the variables considered display stronger correlations if we resort to recent theoretical explanations. In fact, many examples that seem to exhibit V2 patterns at the surface—and that have been annotated as such—should better be analyzed as a different type of word order (cf. Kroch & Santorini, 1991; Pintzuk, 1991; Tomaselli, 1995; Hinterhölzl, 2004; Schlachter, 2004, 2012; Axel, 2007; Petrova & Hinterhölzl, 2010; Weiß, forthcoming, etc.). As illustrated in example (36), the VO order must not be necessarily a V2 order in OHG—i.e. the verb can be in a late/final position and still be followed by its object(s) (cf. Coniglio, 2017, p. 257).

- (36) *Daz ist daz hêreste guot, daz der uore gegariwet ist*  
 that is the greatest wealth that PART.REL before afforded is  
*gotes trûtfriunden*  
 God's intimate.friends.DAT  
 'This is the greatest wealth which is provided to God's intimate friends  
 before' (HiH 153, 36)

Basically, two main types of explanations have been proposed for similar examples, and both rely on information-structural factors that are responsible for triggering the “final” VO order. One possible interpretation is that—as illustrated in (37)—in such cases, the basic word order is OV, exactly as in most Modern German subordinate clauses, but that the object is moved to the right of the verb for information-structural reasons (cf. Axel, 2007, p. 80).

- (37) [<sub>VP</sub> t<sub>i</sub> V] O<sub>i</sub>

Another interpretation to be found in the literature is that the verb is base-generated in a position preceding the object or as having moved to that position for information-structural reasons (cf. Tomaselli, 1995; Schlachter, 2004, 2012;

Hinterhölzl, 2009; Petrova & Hinterhölzl, 2010; Coniglio, Linde & Ruetter, 2017; Weiß, forthcoming, but also Petrova & Speyer, 2011, for Old English, etc.):

(38) [<sub>VP</sub> VO] or V<sub>i</sub> [<sub>VP</sub> O t<sub>i</sub>]

Independently of the analysis adopted, there seems to be consensus in the literature as to the reasons for this marked order in subordinate clauses. Recent works have proven that the main factor triggering these deviations is information-structural in nature, being related to the focus-background-structure of the utterance (cf. Schlachter, 2004, 2012; Hinterhölzl, 2009; Petrova & Hinterhölzl, 2010). Hinterhölzl (2009, p. 48) illustrates this by means of the following examples. In (39), the discourse-given DP “thin ouga” precedes the finite verb in the conditional clause, but the focussed predicative “luttar” follows it. The predicative “p[et]rus” is postponed in (40) since it represents new information focus. In the relative clause in (41), the direct object “diuual” is focused and placed to the right of the finite verb.<sup>9</sup>

(39) *liohtfaz thes lihhamen ist ouga / oba thin ouga uuirdit luttar/*  
 light of.the body is eye if your eye becomes bright  
*thanne ist al thin lihhamo liohter*  
 then is all your body bright  
 Lat. *Lucerna corporis. est oculus. / si fuerit oculus tuus simplex. / totum corpus tuum lucidum erit.*  
 ‘The light of the body is the eye. If your eye becomes bright, then all your body is bright.’ (T 69, 21 ff., adapted from Hinterhölzl, 2009, p. 48)

(40) *ther giheizan ist p&rus*  
 who named is Petrus  
 Lat. *qui vocatur p&rus*  
 ‘who is named Petrus’ (T 54, 15, adapted from Hinterhölzl, 2009, p. 48)

9 In a recent paper, Coniglio, Linde and Ruetter (2017) test these recent theoretical theories based on a sample of relative clauses in non-translated OHG texts and show that, also in relative clauses, the OV/VO order is determined by information and discourse structure. In particular, narrow focus of the object is associated with a VO order, while contrastive focus and broad focus trigger OV orders. These empirical results are partially similar to the (mostly theoretical) results in Hinterhölzl (2009), Petrova and Hinterhölzl (2010), and Schlachter (2004). Furthermore, it is shown that non-restrictive relative clauses exhibit more often VO orders than restrictive relative clauses. This is expected if one considers that non-restrictive relative clauses have a greater illocutionary potential (cf. Holler, 2005).

