COMPREHENSIVE GRAMMAR RESOURCES

Henk van Riemsdijk & István Kenesei, series editors

Syntax of Dutch

Verbs and Verb Phrases

VOLUME 2

Hans Broekhuis
Norbert Corver

ROUTLEDGE

Syntax of Dutch
Verbs and Verb Phrases
Volume 2

Comprehensive Grammar Resources

Editors:
Henk van Riemsdijk
István Kenesei

Syntax of Dutch
Verbs and Verb Phrases
Volume 2

Hans Broekhuis
Norbert Corver

With the cooperation of:
Hans Bennis
Frits Beukema
Carole Boster
Crit Cremers
Henk van Riemsdijk

Routledge
Taylor & Francis Group
LONDON AND NEW YORK

The publication of this book is made possible by grants and financial support from:
Netherlands Organisation for Scientific Research (NWO)
Center for Language Studies
University of Tilburg
Truus und Gerrit van Riemsdijk-Stiftung
Meertens Institute (KNAW)

This book is published in print and online through the online OAPEN library (www.oapen.org).

First published in 2015 by Amsterdam University Press Ltd.

Published 2025 by Routledge
4 Park Square, Milton Park, Abingdon, Oxon OX14 4RN
605 Third Avenue, New York, NY 10158

Routledge is an imprint of the Taylor & Francis Group, an informa business

ISBN: 9789089647313 (hbk)
ISBN: 9781041186830 (pbk)
ISBN: 9781003704676 (ebk)
NUR 616 / 624

Cover design: Studio Jan de Boer, Amsterdam

For Product Safety Concerns and Information please contact our EU representative: GPSR@taylorandfrancis.com
Taylor & Francis Verlag GmbH, Kaufingerstraße 24, 80331 München, Germany

DOI: 10.5117/9789089647313

Contents

Volume 1

Volume 2

Volume 3 (may be subject to change)

Chapter 13
Word order in the clause V: The middle field of the clause

Chapter 14
Main-clause external elements

Abbreviations and symbols

This appendix contains a list of abbreviations and symbols that are used in this volume. Sometimes, conventions are adopted that differ from the ones given in this list, but if this is the case this is always explicitly mentioned in the text.

References to the other volumes of the *Syntax of Dutch*.
References to the chapters and sections to the other volume in the series *Syntax of Dutch* are preceded by a letter: N + section # refers to the two volumes on nouns and noun phrases, A + section # refers to the volume on *Adjectives and adjective Phrases*, and P+section # refers to the volume on *Adpositions and adpositional phrases*. For example, refers to Section P3.2. in Hans Broekhuis (2013). *Syntax of Dutch: Adpositions and adpositional phrases*. Amsterdam: AUP.

Symbols and abbreviation used in the main text

°xxx	refers to the XXX glossary
Domain D	Domain of discourse

Abbreviations used in both the main text and the examples

AP	Adjectival Phrase
CP	Complementizer Phrase
DP	Determiner phrase
NP	Noun Phrase
Noun phrase	used when the NP-DP distinction is not relevant
NumP	Numeral Phrase
PP	Prepositional Phrase
PO-verb	Verb with a prepositional object
QP	Quantifier Phrase
TP	Tense Phrase
VP	Verb Phrase
Aux_2-$Main_1$	Verb cluster. The numeral indices indicate the hierarchical order of the verbs: V_{n+m} is superior to V_n. the en-dash indicates linear order: the element to the left precedes the element to the right in the surface order of the sentence: see Section 7.2, sub I, for details.

Symbols, Abbreviations and conventions used in the examples

e	Phonetically empty element
Ref	Referent argument (external °thematic role of nouns/adjectives)
Rel	Related argument (internal thematic role of relational nouns)
OP	Empty operator
PG	Parasitic gap
PRO	Implied subject in, e.g., infinitival clauses
PRO_{arb}	Implied subject PRO with arbitrary (generic) reference
t	Trace (the original position of a moved element)
XXX	Small caps indicates that XXX is assigned contrastive accent

Abbreviations used as subscripts in the examples

1p/2p/3p	1st, 2nd, 3rd person	pl	Plural
acc	Accusative	poss	Possessor
dat	Dative	pred	Predicate
ben	Beneficiary	rec	Recipient
nom	Nominative	sg	Singular

Abbreviations used in the glosses of the examples

AFF	Affirmative marker
COMP	Complementizer: *dat* 'that' in finite declarative clauses, *of* 'whether/if' in finite interrogative clauses, and *om* in infinitival clauses
prt.	Particle that combines with a particle verb
PRT	Particle of different kinds
REFL	The short form of the reflexive pronoun, e.g., *zich*; the long form *zichzelf* is usually translated as *himself*/*herself*/*itself*
XXX	Small caps in other cases indicates that XXX cannot be translated

Diacritics used for indicating acceptability judgments

*	Unacceptable
*?	Relatively acceptable compared to *
??	Intermediate or unclear status
?	Marked: not completely acceptable or disfavored form
(?)	Slightly marked, but probably acceptable
no marking	Fully acceptable
%	Varying judgments among speakers
#	Unacceptable under intended reading
$	Special status: old-fashioned, archaic, very formal, semantically incoherent, degraded/unacceptable for non-syntactic reasons, etc. The nature of the deviation is normally explained in the main text.

Other conventions

xx/yy	Acceptable both with xx and with yy
*xx/yy	Unacceptable with xx, but acceptable with yy
xx/*yy	Acceptable with xx, but unacceptable with yy
(xx)	Acceptable both with and without xx
*(xx)	Acceptable with, but unacceptable without xx
(*xx)	Acceptable without, but unacceptable with xx
.. <xx>	Alternative placement of xx in an example
.. <*xx> ..	Impossible placement of xx in an example
$\Rightarrow$	Necessarily implies
$\not\Rightarrow$	Does not necessarily imply
XX ... YY	Italics indicate binding
XX_i ... YY_i	Coindexing indicates coreference
XX_i ... YY_j	Counter-indexing indicates disjoint reference
$XX_{*i/j}$	Unacceptable with index *i*, acceptable with index *j*
$XX_{i/*j}$	Unacceptable with index *j*, acceptable with index *i*
$[_{XP}$ ...]	Constituent brackets of a constituent XP

Chapter 4 Projection of verb phrases IIIa: Selection of clauses/verb phrases

DOI: 10.5117/9789089647313-1

Introduction

Chapter 5 to Chapter 7 will discuss constructions in which a verb select a verbal projection, that is, a clause or some smaller (extended) °projection of some other verb. The present chapter provides the necessary background for these chapters by providing a review of a number of issues in this domain. In a sense, Chapter 5 can be seen as a continuation of the discussion in Chapter 2 on °argument structure: it discusses cases in which main verbs select a verbal projection, that is, a finite or infinitival argument clause. The reason why we did not discuss this type of °complementation in Chapter 2 is that in essence it does not alter the syntactic verb classification that was developed there: for example, many verbs taking an internal °argument have the option of choosing between a nominal and a clausal complement. This is illustrated in (1) for the transitive verb *zien* 'to see' and the ditransitive verb *vertellen* 'to tell'.

(1) a. Jan zag het schilderij.
Jan saw the painting
a′. Jan zag [dat het regende].
Jan saw that it rained
b. Peter vertelde Marie een leuk verhaal.
Peter told Marie a nice story
b′. Peter vertelde Marie [dat Jan ziek was].
Peter told Marie that Jan ill was
'Peter told Marie that Jan was ill.'

