



SUSANNE WURMBRAND

# Infinitives

Restructuring  
and Clause Structure

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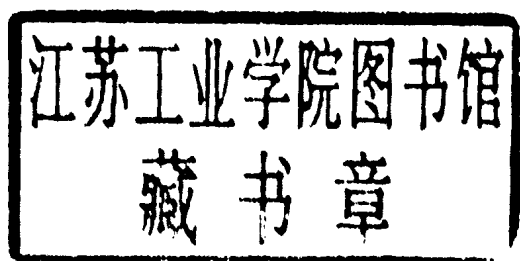
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# Infinitives

## Restructing and Clause Structure

*by*

Susanne Wurmbrand



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This book is dedicated to Auguste and Josef Kraker

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# Chapter 1

## Introduction

### 1. *Infinitives* in brief

Infinitival complementation constructions provide a set of intriguing and deep challenges for contemporary linguistic theories. Not least among the questions raised are the various facts which contribute to the general observation that two apparently identical infinitival clauses may vary quite substantially in their syntactic behavior and their semantic interpretation. For example, an infinitival clause like [*to read a book*] may, depending on the environment in which it occurs, be opaque or transparent for extraction, may itself be movable or may be immobile, may or may not receive a variable interpretation for the understood infinitival subject, and it may or may not permit a tense interpretation distinct from that of the matrix clause (facts of this sort will be illustrated in detail as we proceed). Describing and explaining the correlations both between semantic properties and syntactic ones, and among various syntactic properties, has proven to be no easy task. In particular, a substantial literature has been devoted to cases in which infinitival complement clauses appear to be transparent domains for syntactic phenomena that are otherwise quite local, e.g., clause-bounded. (This is the phenomena of *restructuring* to which we return presently.)

This book offers a detailed case study of infinitival constructions in German, though the properties we discuss can be generalized to other languages, provided the particular syntactic properties of any given language are taken into consideration. The primary thesis of the book is that infinitival complements do not all have the same functional (i.e., syntactic) architecture above the VP and that differences in the syntactic structure among different classes of infinitival

complement clauses correspond closely (though not perfectly) to differences in interpretation. A particular emphasis is placed here on pursuing an explanatory approach, i.e., an approach which not only provides a framework for the description of the syntactic phenomena but one which attempts to predict the distribution of various properties across clause types and to explain the observed correlations between syntactic and interpretive differences among related sentences.

The major claim of this study is that control and raising infinitives do not form uniform classes but are represented by a variety of configurations, which reasonably directly reflect the syntactic and semantic properties of the different infinitival constructions. Concentrating on German, we show that infinitival complements fall into four basic classes: *lexical restructuring infinitives*, *functional restructuring infinitives*, *reduced non-restructuring infinitives*, and *non-restructuring infinitives*. The distribution and properties of these types of infinitival constructions are summarized in Table 1. This study pursues four main goals: i) to provide evidence for (at least) a four-way classification of infinitival constructions; ii) to motivate the different syntactic structures for the different classes of infinitival constructions; iii) to derive the operations and properties listed in Table 1; and iv) to provide an explanatory account which not only derives but predicts the distribution in Table 1.

There are two crucial points that we would like to direct the reader's attention to now concerning the distribution in Table 1. First, as the table shows, *restructuring* is not treated as a uniform phenomenon but is split into two subclasses—lexical vs. functional restructuring (an overview of the restructuring phenomenon will be provided in section 2). Thus, we argue against approaches such as the one suggested by Cinque (1997a, 1997b, 2000) which take all restructuring to be functional. Second, the table illustrates that the distinction between different types of infinitival constructions is not a simple distinction between VP and clause, but a more fine grained distinction. Consequently, there is no single phenomenon of restructuring per se, and there can be no tests that pick out a “restructuring property” or feature. Rather, different tests are shown to pick out distinct aspects of the syntactic structure in a principled manner.