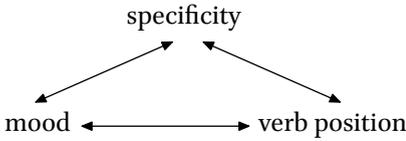


FIGURE 8.3

Correlations based on theoretical accounts

- (41) *Inti bráhtun imo / alle ubil habante* / [...] *Inti thie thár*  
 and brought him all evil having-NOM.PL and those PRT  
*hab&un diuual*  
 had devil  
 Lat. & *obtulerunt ei / omnes male habentes* / [...] & *qui demonia habebant*  
 ‘and they brought him all the sick ones and those that had the devil’ (T 59,  
 1, adapted from Hinterhölzl, 2009, p. 48)

Following such theoretical accounts, many of the orders annotated as V2 orders in our dataset can in fact be interpreted as VO orders (clearly diagnostic cases being very rare in our corpus): they only surface as V2 orders since they display no material in the so called “middle field” (cf. Coniglio, 2017, p. 258). According to this analysis, examples like (42a) could thus be described—despite the surface V2 order—as verb-late orders (as in (42b)) even if the finite verb seems to appear in second position:

- (42) a. [...] *dhiu chrumba nadra* [...]   
 the crooked viper  
*dhea chisaughida gotes uuordes* [...]   
 that suckled God.GEN word.GEN  
 ‘[...] the crooked viper [...] that suckled God’s word [...]’ (1 IX,10)
- b. [<sub>CP</sub> *dhea* ... [<sub>VP</sub> [<sub>V</sub> *chisaughida*] [<sub>DP</sub> *gotes uuordes*]]]

Our intuition is that, if such apparent V2 cases are excluded, we would probably get neater correlations between the three variables considered (specificity, mood and verb position), as represented in Fig. 8.3.

This would indicate that Old High German has both the possibility to mark specificity by means of mood alternations as Italian and some Romance languages and by means of verb placement as Modern German. The diachronic scenario would be easily explained, since the loss of mood alternations in German subordinate clauses would necessarily leave just one option for marking the (non-)specificity of the referent of the relative clause, i.e. via verb placement. However, since it would not be methodologically correct to present a distribution based on a possible interpretation of the data, we will refrain from doing so.

With respect to this point, we are currently conducting a more complex research on the interaction between mood and verb position in OHG and in Old English (Coniglio, De Bastiani, Hinterhölzl & Weskott, t.a.). This survey confirms the empirical results of this investigation, at least for OHG, while the situation in Old English seems to indicate a possibly more advanced development, with neater correlations between mood alternations and verb placement. This new investigation is based on a seminal work by Gärtner and Eythórsson (2020), which we will briefly present in the next section. Starting from their model, we intend to sketch a diachronic scenario for the development from the Italian-like situation in OHG to the one represented by Modern German.

## 9 From Morphological Mood to Syntactic Verb Position

This final section sketches a first scenario for the change that we observed from OHG to Modern German. Our investigation has shown that verbal mood requires different interpretations of the referents of relative clauses. For the older Germanic languages, verbal mood is also taken to indicate the (in)dependent status of a sentence (cf. Schrodt, 1983; Petrova, 2008, for OHG; Mitchell, 1985; Vezzosi, 1998, for OE, etc.), as is often claimed for the Romance languages (Farkas 1985; Giorgi & Pianesi, 1997; Quer, 1998, etc.). This is possibly related to the fact that, as discussed in the previous sections, at least in languages displaying such alternations, the indicative is typically used in assertive contexts, while the subjunctive is used in presupposed, backgrounded or non at-issue contexts.

Furthermore, verb placement in OHG has also been shown to mark the clausal status (for example by Axel, 2007). Nonetheless, as we have seen, the position of the verb is often claimed to be the reflex of Information Structure, especially of the focus/background structure (cf. Hinterhölzl & Petrova, 2009; Petrova, 2009, 2011; Hinterhölzl, 2015; Coniglio, Linde & Ruetten, 2017).