If a specific verb resists a nominal object, pronominalization of the clausal complement shows that the verb in question is in principle able to take a nominal complement and to assign case to it. The acceptability of pronominalization in (2b), for instance, shows that the verb *betogen* 'to argue' is simply a transitive verb and that the infelicitousness of the use of the nominal object *die stelling* 'that thesis' is a matter of semantics, not syntax; complements of verbs like *betogen* must simply have propositional content. This is confirmed by the fact illustrated in (2c) that there are acceptable cases of nominal complementation with noun phrases like *het tegendeel* 'the opposite', which are propositional in nature.

(2) a. Jan betoogt [dat dit boek een mislukking is].
Jan argues that this book a failure is
'Jan argues that this book is a failure.'
b. Jan betoogt dat/$die stelling.
Jan argues that/that thesis
c. Els zegt [dat dit boek een meesterwerk is] maar Jan betoogt *het tegendeel*.
Els says that this book a masterpiece is but Jan argues the opposite
'Els says that this book is a masterpiece but Jan argues the opposite.'

The examples in (3) show that clausal complements of PO-verbs can normally also be pronominalized or be replaced by a noun phrase. This illustrates again that clausal complements do not essentially affect the syntactic classification of verbs, and that the omission of clausal complements from our discussion of argument structure in Chapter 2 is therefore relatively innocuous.

(3) a. Jan twijfelt (erover) [of hij de juiste beslissing genomen heeft].
Jan doubts about.it whether he the right decision taken has
'Jan isn't sure (about it) whether he has taken the right decision.'
b. Jan twijfelt daarover/over zijn beslissing.
Jan doubts about.it/about his decision
'Jan isn't sure about that/about his decision.'

The reason for devoting a separate discussion to clausal/verbal arguments is that these arguments exhibit various special properties and introduce a number of complicating factors that have been investigated extensively in the literature. A discussion of these special properties and complicating factors would seriously interfere with the main line of argumentation in Chapter 2: it is better to discuss these properties in their own right. The present chapter will point at some of the topics that need special attention.

After having read the general discussion in this chapter, the reader will be sufficiently equipped to read the next three chapters, which we briefly review here for convenience. Chapter 5 starts by showing that main verbs can take a number of different types of clausal/verbal arguments: the examples in (4) show that such argument clauses may be finite or infinitival: finite argument clauses are discussed in Section 5.1 and the various types of infinitival clauses in Section 5.2.

(4) a. Jan vertelde me *dat Marie in Utrecht woont*. [finite]
Jan told me that Marie in Utrecht lives
'Jan told me that Marie lives in Utrecht.'
b. Jan verzocht me *om naar Amsterdam te komen*. [infinitival]
Jan asked me COMP to Amsterdam to come
'Jan asked me to come to Amsterdam.'

Section 5.3 concludes Chapter 5 by investigating whether finite and infinitival clauses can function as °complementives in copular and *vinden*-constructions. Examples such as (5a) seem to point in this direction but the fact that such examples occur alongside examples such as (5b), in which the finite clause clearly functions as the subject of the construction, shows that this cannot be taken for granted.

(5) a. Een feit is [dat hij te lui is].
a fact is that he too lazy is
'A fact is that he's too lazy.'
b. Het is een feit [dat hij te lui is].
it is a fact that he too lazy is
'It is a fact that he's too lazy.'

Chapter 6 discusses the various types of verbal complements of non-main verbs. Although such complements do not function as arguments in the sense of predicate calculus, they can still be said to be selected by the non-main verbs: the examples in (6) show that perfect auxiliaries like *hebben* 'to have' select past participles, whereas aspectual verbs like *gaan* 'to go' select infinitives.

(6) a. Jan *heeft* dat boek *gelezen*.
Jan has that book read
'Jan has read that book.'
b. Jan *gaat* dat boek *lezen*.
Jan goes that book read
'Jan is going to read that book.'

Constructions with embedded non-finite clauses/verbal projections may exhibit monoclausal behavior in the sense that the °matrix verb (that is, the verb that selects the clause/verbal projection and thus heads the matrix clause) and the verb heading the non-finite complement form a °verb cluster, that is, a more or less impermeable sequence of verbs. This may give rise to what we will refer to as CLAUSE SPLITTING; the infinitival clause becomes discontinuous in the sense that the matrix verb separates the infinitival verb from its dependents (like arguments and modifiers). The phenomenon of verb clustering (which is often referred to as VERB RAISING in the formal linguistic literature) and concomitant clause splitting is illustrated in (7a): the verb *zien* 'to see' selects the infinitival complement *Peter dat boek lezen*, which surfaces as a discontinuous phrase due to clustering of the verbs *zien* 'to see' and *lezen* 'to read'. Example (7b) has been added to show that verb clustering is often obscured in main clauses because they require movement of the finite verb into second position; see Section 9.2 for discussion.

(7) a. dat Jan *Peter dat boek* ziet *lezen*.
that Jan Peter that book sees read
'that Jan sees Peter read that book.'
b. Jan ziet *Peter dat boek lezen*.
Jan sees Peter that book read
'Jan sees Peter read that book.'

Constructions with non-main verbs typically exhibit monoclausal behavior; they always involve verb clustering, as shown in (8) by the embedded counterparts of the examples in (6).

(8) a. dat Jan *dat boek* heeft *gelezen*.
that Jan that book has read
'that Jan has read that book.'
b. dat Jan *dat boek* gaat *lezen*.
that Jan that book goes read
'that Jan is going to read that book.'

Chapter 7 is devoted especially to verb clustering given that this is a recurring topic in the literature. The reader must be aware, however, that it is often not *a priori* clear what counts as a case of verb clustering. This is due to the facts listed in (9), which are established in the sections indicated; we refer the reader to these sections for detailed discussion.

(9) a. Projections headed by a participle are not only used as verbal complements of auxiliaries but can also be used as adjectival complementives; see A9.
b. Projections headed by an infinitive are not only used as infinitival clauses, but can also be used as (i) adjectival complementives (this holds especially for *te*-infinitives; see A9) or (ii) nominalizations (this holds especially for bare infinitives; see N1.3.1.2 and N2.2.3.2).

The facts in (9) appear not always to have been taken into account in the existing literature, which has led to confusion and, what is worse, an inaccurate and unnecessarily complex empirical description of verb clustering. In order to avoid this here, Chapter 5 will also discuss the disputable cases of verb clustering, which we will subsequently eliminate these from the discussion, so that Chapter 7 can focus on the true cases of verb clustering and formulate a small number of relatively simple and, in our view, descriptively adequate generalizations.

4.1. Semantic types of finite argument clauses

The examples in (10) show that finite verbal argument clauses come in at least two different forms, and that the choice between the two is largely dependent on the matrix verb: the verbs *zeggen* 'to say' and *vragen* 'to ask' differ in that the former takes declarative clauses as its complement, whereas the latter takes interrogative clauses (that is, *yes*/*no*- or *wh*-questions) as its complement.