Table 1. German infinitival constructions

Type	Structure	Properties, distribution	(Im)Possible operations
<i>Restructuring:</i>			
Lexical	INF = VP-layer	<ul style="list-style-type: none"> <li>• no embedded (PRO) subject</li> <li>• no embedded structural case</li> <li>• no embedded tense</li> <li>• no embedded negation</li> <li>• obligatory control</li> <li>• possible with: (strong) implicatives, aspectuals, irrealis predicates</li> </ul>	<p><i>possible:</i></p> <ul style="list-style-type: none"> <li>• long object movement</li> <li>• scrambling</li> <li>• pronoun fronting</li> </ul> <p><i>impossible:</i></p> <ul style="list-style-type: none"> <li>• ??extraposition of infinitive</li> <li>• relative clause pied piping</li> </ul>
Functional	INF = main predicate	<ul style="list-style-type: none"> <li>• thematic properties are determined by the embedded predicate (except semi-functional predicates)</li> <li>• possible with: modal, raising, aspectual, causative, perception, motion verbs</li> </ul>	<p><i>possible:</i></p> <ul style="list-style-type: none"> <li>• IPP effect</li> <li>• raising</li> </ul> <p><i>impossible:</i></p> <ul style="list-style-type: none"> <li>• extraposition of infinitive</li> <li>• matrix passive</li> <li>• relative clause pied piping</li> </ul>
<i>Non-restructuring:</i>			
Reduced	INF = vP or TP	<ul style="list-style-type: none"> <li>• embedded (PRO) subject</li> <li>• embedded structural case</li> <li>• possible with: implicatives, aspectuals, irrealis predicates</li> </ul> <p><i>possible:</i></p> <ul style="list-style-type: none"> <li>• embedded tense</li> <li>• embedded negation</li> <li>• non-obligatory control</li> </ul>	<p><i>possible:</i></p> <ul style="list-style-type: none"> <li>• pronoun fronting</li> <li>• focus scrambling</li> <li>• %extraposition of infinitive</li> </ul> <p><i>impossible:</i></p> <ul style="list-style-type: none"> <li>• long object movement</li> <li>• (non-focus) scrambling</li> <li>• relative clause pied piping</li> </ul>
Clausal (full)	INF = CP	<ul style="list-style-type: none"> <li>• embedded (PRO) subject</li> <li>• embedded structural case</li> <li>• embedded tense</li> <li>• possible with: all lexical predicates</li> <li>• obligatory with: propositional, factive predicates</li> </ul>	<p><i>possible:</i></p> <ul style="list-style-type: none"> <li>• relative clause pied piping</li> <li>• extraposition of infinitive</li> </ul> <p><i>impossible:</i></p> <ul style="list-style-type: none"> <li>• long object movement</li> <li>• scrambling</li> <li>• pronoun fronting</li> <li>• %intraposition of infinitive</li> </ul>

The clustering of these properties to yield the appearance of a restructuring phenomenon follows from general aspects of the clausal architecture. For example, tests for embedded infinitival (PRO) subjects and tests for embedded accusative case (e.g., long object

movement) coincide because they both target the same domain of the clause, namely  $\nu$ P. Infinitival complements lacking  $\nu$ P will fail tests for PRO and will allow long object movement, thus instantiating the basic restructuring configuration. Variation in the literature as to the proper classification of restructuring results from discrepancies among the targets of different diagnostics. Long pronoun movement for example may cross  $\nu$ P though it is impossible out of CP. Therefore, the class of infinitives picked out by this test will be a superset of the class of infinitives picked out by long object movement.

The book is organized as follows. Lexical restructuring is the topic of Chapter 2 and Chapter 4. In short, we argue that lexical restructuring is not defined by a single property or feature of certain predicates, but rather, lexical restructuring is a particular *configuration*. To qualify as a lexical restructuring configuration the following structural and semantic properties have to coincide: the infinitive denotes (roughly) an event or an action, lacks propositional and force properties such as an independent tense specification and complementizer material, lacks a structural case position/assigner, and does not include a syntactic subject. In Chapter 2, we concentrate on tense, negation, complementizers, and structural case and conclude that lexical restructuring infinitives are best analyzed as bare VPs—i.e., as infinitival complements to a lexical verb lacking the projections associated with tense, structural case, (sentential) negation, and complementizer material. In Chapter 4, we argue that lexical restructuring infinitives are obligatory control infinitives which lack a syntactic (PRO) subject.