The situation in the modern Germanic languages is different. In general, mood is no longer used to indicate the (in)dependent status of the clause. In contrast to the Romance languages, its usage contexts are mostly restricted to reported speech, counterfactuality, etc. As we have seen for Modern German in the previous sections, the modern Germanic languages mostly use verb placement for marking clausal (in)dependency.<sup>10</sup>

<sup>10</sup> According to several studies, the Romance languages use mood alternations also to indicate (in)dependency (Meinunger, 2004, 2006), but see Poletto (2000) and Ledgeway (2012), etc. arguing that verb placement also plays a role.

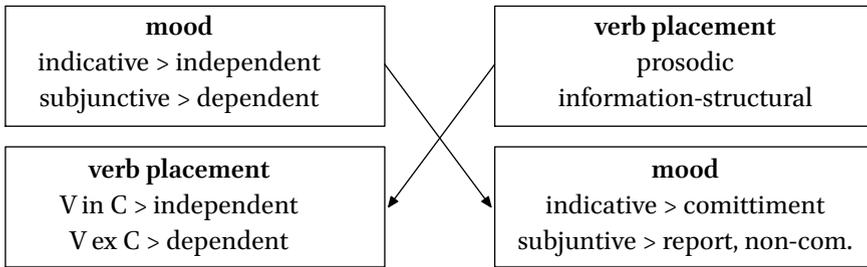


FIGURE 8.4 Clausal (In)dependency Marking

ADAPTED FROM GÄRTNER &amp; EYTHÓRSSON, 2020

Based on data from Icelandic (and German), Gärtner and Eythórsson (2020) argue that a diachronic scenario can be reconstructed for all the Germanic languages. In their view, older Germanic recruits mood for marking clause (in)dependency, while verb placement (verb fronting vs. verb in situ) is just a reflex of prosody and Information Structure (see the upper part of Fig. 8.4). In later stages, most of the Germanic languages use verb placement for clausal marking, while mood acquires different semanto-pragmatic functions (bottom part of Fig. 8.4).

Elaborating on Gärtner and Eythórsson's proposal, we posit a first stage (stage A) representing the initial situation in which the subjunctive mood expresses clausal dependency independently of finite verb position. In this stage the position of the finite verb is determined by information-structural factors, as is typical of OHG, where backgrounded material precedes the finite verb, while focused material follows the verb (cf. Hinterhölzl, 2004; Petrova & Hinterhölzl, 2010). We thus expect that the default position of the finite verb in clauses marked with the subjunctive mood is final, since the content of these clauses is presupposed or at least not at issue, as we have seen in Section 5. On the other hand, the indicative mood expresses clausal independency irrespective of the position of the finite verb at this stage. In clauses marked with the indicative mood, the position of the verb is more flexible, since independent clauses have an autonomous focus-background structure, in which the finite verb separates the background from the focused material. Thus, we expect the default position of the finite verb to be medial (verb-late order).

The second stage (stage B)—towards which OHG was probably already moving—can be taken to set in when the subjunctive starts to get lost in certain environments. In this stage, mood alternations will represent a mixed picture. The subjunctive mood—where present—will continue to indicate clausal dependency (43), while the indicative mood becomes ambiguous and indicates clausal dependency in final position (44)—due to the presupposed status

of dependent clauses in the unmarked case—and clausal independency and information-structural distinctions in late/medial position (45)—due to the main clause properties of embedded clauses in the marked case. This stage may very well be represented by OHG, as illustrated by the following examples from *Isidor*:

- (43) *Huer ist dher dhiz al ni chisehe in im selbem nu uuesan*  
 who is who this all NEG sees.SUB in him himself now be  
*arfullit?*  
 fulfilled  
 ‘Who is that does not see all this now fulfilled in his person?’ (1 DF, 8, 3)
- (44) [...] *so ih fona dhemu nam, dher ær fora dhir uuas.*  
 as I from that took who before before you was.IND  
 ‘[...] as I took it away from the one who came before you.’ (1 DF, 9, 2)
- (45) [...] *osee propheta, dher quhad heilegu gheistu:*  
 Hosea prophet who said.IND Holy.INSTR Ghost.INSTR  
 ‘[...] Prophet Hosea, who said inspired by the Holy Spirit.’ (1 DF, 8, 3)

Especially the contrast between (44) and (45) deserves attention. The final position of the verb “*uuas*” in (44) is compatible with the presupposed status of the relative clause. *Isidor* is quoting 1Chronicles (17, 13): “I will be his father and he will be my son. I will never take away my mercy from him, as I took it away from the one who came before you.” The content of the material preceding the indicative verb “*uuas*” is not focused. While the asserted content is that he will never take away his mercy from him, the adverbial and the relative clause are probably only restating something known to the addressee.

Even more interesting is the case in (45). Here, *Isidor* is claiming that Hosea cannot be a liar because—as a prophet—he spoke those words inspired by the Holy Spirit. Thus, it is highly plausible that the prominent post-finite position of “*heilegu gheistu*” is linked to the higher discourse-structural and information-structural potential of the relative clause.

Note that it is difficult to pinpoint the possible causes and grammatical processes leading to this second stage, where the subjunctive is gradually replaced by the indicative also in typical subjunctive domains. Even though this point must be left for further research, Petrova (2008, p. 215), Coniglio (2017, p. 263), and Coniglio, Hinterhölzl and Petrova (2018, p. 31) indicate two main morphophonological and syntactic changes progressively affecting the language as a possible explanation for this gradual change, namely 1) the impoverishment

of verb morphology (and consequent mood syncretism) and 2) the emergence of analytic constructions using auxiliary and modal verbs in combination with full verbs (instead of the synthetic subjunctive forms of the full verbs). Since these changes can already be observed in OHG, they could explain why the indicative mood was already supplanting the subjunctive during this period.

The third stage of the diachronic scenario (stage C) is reached when the option of having focused material in post-finite position is lost. This stage can be identified with the slow process of reducing post-finite DP-arguments in MHG (and Early New High German, cf. Coniglio & Schlachter, 2015). The cause of this process may be the loss of extraposition of focused material in the standard OV account or the loss of the finite verb movement to a sentence medial position triggered by information-structural properties (illustrated in Section 8). The latter assumption—loss of movement of the finite verb to a sentence medial position—would then yield the rather plausible and natural conclusion that the medial verb position in embedded clauses in this stage is reanalyzed from movement to a medial position for information-structural reasons into movement of the verb to the C-domain (to some high Mood head) for marking clausal dependency. In this scenario, we would expect that real V2 in embedded clauses arises at the end of the MHG period, when VO orders have been (or are) driven out of the language.

### Conclusions

We have first shown that alternations in verb order in relative clauses in Modern German has essentially the same function as mood alternations in these clauses in the Romance languages, in particular, in Italian. Second, we have shown that mood alternation in OHG has essentially the same function as mood alternation has in Italian. Then, it was shown that alternations in word order in relative clauses in OHG cannot be related to the specific or non-specific interpretation of the head noun as it can in Modern German, but is triggered mostly by information-structural conditions. We have finally sketched a historical scenario for the relevant change from OHG to Modern German based on the model of Gärtner and Eythórsson (2020) for the entire Germanic language family. This account crucially links the change in the expression of mood and the loss of VO orders—which are a side effect of the information-structural potential of indicative-marked clauses—to a reanalysis of embedded verb-late orders in MHG to embedded V2 orders in modern German.

## Acknowledgements

Roland Hinterhölzl takes responsibility for sections 2 to 6, Marco Coniglio for sections 7 to 8. Both take responsibility for sections 1 and 9. We thank the organizers and the audience of the workshop “Information structuring in discourse” (Saarbrücken, Mar. 8th–10th, 2017), as well as the reviewers for their insightful comments.

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