(10) a. Jan zegt [dat/*of Peter ziek is]. [declarative clause]
Jan says that/whether Peter ill is
'Jan says that Peter is ill.'
b. Jan vraagt [of/*dat Peter ziek is]. [*yes*/*no*-question]
Jan asks whether/that Peter ill is
'Jan asks whether Peter is ill.'
b′. Jan vraagt [wie er ziek is]. [*wh*-question]
Jan asks who there ill is
'Jan asks who is ill.'

Although we occasionally find similar differences in the domain of nominal complementation (cf. *Jan stelde een vraag/*antwoord* 'Jan asked a question' versus *Jan gaf een antwoord/*vraag* 'Jan gave an answer'), this distinction is quite basic when it comes to complementation by finite clauses.

Since Grimshaw (1979) it has often been claimed that verbs are subcategorized for specific semantic types of complement clauses: embedded declarative clauses such as (10a) are of the type "proposition" and embedded questions are of the type "interrogative". Grimshaw adds the type of "*wh*-exclamative", which is found in the examples in (11); the *wh*-phrases in these examples are not interrogative but express "high degree" modification, just as in the exclamative main clauses given in the primed examples. Observe that there are a number of differences between the main and embedded clause (e.g. concerning word order and the form of the *wh*-word), which we will ignore for the moment, but to which we will return in Section 11.3.5.

(11) a. Ik was vergeten wat een ontzettend aardige vrouw Marie is. [exclamative]
I was forgotten what a very nice woman Marie is
'I'd forgotten what a very nice woman Marie is.'

a′. Wat is Marie een ontzettend aardige vrouw!
what is Marie a very nice woman
'What a very nice woman Marie is!'

b. Ik was vergeten hoe ontzettend aardig Marie is. [exclamative]
I was forgotten hoe very nice Marie is
'I'd forgotten how very nice Marie is.'

b′. Wat is Marie ontzettend aardig!
what is Marie very nice
'How very nice Marie is!'

The fact that Grimshaw (1979) includes exclamatives suggests that the list of semantic types is open-ended in the sense that it would be possible to add more semantic types to it; so it seems desirable to restrict it by imposing principled constraints on the set of possible types. An attempt to do this can be found in Nye (2013), who proposes that complement clauses are selected on the basis of two binary features: [±WH] and [±FACTIVE]. These features characterize the four different constructions in (12) provided we adopt the following definition of factivity: FACTIVITY refers to constructions with verbs which take a complement clause, and where the speaker presupposes the truth of some proposition expressed by that clause; see Kiparsky & Kiparsky (1970) in the interpretation of Broekhuis & Nye (2013). In the (a)-examples the relevant proposition is expressed by the full complement clause, whereas in the (b)-examples it is expressed by the non-*wh* part of the complement clause. For the two types of *wh*-questions, see also Groenendijk & Stokhof (1984:91ff.) who define the distinction in terms of pragmatic implicatures, that is, the speaker's presupposition instead of factivity.

(12) a. Jan denkt dat Els morgen vertrekt. ⇏ Els vertrekt morgen.
Jan thinks that Els tomorrow leaves Els leaves tomorrow
'Jan thinks that Els is leaving tomorrow. ⇏ Els is leaving tomorrow.'

a′. Jan betreurt dat Els morgen vertrekt. ⇒ Els vertrekt morgen.
Jan regrets that Els tomorrow leaves Els leaves tomorrow
'Jan thinks that Els is leaving tomorrow. ⇒ Els is leaving tomorrow.'

b. Jan vroeg wie er vertrekt. ⇏ Er vertrekt iemand.
Jan asked who there leaves there leaves someone
'Jan asked who is leaving. ⇏ someone is leaving.'

b′. Jan weet wie er vertrekt. ⇒ Er vertrekt iemand.
Jan knows who there leaves there leaves someone
'Jan knows who is leaving. ⇒ someone is leaving.'

The binary feature approach thus gives rise to the four construction types in Table 1, which now includes the new class of factive interrogatives illustrated in (12b′).

Table 1: Complement clause selection

	[-WH]	[+WH]
[-FACTIVE]	non-factive declarative (12a)	non-factive interrogative (12b)
[+FACTIVE]	factive declarative (12a′)	factive interrogative (12b′) *wh*-exclamative (11)

Another advantage of adopting the binary features [±WH] and [±FACTIVE] is that they enable us to account for the fact that *betreuren* 'to regret' and *weten* 'to know' impose different selection restrictions on their complement; the unacceptability of (13a) shows that the verb *betreuren* is only compatible with declarative clauses, whereas the acceptability of (13b) shows that *weten* is compatible both with declarative and with interrogative clauses. This can be expressed by assuming that *betreuren* selects a [-WH,+FACTIVE] complement clause, but that *weten* does not impose restrictions on the [wh]-feature and thus simply selects a [+FACTIVE] complement clause. Providing a similar account in a non-*ad hoc* fashion seems harder if we adopt Grimshaw's claim that verbs select semantic types like proposition, interrogative or exclamative.

(13) a. *Jan betreurt wanneer Els vertrekt. [cf. example (12a′)]
Jan regrets when Els leaves
b. Jan weet dat Els morgen vertrekt. [cf. example (12b′)]
Jan knows that Els tomorrow leaves
'Jan knows that Els is leaving tomorrow.'

Note in passing that examples like *Ik betreur [wat je hier schrijft]* 'I regret what you write here' are not relevant in this context: the bracketed part is a free relative, therefore we are dealing with a nominal complement and not a complement clause.

In a similar way, we might account for the fact that verbs like *betwijfelen* 'to doubt' in (14) can be combined with an embedded *yes*/*no*-question, but not with an embedded *wh*-question by claiming that its interrogative complement clause must be [-FACTIVE]—although it should be noted that this still leaves open why the embedded *wh*-question in (14) cannot be interpreted as non-factive. Again, providing a similar account is not possible under Grimshaw's proposal where *yes*/*no*- and *wh*-questions are claimed to be of the same semantic type.

(14) Jan betwijfelt of/*wanneer Marie vertrekt.
Jan doubts whether/when Marie leaves
'Jan doubts whether Marie will leave.'

For completeness' sake, it should be noted that a less fortunate aspect of a binary feature approach is that it does not account for the fact that factive verbs like *weten* can also take *yes*/*no*-questions: *Jan weet (niet) of Marie morgen komt* 'Jan knows/does not know whether Marie is coming tomorrow', which can never be used to express a non-null proposition. This, as well as the problem noted for example (14), shows that the binary feature approach is still in need of some fine-tuning, but we leave this issue for future research.

The new class of [+FACTIVE,+WH] verbs does not seem to be restricted to factive interrogative constructions. If we assume that the feature [+WH] does not

refer to a semantic feature but to the formal (syntactic/morphological) feature that *wh*-elements have in common and that enables them to undergo *wh*-movement, it may also include verbs taking exclamative complements; cf. the primeless examples in (11) above. Another construction that may be included, which is discussed in Nye (2013), is the one illustrated in (15a); the complement clause in this construction, which is especially found in narrative contexts, is introduced by the *wh*-word *hoe* 'how' but seems to be more or less semantically equivalent with the factive declarative *dat*-clause in (15b).

(15) a. Ik herinner me goed hoe hij daar altijd stond te kletsen.
I remember me well how he there always stood to chat
'I well remember how he always stood chatting there.'
b. Ik herinner me goed dat hij daar altijd stond te kletsen.
I remember me well that he there always stood to chat
'I well remember that he always stood chatting there.'