Chapter 3 investigates functional restructuring constructions. Functional restructuring refers to mono-clausal structures in which the restructuring verb represents a functional head and the infinitive is the main predicate of the clause. As such, functional restructuring is the core of restructuring since it is a direct (and unavoidable) result of the architecture of a clause. A detailed comparison of the properties of lexical restructuring constructions with the properties of functional restructuring constructions will motivate the distinction between lexical and functional restructuring and show that a uniform treatment is untenable.

Non-restructuring infinitives are discussed in Chapter 5. Syntactic

properties such as pronoun fronting and relative clause pied piping split the class of non-restructuring infinitives into two subclasses: (full clausal) *non-restructuring infinitives* vs. *reduced non-restructuring infinitives*, which correlate with different semantic classifications of the infinitival constructions. In particular, propositional and factive constructions differ from irrealis and aspectual infinitives in that the former can only be represented by full clausal structures whereas the latter allow a reduced clausal structure.

Finally, Chapter 6 summarizes the major claims of the study including an illustration of the crucial examples. For reference purposes, the study also includes an appendix which lists the data used in this study, the properties tested and applied to a range of predicates, and a preliminary summary of verb classification in five languages (German, Dutch, Italian, Spanish, and Japanese).

Before we turn to lexical restructuring, we will conclude the introduction with an overview of the history of the literature on the restructuring phenomenon.

## 2. Restructuring—its significance in history

In an extensive study of infinitives, Gunnar Bech (1955) developed one of the first characterizations of infinitival complements in German. Bech showed that infinitives fall into two classes: infinitives that form an independent clausal domain and infinitives that do not exhibit clausal behavior. He labeled the former class *kohärente Infinitive* 'coherent infinitives', the latter *inkohärente Infinitive* 'incoherent infinitives'. The first study of the two classes of infinitives in a generative framework was provided by Evers (1975b). Evers observed that the split among infinitival constructions in Dutch and German correlates with a reordering process of the verbal elements in an infinitival construction. He proposed that this reordering is the result of a process of *verb raising* which applies in certain infinitival clauses but not in others. Evers' analysis which set the groundwork for most later analyses of clause structure in German and Dutch is the first work that builds on the correlation between mono-clausality and verb movement. In particular, he suggests a *structure pruning* princi-

*ple* (also referred to as a *Guillotine principle*) which applies to the S-node of infinitives that have lost their head (i.e., by movement of the embedded verb to the higher clause).

At the same time, Aissen and Perlmutter (1976) and Rizzi (1976) observed that in Italian and Spanish, certain infinitives lack clausal properties.<sup>1</sup> That is, while in most cases infinitives constitute a boundary for processes that are restricted to apply within one clause, certain infinitives are transparent for the same processes. Aissen and Perlmutter suggest that certain infinitives undergo a process of *clause union* with the matrix clause and hence cease to function as independent clauses. Similarly, Rizzi proposes that what is special about infinitives lacking clausal properties is that they have undergone a *process of restructuring*. In Rizzi's analysis, restructuring is an optional rule according to which the embedded infinitive and the matrix verb are reanalyzed as one complex verb. Thus, restructuring transforms a bi-clausal structure into a mono-clausal one.<sup>2</sup>

Since then, the study of restructuring/coherence has received extensive attention in the Germanic and the Romance literature. The three main research questions addressed are: the determination and characterization of the class of restructuring infinitives, the structure of restructuring infinitives, and the motivation for restructuring or clause union. In the next sections, we will give an overview of the major insights and analyses.

### 2.1. *The class of restructuring predicates*

In most studies on restructuring, it has been noted that the class of

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<sup>1</sup> Both articles—Rizzi (1976) and Aissen and Perlmutter (1976)—were subsequently republished. In most cases, we will refer to the newer versions.