This section has shown that the semantic selection restrictions on finite complement clauses exceed the dichotomies between (i) declarative and interrogative clauses and (ii) yes/no- and *wh*-questions normally found in descriptive grammars. In addition, we have shown that Nye's (2013) binary-feature approach to the selection of complement clauses has certain advantages compared to Grimshaw's (1979) approach based on semantic types.

4.2. Finite and infinitival argument clauses

We need to distinguish between finite and infinitival argument clauses. The examples in (16) show that the choice depends on the matrix verb: whereas propositional verbs like *zeggen* 'to say' or *beweren* 'to claim' can take either a finite or an infinitival clause, an °irrealis verb like *proberen* 'to try' is only compatible with an infinitival clause. Note that we assume that the infinitival clauses in the primed examples contain a phonetically empty pronominal element °PRO that functions as the implied subject of the infinitival clause; we will discuss this element in more detail in Section 4.3.

(16) a. Jan beweert/zegt [dat hij morgen komt]. [finite clause]
Jan claims/says that he tomorrow comes
'Jan claims that he'll come tomorrow.'
a′. Jan beweert /zegt [PRO morgen te komen]. [*te*-infinitival]
Jan claims/says tomorrow to come]
'Jan claims to come tomorrow.'
b. *Jan probeert [dat hij morgen komt]. [finite clause]
Jan tries that he tomorrow comes
b′. Jan probeert [PRO morgen te komen]. [*te*-infinitival]
Jan tries tomorrow to come]
'Jan tries to come tomorrow.'

Replacing finite interrogative clauses by infinitival ones does not seem to be always possible. Although example (17a′) is acceptable, it belongs to a more formal register of the language—in speech we only find more or less fixed forms like *Hij*

vroeg me wat te doen 'he asked me what he was supposed to do'. Example (17b′) is also acceptable, but the verb does not introduce a question; instead the embedded clause has the function of a request.

(17) a. Jan vroeg me [hoe hij die auto kon repareren]. [finite clause]
Jan asked me how he that car could repair
'Jan asked me how he could repair that car.'
a′. Jan vroeg me [hoe PRO die auto te repareren]. [*te*-infinitival]
Jan asked me how that car to repair
b. Jan vroeg Marie [of ze kwam]. [finite clause]
Jan asked Marie whether she came
'Jan asked (= inquired from) Marie whether she'd come.'
b′. Jan vroeg Marie [PRO te komen]. [*te*-infinitival]
Jan asked Marie to come
'Jan asked (= requested from) Marie to come.'

That the verb determines the form of the clausal argument is also clear from the examples in (18), which show that while perception verbs like *zien* 'to see' exhibit an alternation between finite and non-finite complement clauses, the causative/permission verb *laten* allows infinitival clauses only.

(18) a. Jan zag [dat Marie vertrok]. [finite clause]
Jan saw that Marie left
a′. Jan zag [Marie (*te) vertrekken]. [bare infinitival]
Jan saw Marie to leave
'Jan saw Marie leave.'
b. *Jan laat [dat Marie vertrekt]. [finite clause]
Jan lets that Marie leaves
b′. Jan laat [Marie (*te) vertrekken]. [bare infinitival]
Jan lets Marie to leave

A comparison of the primed examples in (18) with those in (16) shows us that the verb also determines the *type* of infinitival clause; whereas the verbs in (16) take *te*-infinitivals, the verbs in (18) take bare infinitivals. Section 5.2 will provide a brief introduction to the different types of infinitival clauses.

It seems that there are only few verbs that can be combined with a finite but not with an infinitival declarative object clause. Manner of speech verbs seem to prefer a finite clause as their complement, but judgments on the corresponding infinitival constructions appear to differ from case to case and from person to person. This is clear from a Google search (3/16/2012) on the string [V_{finite} * *te zullen*] for various tense forms of the matrix verbs *roepen* 'to call', *schreeuwen* 'to yell' and *huilen* 'to cry'. while there are countless examples in which these verbs are followed by a finite declarative clause, our search resulted in only a small number of cases in which they were followed by an infinitival clause. We found a relatively large number of examples such as (19a′) with the verb *roepen*, but only two examples such as (19b′) with the verb *schreeuwen*, and no examples such as (19c′) with the verb *huilen* 'to cry'. Nevertheless, the primed examples all seem passable for at least some of the speakers we have consulted.

(19) a. Hij riep jarenlang [dat hij nooit zou trouwen].
he called for.years that he never would marry
'He called for years that he would never marry.'
a′. Hij riep jarenlang [PRO nooit te zullen trouwen].
he called for.years never to will marry
b. Ze schreeuwden [dat ze hem zouden vermoorden].
they yelled that they him would kill
'They yelled that they would kill him.'
b′. %Ze schreeuwden [PRO hem te zullen vermoorden].
they yelled him to will kill
c. Het jongetje huilde [dat hij gevallen was].
the boy cried that he fallen was
'The boy cried that he'd fallen.'
c′. %Het jongetje huilde [PRO gevallen te zijn].
the boy cried fallen to be

At first sight, the (a)-examples in (20) seem to contradict the claim that there are few verbs that can be combined with a finite declarative clause only, but the (b)-examples show that we should be careful not to jump to conclusions.

(20) a. Jan merkte/ontdekte [dat hij loog].
Jan noticed/discovered that he lied
a′. $Jan merkte/ontdekte [PRO te liegen].
Jan noticed/discovered to lie
b. Jan merkte/ontdekte [dat hij honger had].
Jan noticed/discovered that he hunger had
'Jan noticed/discovered that he was hungry.'
b′. Jan merkte/ontdekte [PRO honger te hebben].
Jan noticed/discovered hunger to have
'Jan noticed/discovered that he was hungry.'

The contrast between the two primed examples seems to be related to the preferred interpretation of the implied subject PRO of the infinitival clause. First, consider the primeless examples with a finite clause: the most prominent reading of (20a) is that Jan noticed or discovered something about someone else, that is, the subject pronoun *hij* 'he' of the embedded clause is preferably interpreted as referring to some individual not mentioned in the sentence; example (20b), on the other hand, is also compatible with a reading in which Jan noticed or discovered something about himself, that is, in which the subject pronoun *hij* takes the subject of the matrix clause as its antecedent. The contrast between the primed examples can now be accounted for by referring to the fact that the implied subject PRO of the infinitival clause differs from the subject pronoun *hij* in that it *must* be interpreted as coreferential with the subject of the matrix clause; this makes the interpretation of (20a′) as unusual as that of (20a) if the pronoun *hij* is taken to be coreferential with the subject of the matrix clause. See Section 4.3 for a brief introduction to the restrictions on the interpretation of the PRO-subject of infinitival argument clauses.

It seems that, besides restrictions imposed by the interpretation of PRO, there are various other factors that may affect the acceptability of infinitival argument

clauses. The examples in (21), for instance, suggest that the verb *voorkomen* 'to prevent' can only select finite clauses; the pronoun *hij* in the (a)-examples can without difficulty be interpreted as coreferential with the subject of the main clause but nevertheless the primed examples are severely degraded.