<sup>2</sup> The typical properties attesting to the transparency or lack of clause boundedness of certain infinitives in Romance are *clitic climbing*, *object preposing*, and *auxiliary switch*; the main transparency properties in Germanic are *long distance scrambling*, *long passive*, and *verb raising*. We will illustrate most of these properties in the course of this book. For the present purpose, it suffices to know that these operations are impossible out of finite clauses and non-restructuring infinitives, but are possible out of restructuring infinitives.

restructuring predicates varies across languages and also shows some variation among speakers of one language. However, it is also commonly accepted that there is a core of restructuring predicates that is not disputed and moreover found in all languages displaying restructuring effects. This core class of restructuring predicates is summarized in Table 2 for German, Dutch, Spanish, Italian, and Japanese (a list of actual predicates is provided in the appendix, section 5). As the table shows, infinitives selected by modal verbs (*must, may, can, want* etc.) motion verbs (*come, go, return*), aspectual verbs (*begin, continue, finish*), and causative verbs (*let, make*) are typically restructuring verbs.

Table 2. The core restructuring predicates

Verb	German	Dutch	Spanish	Italian	Japanese
modal verbs	+	+	+	+	+
motion verbs	+	+	+	+	+
aspectual verbs	+	+	+	+	+
causatives	+	+	+	+	+

Turning to the less straightforward cases, speaker and language variation arises for instance for the predicates listed in Table 3. The table also shows, however, that there are predicates that are uniformly considered as non-restructuring predicates (in particular, these involve factive and propositional predicates).

Table 3. Variation

Verb	German	Dutch	Spanish	Italian	Japanese
<i>try</i>	+	+	%	%	±
<i>forget, manage</i>	+	+	%	%	+
<i>dare, seem</i>	+	+	-	%	-
<i>allow, permit</i>	+	-	%	-	-
<i>decide, plan</i>	%	%	-	-	-
<i>regret</i>	-	-	-	-	-
<i>assume, claim</i>	-	-	-	-	-

The fact that the class of restructuring predicates shows both semantic cohesion as well as variation and apparent arbitrariness is re-



flected in the general tension between two basic directions authors take regarding the question of how the class of restructuring predicates is determined. One type of approach considers the regularities of the class of restructuring predicates as the basic cases of restructuring, and language and speaker variation are assigned a special status or set aside. According to this view, restructuring is motivated through a semantic (and/or thematic) property found among the class of restructuring verbs. Another type of approach treats restructuring as a language-specific and irregular phenomenon, and the cohesion among the class of restructuring predicates is considered as an accident. According to this view, restructuring is generally considered as a lexical property that is assigned (arbitrarily) to a subclass of infinitive-taking verbs and parametrically restricted to certain languages. The major references addressing the question of whether restructuring is (mainly) a lexical/syntactic or (mainly) a semantic phenomenon are summarized in Table 4.<sup>3</sup>

Table 4. Syntactic vs. semantic approaches to restructuring

Restructuring	References
Lexically/syntactically determined	Aissen and Perlmutter 1976, 1983; DiSciullo and Williams 1987; Fanselow 1989; Kayne 1989, 1990, 1991; Sternefeld 1990; Rutten 1991; Roberts 1993, 1997; Grewendorf and Sabel 1994; Sabel 1994/1996; Kiss 1995; Meurers 2000
Semantically/thematically determined	Luján 1980; Napoli 1981; Strozer 1976; Zagana 1982; Rochette 1988, 1990, 1999; Rosen 1989, 1990; Picallo 1985, 1990; Rosengren 1992; Wurmbrand 1997, 1998a, 1998b; Cinque 1997a, 1997b, 2000; Roberts 1997 <sup>4</sup>

<sup>3</sup> Note that the lists of references we will provide in this chapter are selective and we do not claim that they exhaustively represent the works on restructuring. In many cases, we will only mention works that explicitly discuss the questions or issues under consideration.

<sup>4</sup> We list Roberts (1997) in both categories since Roberts claims that restructuring verbs are characterized as non-theta assigners, however, at the same time Roberts assumes that this property is essentially a language specific lexical property which does not necessarily correlate with the thematic and semantic properties of the verbs involved.