(21) a. Jan voorkwam net op tijd [dat hij zijn bril vermorzelde].
Jan prevented just in time that he his glasses crushed
'Jan prevented just in time that he crushed his glasses.'
a′. *?Jan voorkwam net op tijd [PRO zijn bril te vermorzelen].
Jan prevented just in time his glasses to crush
b. Jan voorkwam net op tijd [dat hij viel].
Jan prevented just in time that he fell
'Jan prevented just in time that he fell.'
b′. *?Jan voorkwam net op tijd [PRO te vallen].
Jan prevented just in time to fall

The examples in (22) show, however, that the primed examples improve a great deal when we add an adverbial phrase indicating causation or manner.

(22) a. (?)Jan voorkwam hierdoor net op tijd [PRO zijn bril te vermorzelen].
Jan prevented by.this just in time his glasses to crush
b. (?)Jan voorkwam zo net op tijd [PRO te vallen].
Jan prevented thus just in time to fall

The primed examples in (23), which are adaptations of actually occurring sentences on the internet, further show that examples like these become even better if the embedded clause is a passive or copular construction. Observe that the relevant issue is *not* that subjects of passive and copular constructions are internal arguments because the same thing holds for the subjects of °unaccusative verb like *vallen* 'to fall' in the (b)-examples above.

(23) a. Hierdoor voorkwam hij [dat hij gedeporteerd werd naar Duitsland].
by.this prevented he that he deported was to Germany
'In this way he prevented that he was deported to Germany.'
a′. Hierdoor voorkwam hij [PRO gedeporteerd te worden naar Duitsland].
by.this prevented he deported to be to Germany
b. Zo voorkwam ik [dat ik zeeziek werd].
thus prevented I that I seasick became
'In this way I prevented that I became seasick.'
b′. Zo voorkwam ik [PRO zeeziek te worden].
thus prevented I seasick to become

Although there are more potential counterexamples to the claim that there are only few verbs that can be combined with a finite but not with an infinitival declarative clause, we will conclude by pointing out the contrast between the two examples in (24). The reason why (24a) does not have an infinitival counterpart might simply be that we are dealing with an idiomatic expression (which is also listed as such in dictionaries); the options for substituting the finite clause in (24a) are very limited.

(24) a. Ik maakte [dat ik wegkwam].
I made that I away-came
'I got out as quickly as I could.'
b. *Ik maakte [PRO weg te komen].
I made away to come

The examples in (25) suggest that there are also few verbs that can be combined with a finite but not with an infinitival prepositional object clause: the (a)-examples show that verbs such as *verwachten* 'to expect' that normally take finite PO-clauses also allow infinitival complements; verbs such as *vragen* 'to request' that normally take infinitival PO-clauses give rise to a degraded result with finite complements.

(25) a. Jan verwacht [dat hij wordt uitgenodigd].
Jan expects that he is prt-invited
'Jan expects that he'll be invited.'
a′. Jan verwacht uitgenodigd te worden.
Jan expects prt.-invited to be
'Jan expects to be invited.'
b. Jan vraagt Marie [PRO te vertrekken].
Jan asks Marie to leave
'Jan asks Marie to leave.'
b′. ??Jan vraagt Marie [dat zij vertrekt].
Jan asks Marie that she leaves

To our knowledge the factors affecting the acceptability of infinitival argument clauses have not been studied in detail but we provisionally conclude on the basis of the discussion above that verbs selecting a finite declarative argument clause may also take an infinitival clause in the normal course of things, but not necessarily vice versa. Future research must show whether this conclusion is tenable.

4.3. Control properties of verbs selecting an infinitival clause

Section 4.2 has already shown that there are different restrictions on the interpretation of referential subject pronouns of finite clauses on the one hand, and °PRO-subjects of infinitival complement clauses on the other. The former can freely take some antecedent from the °matrix clause or refer to some entity that is part of the domain of discourse, whereas the latter must be coreferential with some noun phrase in the matrix clause. We illustrate this again by showing that passivization of the primeless examples in (26) gives rise to different results in acceptability: the subject pronoun *hij* 'he' of the embedded finite clause in (26a′) can readily take some antecedent from the discourse domain, whereas the PRO-subject of the infinitival clause in (26b′) cannot.

(26) a. Jan ontdekte [dat hij honger had].
Jan discovered that he hunger had
'Jan discovered that he was hungry.'
a′. Er werd ontdekt [dat hij honger had].
there was discovered that he hunger had
'It was discovered that he was hungry.'

b. Jan ontdekte [PRO honger te hebben].
Jan discovered hunger to have
'Jan discovered that he was hungry.'

b′. *Er werd ontdekt [PRO honger te hebben].
there was discovered hunger to have
Intended reading: 'It was discovered that he was hungry.'

The restrictions on the interpretation of PRO-subjects of infinitival complement clauses have become known as °control theory. In many cases, it is required that PRO should be controlled, that is, bound by some antecedent in the matrix clause. The examples in (27) show, however, that PRO cannot take just any antecedent; in (27a) PRO can only be controlled by the subject and in (27b) it can only be controlled by the object of the matrix clause. The available readings are indicated by means of referential indices.

(27) a. Jan_i beloofde Peter_j [$\text{PRO}_{i/*j}$ te komen]. [subject control]
Jan promised Peter to come
'Jan promised Peter to come.'

b. Jan_i vroeg Peter_j [$\text{PRO}_{j/*i}$ te komen]. [object control]
Jan asked Peter to come
'Jan asked Peter to come.'

The examples in (27) suggest that the interpretation of PRO is determined by the matrix verb: accordingly, verbs like *beloven* 'to promise' have become known as subject control verbs, and verbs like *vragen* 'to ask' as object control verbs. However, the situation is more complex given that the contents of the embedded clause may also affect the control options; adding a deontic modal verb like *mogen* 'to be allowed' to the infinitival clauses in (27), for example, reverses the interpretation possibilities of PRO, a phenomenon known as CONTROL SHIFT.

(28) a. Jan_i beloofde Peter_j [$\text{PRO}_{j/*i}$ te mogen komen]. [object control]
Jan promised Peter to be.allowed.to come
'Jan promised Peter to be allowed to come.'

b. Jan_i vroeg Peter_j [$\text{PRO}_{i/*j}$ te mogen komen]. [subject control]
Jan asked Peter to be.allowed.to come
'Jan asked Peter to be allowed to come.'

The examples in (27) and (28) show that the interpretation of PRO can be affected by properties of both the matrix verb and the infinitival clause. Moreover, it would seem that these restrictions are not syntactic in nature but related to our knowledge of the world; the interpretation of example (27a), for instance, is related to the fact that the speaker has the ability to promise that he will perform a certain action himself but he cannot promise that the addressee will perform that action; the interpretation of example (28a), on the other hand, is based on the fact that the speaker may grant permission to the addressee to do something, whereas it is much less likely that he will or needs to grant such permission to himself. Consequently, it is not at all surprising that we find similar shifts when the verbs *beloven* and *vragen* take finite clauses as their complement.

(29) a. Jan$_i$ beloofde Peter$_j$ [dat hij$_{i/*j}$ zou komen].
Jan promised Peter that he would come
'Jan promised Peter that he (≠ Peter) would come.'
a′. Jan$_i$ beloofde Peter$_j$ [dat hij$_{j/*i}$ mocht komen].
Jan promised Peter that he be.allowed.to come
'Jan promised Peter that he (≠ Jan) would be allowed to come.'
b. Jan$_i$ vroeg Peter$_j$ [of hij$_{j/*i}$ kwam].
Jan asked Peter whether he came
'Jan asked Peter whether he (≠ Jan) was willing to come.'
b′. Jan$_i$ vroeg Peter$_j$ [of hij$_{i/*j}$ mocht komen].
Jan asked Peter whether he was.allowed.to come
'Jan asked Peter whether he (≠ Peter) was allowed to come.'

For the moment we provisionally conclude that the PRO-subject of infinitival argument clauses must be controlled by some antecedent in the matrix clause, but that the actual choice of the antecedent must be compatible with our knowledge of the world. Section 5.2 will show, however, that there are circumstances under which the PRO-subject may be exempt from the requirement that it should be bound.

4.4. Three main types of infinitival argument clauses

Sections 4.2 and 4.3 have shown that we need to distinguish between verbs taking finite and verbs taking infinitival complement clauses, and that these types of complements introduce a number of issues of a more semantic or pragmatic nature. On top of this, this section will show that infinitival clauses do not constitute a single syntactic category but can be subdivided into at least the three formally different categories illustrated in (30): *Om* + *te*-infinitivals, *te*-infinitivals and bare infinitivals.

(30) a. Jan beloofde [om PRO het boek naar Els te sturen]. [*om* + *te*-infinitival]
Jan promised COMP the book to Els to send
'Jan promised to send the book to Els.'
b. Jan beweerde [PRO het boek naar Els te sturen]. [*te*-infinitival]
Jan claimed the book to Els to send
'Jan claimed to send the book to Els.'
c. Jan wilde [PRO het boek naar Els sturen]. [bare infinitival]
Jan wanted the book to Els send
'Jan wanted to send the book to Els.'

The following sections will briefly introduce the three subtypes in (30). For reasons of presentation we begin with *om* + *te*-infinitivals and bare infinitivals, because we will see that *te*-infinitivals again fall into various subgroups, some of which behave more like *om* + *te*-infinitivals and some of which behave more like bare infinitivals.

4.4.1. Om + te-*infinitivals*

Om + *te*-infinitivals are formally characterized by the presence of the infinitival marker *te* and the complementizer-like element *om*. There are at least two analyses

available for the infinitival marker *te*. According to some proposals *te* is a bound morpheme prefixed to the infinitival verb, just like *ge-* is a bound morpheme in past participle forms like *ge-pak-t* 'taken'. This may account for the fact that both *te* and *ge-* are normally adjacent to the stem of the verb. An alternative proposal is that *te* is the T(ense) °head of the functional projection TP. We refer the reader to Section 1.3, sub IIIA1, and references cited there for a more extensive discussion of these proposals.

One reason for assuming that the element *om* is a complementizer, and not a preposition, is that infinitival complement clauses introduced by this element behave like finite complement clauses and not like PP-complements in that they must be in extraposed position, that is, they obligatorily follow the °matrix verb in clause-final position. This can be illustrated by means of the embedded and the perfect-tense counterparts of example (30a), which are given in (31).

(31) a. dat Jan beloofde [om PRO het boek naar Els te sturen].
that Jan promised COMP the book to Els to send
'that Jan promised to send the book to Els.'
a′. *dat Jan [om PRO het boek naar Els te sturen] beloofde.
b. Jan heeft beloofd [om PRO het boek naar Els te sturen].
Jan has promised COMP the book to Els to send
'Jan has promised to send the book to Els.'
b′. *Jan heeft [om PRO het boek naar Els te sturen] beloofd.

Further grounds for assuming that *om* is a complementizer are that it can often be omitted, as illustrated in (32a). This would be quite surprising for a preposition, but it is attested for complementizers in many languages: cf. *John promised (that) he would* send *Elisabeth the book*. Another reason for assuming we are not dealing with a PP-complement is that the infinitival clause is not pronominalized by means of the pronominal PP *erom* but by the pronoun *dat*; this is illustrated in (32b).

(32) a. Jan heeft beloofd [(om) PRO het boek naar Els te sturen].
Jan has promised COMP the book to Els to send
'Jan has promised to send the book to Els.'
b. Jan heeft dat/*erom beloofd.
Jan has that/P+it promised
'Jan has promised that.'

It should be noted, however, that the omission of *om* is not syntactically innocuous; the examples in (33) show that it may make the infinitival clause transparent for extraction of the object to a position to the left of the matrix verb in the matrix clause; see Section 4.4.3 for more detailed discussion. The percentage sign in (33b) is added because some speakers object to such examples.

(33) a. *Jan heeft het boek$_i$ beloofd [om PRO t_i naar Els te sturen].
Jan has the book promised COMP to Els to send
b. %Jan heeft het boek$_i$ beloofd [PRO t_i naar Els te sturen].
Jan has the book promised to Els to send

The fact that this type of extraction is excluded from finite clauses such as (34a) suggests that o*m* + *te*-infinitivals and finite clauses are of the same categorial type; they are CPs. Infinitival clauses without *om*, on the other hand, are likely to be less extended verbal projections, which would make TP a likely candidate. See Section 9.1 for an introduction to the functional categories CP and TP.

(34) a. Jan heeft beloofd [$_{CP}$ dat hij het boek naar Els zal sturen].
Jan has promised that he the book to Els will send
'Jan has promised that he'll send the book to Els.'
b. *Jan heeft het boek$_i$ beloofd [dat hij t_i naar Els zal sturen].

For completeness' sake, note that the string *Jan heeft het boek beloofd dat hij naar Els zal sturen* is acceptable if the postverbal clause is interpreted as a relative clause modifying *het boek* ("John promised the book that he will bring to Els"), but this is of course irrelevant here.

4.4.2. Bare infinitivals

This section discusses a number of formal properties of so-called bare infinitivals and shows that we should distinguish at least three different subcategories.

I. The infinitive verb is not preceded by te

Bare infinitivals are characterized by the fact that they contain neither the complementizer-like element *om* nor the infinitival marker *te*, that is, the infinitive is bare in the sense of not being accompanied by any of the elements that we may find in the two other types of infinitival clauses. The question as to whether a verbal complement may appear as a bare infinitival depends on the matrix verb; a verb like *willen* 'to want', for example, may take a finite clause or a bare infinitival, but not an (*om* +) *te*-infinitival. Note in passing that English *to want* crucially differs from Dutch *willen* in selecting a *to*-infinitival, not a bare infinitival.

(35) a. Jan wil [dat Peter het boek naar Els stuurt].
Jan wants that Peter the book to Els sends
'Jan wishes that Peter will bring the book to Els.'
b. *Jan wil [(om) PRO het boek naar Els te sturen].
Jan wants COMP the book to Els to send
c. Jan wil [PRO het boek naar Els sturen].
Jan wants the book to Els send
'Jan wants to send the book to Els.'

II. Verb clustering

Customarily, the bare infinitive forms a °verb cluster with the verb selecting the bare infinitival complement. This is clear from the fact that the two verbs cluster in clause-final position and that, as a result, the infinitival clause may be split: example (36a) shows that whereas the bare infinitive follows the matrix verb in clause-final position, all other constituents of the infinitival clause must precede it. For convenience, we italicize the infinitival clauses in the examples below.

(36) a. dat Jan *het boek naar Els* wil *sturen*.
that Jan the book to Els wants send
'that Jan wants to send the book to Els.'
b. %dat Jan *het boek* wil *naar Els sturen*.
b′. %dat Jan wil *het boek naar Els sturen*.

The percentage signs in the two (b)-examples in (36) are added to indicate that certain southern varieties of Dutch also allow parts of the remaining part of the embedded infinitival clause to follow the matrix verb; we will ignore this for the moment and refer the reader to Section 5.2.3 for an extensive discussion of this.

III. The infinitivus-pro-participio (IPP) effect

Monoclausal behavior in the sense indicated in the previous subsection is typically signaled by the so-called °*infinitivus-pro-participio* effect, that is, the phenomenon that a verb does not surface in its expected past participial form when governed by a perfect auxiliary, but as an infinitive. That constructions with bare infinitival complements exhibit monoclausal behavior can be shown by comparing the perfect-tense constructions in (37): if the matrix verb *willen* selects a finite clause, as in (37a), it behaves as expected by appearing as a past participle in perfect-tense constructions, but when it selects a bare infinitival complement, it must appear as an infinitive in such constructions.

(37) a. Jan had gewild/*willen [dat Peter het boek naar Els had gestuurd].
Jan had wanted/want that Peter the book to Els had sent
'Jan had wished that Peter would have sent the book to Els.'
b. Jan had *het boek naar Els* willen/*gewild *sturen*.
Jan had the book to Els want/wanted send
'Jan had wanted to send the book to Els.'

IV. Three subtypes of bare infinitival clauses

Bare infinitival complements may occur in at least three different syntactic environments, which differ in the way their subject is realized in the surface structure: the subject can be realized as an accusative noun phrase in an °AcI-construction, the phonetically empty element PRO in a °control construction, or as the subject of the matrix clause in a °subject raising construction. In the following examples the infinitival clauses are italicized and their subjects are underlined.

(38) a. Jan zag *Marie/haar op de hei lopen*. [AcI-infinitival]
Jan saw Marie/her on the heath walk
'Jan saw Marie/her walk on the heath.'
b. Jan wil *PRO een boek kopen.* [control infinitival]
Jan wants a book buy
'Jan wants to buy a book.'
c. *Marie/Zij* kan *vertraagd zijn*. [subject raising infinitival]
Marie/she may delayed be
'Marie/She may be delayed.'

We will refer to these infinitival constructions by means of the names given in straight brackets, for reasons that will become clear in the following subsections.

A. Accusativus-cum-infinitivo infinitivals

Bare infinitival complement clauses selected by perception verbs like *zien* 'to see' or the causative/permissive verb *laten* 'to make/let' exhibit an ACCUSATIVUS-CUM-INFINITIVO effect: the subjects of the bare infinitival clauses do not appear as the phonetically empty element PRO, as would normally be the case in infinitival clauses, but as an accusative noun phrase. This is illustrated in (39), in which the subject of the infinitival clause is underlined.

(39) a. dat Jan *het meisje/haar een lied* hoorde *zingen*.
that Jan the girl/her a song heard sing
'that Jan heard the girl/her sing a song.'
b. dat Jan *het meisje/haar een lied* liet *zingen*.
that Jan the girl/her a song made/let sing
'that Jan made/let the girl/her sing a song.'

It is generally assumed that the subject of the infinitival complement is case-marked by the matrix verb, that is, that we are dealing with so-called exceptional case-marking *across the boundary of an infinitival clause*. That it is the matrix verb which assigns case to the subject of the embedded clause is, however, not so easy to prove for Dutch because the examples in (40) show that matrix verbs of AcI-constructions cannot be passivized. We are therefore not able to provide evidence that the underlined noun phrases in (39) are indeed assigned °accusative case by the active matrix verbs. This claim must therefore be motivated by appealing to the fact that there is simply no other element available that could be held responsible for case-assignment.

(40) a. *dat het meisje/zij een lied werd gehoord/horen zingen.
that the girl/she a song was heard/hear sing
b. *dat het meisje/zij een lied werd gelaten/let zingen.
that the girl/she a song was made/make sing

That the underlined phrases in (39) are not selected by the matrix verbs but function as the subjects of the bare infinitival clauses seems undisputed and can be supported by means of pronominalization; the fact that the accusative noun phrase cannot be realized in (41a) shows that it is not selected by the matrix verb *horen* 'to hear' but must be part of the infinitival clause pronominalized by *dat* 'that'. Unfortunately, (41b) shows that pronominalization cannot readily be used as a test in the case of the verb *laten* 'to make/let', as it is at best marginally acceptable with this verb under its permissive reading and completely excluded under its causative reading.

(41) a. dat Jan (*het meisje/*haar) dat hoorde. [perception verb]
that Jan the girl/her that heard
'that Jan heard that.'
b. dat Jan ??(*het meisje/*haar) dat liet. [permissive verb]
that Jan the girl/her that let
b′. *dat Jan (het meisje/haar) dat liet. [causative verb]
that Jan the girl/her that let

Accusativus-cum-infinitivo constructions of the type discussed here exhibit monoclausal behavior. First, as is indicated by italics in (39) above, the bare infinitival complements are normally split; whereas the bare infinitives normally follow the matrix verbs in clause-final position, their arguments must precede them. Second, the examples in (42) show that they exhibit the IPP-effect; the matrix verb cannot surface as a past participle in perfect-tense constructions, but must be realized as an infinitive.

(42) a. dat Jan het meisje/haar een lied heeft horen/*gehoord zingen.
that Jan the girl/her a song has hear/heard sing
'that Jan has heard the girl/her sing a song.'
b. dat Jan het meisje/haar een lied heeft laten/*gelaten zingen.
that Jan the girl/her a song has make/made sing
'that Jan has made/let the girl/her sing a song.'

B. Control infinitivals

A bare infinitival clause selected by a so-called root/deontic modal like *kunnen* 'to be able', *mogen* 'to be allowed' or *willen* 'to want', or a verb like *leren* 'to teach/learn' has its subject realized as the phonetically empty pronominal-like element PRO. As in the case of (*om* +) *te*-infinitivals, the PRO-subject of a bare infinitival can be either controlled by the subject or by the object of the matrix clause. The choice again depends on the matrix verb: whereas de deontic modals and intransitive *leren* 'to learn' require PRO to be controlled by their subjects, transitive *leren* 'to teach' requires that PRO be controlled by its object. Again, we have italicized the bare infinitival clause and underlined its subject.

(43) a. dat Jan$_i$ *PRO*$_i$ *het boek naar Marie* kan *brengen*.
that Jan the book to Marie is.able bring
'Jan is able to bring the book to Marie.'
b. dat [zijn dochtertje]$_i$ *PRO*$_i$ *piano* leert *spelen*.
that his daughter piano learns play
'that his daughter is learning to play the piano.'
b′. dat Jan$_i$ [zijn dochtertje]$_j$ *PRO*$_{j/*i}$ *piano* leert *spelen*.
that Jan his daughter piano teaches play
'that Jan teaches his daughter to play the piano.'

Control constructions of the sort discussed here exhibit monoclausal behavior. First, the constructions in (43) show once more that the bare infinitival can be split; as is indicated by italics, the arguments of the bare infinitival precede the matrix verb in clause-final position, whereas the bare infinitive normally follows it. Second, the examples in (44) show that the construction exhibits the IPP-effect; the matrix verbs cannot appear as past participles in perfect-tense constructions, but must surface as infinitives.

(44) a. dat Jan *PRO* *het boek naar Marie* heeft kunnen/*gekund *brengen*.
that Jan the book to Marie has be.able/been.able bring
'that Jan has been able to bring the book to Marie.'

b. dat zijn dochtertje *PRO* *piano* heeft leren/*geleerd *spelen*.
that his daughter piano has learn/learned play
'that his daughter has learnt to play the piano.'
b′. dat Jan zijn dochtertje *PRO* *piano* heeft leren/*geleerd *spelen*.
that Jan his daughter piano has teach/ taught play
'that Jan has taught his daughter to play the piano.'

That the noun phrases *Jan* in (43a) and *zijn dochtertje* in (43b&b′) do not function as subjects of the bare infinitivals is clear from the fact illustrated in (45) that they must also be present when the infinitival clauses are pronominalized; this shows that these noun phrases are assigned °thematic roles by the matrix verbs. The agent role of the bare infinitive must therefore be assigned to some independent argument, which motivates the postulation of a PRO-subject in these examples.

(45) a. Jan kan dat.
Jan is.able that
'Jan is able to do that.'
b. Zijn dochtertje leert dat.
his daughter learns that
'His daughter is learning that.'
b′. Jan leert zijn dochtertje dat.
Jan teaches his daughter that
'Jan is teaching that to his daughter.'

Note in passing that, if we adopt the conclusion from Section 4.6 that the quality of being predicational is a defining property of main verbs, the fact that the root modal *kunnen* 'to be able' in the (a)-examples above is able to license the noun phrase *Jan* independently of the embedded infinitival shows that the traditional assumption that root modal verbs are non-main verbs cannot be maintained and that they must instead be seen as regular transitive verbs; cf. Klooster (1984/2001). We return to this issue in Section 4.5.

C. Subject raising infinitivals

The previous subsection has put on hold the fact that examples such as (43a) are actually ambiguous: the matrix verb can not only receive a deontic/root reading but also a so-called epistemic reading. Although the most prominent reading of (43a) is the deontic one, the ambiguity can be brought out by putting this example in the perfect tense; if the modal verb is realized as a non-finite verb, it can only be interpreted deontically as "to be able to", but if it is realized as the finite verb it can only be interpreted epistemically as "may".

(46) a. dat Jan *PRO* *het boek* *naar Marie* heeft kunnen *brengen*. [deontic]
that Jan the book to Marie has be.able bring
'that Jan has been able to bring the book to Marie.'
b. dat *Jan* *het boek* *naar Marie* kan *hebben* *gebracht*. [epistemic]
that Jan the book to Marie may have brought
'that Jan may have brought the book to Marie.'

That constructions with epistemic modals exhibit monoclausal behavior cannot be demonstrated by the IPP-effect as the perfect auxiliary is now part of the infinitival complement of the modal verb (see below), but it is still clear from the fact that the bare infinitival can be split: the arguments of the infinitival clause precede the modal verb in clause-final position whereas the bare infinitive normally follows it. The underlining in (46) suggests entirely different structures for the two constructions: if the modal verb has a deontic interpretation, the subject of the infinitival clause is realized as the phonetically empty pronominal element PRO; if the modal verb has an epistemic interpretation. the subject surfaces as °nominative subject of the entire sentence by being promoted to subject ("raised to the subject position") of the matrix clause. Grounds for this assumption are again related to pronominalization of the infinitival clause; example (47a) illustrates again that the nominative subject is not affected by pronominalization if the modal verb is deontic, whereas (47b) shows that the nominative argument cannot be realized if the modal is epistemic and should therefore be assumed to belong to the pronominalized infinitival clause. We have added example (47b′) in order to support our earlier claim that the perfect auxiliary in the epistemic constructions in (46b) is part of the infinitival complement, which is pronominalized by *dat* in the (b)-examples in (47).

(47) a. Jan heeft dat gekund. [deontic/*epistemic]
Jan has that been.able
'Jan has been able to do that.'
b. Dat kan. [epistemic/*deontic]
that may.be.the.case
b′. *Dat kan hebben.
that may.be.the.case have

There is another good reason for assuming that the nominative subject in the epistemic example in (46b) originates as the subject of the infinitival complement clause. This immediately accounts for the fact that in passive constructions such as (48b) the internal argument of the bare infinitive *stelen* 'to steal' surfaces as the nominative subject of the sentence; passivization of the bare infinitive first promotes the noun phrase *die auto* 'that car' to subject of the infinitival clause, and subject raising subsequently promotes it to subject of the matrix clause.

(48) a. Jan kan de auto/hem gestolen hebben.
Jan may that car/him stolen have
'Jan may have stolen that car/it.'
b. Die auto/Hij kan gestolen zijn.
that car/he may stolen have.been
'That car/It may have been stolen.'

Under the alternative hypothesis that the nominative noun phrases in the examples in (48) originate as arguments of the epistemic modal *kunnen*, we can only account for the pattern in (48) by adopting the highly unlikely assumption that passivization of the embedded verb affects the selectional properties of the matrix verb.

A final argument we mention here is that example (49a), with a subject clause introduced by the °anticipatory pronoun *het* 'it', is semantically more or less equivalent to (49b), at least with respect to the thematic relations between the italicized elements. If we assume that the nominative subject in (49b) originates as the subject of the infinitival clause and is subsequently promoted to subject of the matrix clause, the observed semantic equivalence follows straightforwardly.

(49) a. Het kan dat *Jan gevallen is*.
it may.be.the.case that Jan fallen is
'It may be the case that Jan has fallen.'
b. *Jan* kan *gevallen zijn*
Jan may fallen be
'Jan may have fallen.'

Each of the examples in (47) to (49) strongly suggests that nominative subjects in epistemic constructions such as (46b) originate as the subject of the infinitival clause and are subsequently "raised" to the subject position of the matrix clause. We can formally derive this by assuming that the subject of the infinitival clause cannot be assigned accusative case and must therefore be assigned nominative case by being promoted to subject of the matrix clause in a fashion similar to objects in passive constructions.

(50) a. ___ $V_{epistemic}$ [NP .... $V_{infinitive}$] [underlying structure]
b. NP_i $V_{epistemic}$ [t_i .... $V_{infinitive}$] [Subject Raising]

Note that the analysis in (50) implies that epistemic modals do not assign an external thematic role. They must be able to assign an internal thematic role, however, which is clear from the fact that the finite complement clause in (49a), or the anticipatory pronoun in subject position introducing it, must be semantically licensed. Given the similarity in meaning between the two constructions in (49), we may also assume that the infinitival clause in (49b) must likewise be assigned an internal thematic role. If we adopt the conclusion from Section 4.6 that being predicational is a defining property of main verbs, the conclusion that epistemic modal verbs assign an internal thematic role would imply that the traditional view that epistemic modal verbs are non-main verbs cannot be maintained; we should, instead, consider them as °unaccusative main verbs.

D. Conclusion

The previous subsections have shown that bare infinitival clauses may occur in at least three types of syntactic environment which affect the way their subject is realized: the subject can be realized as an accusative noun phrase, the phonetically empty element PRO, or it may be "raised", that is, be promoted to subject of the matrix clause and be assigned nominative case. What we did not discuss, and what is in fact a still largely unresolved issue, is what the syntactic mechanisms are that determine the form of the subject of the infinitival clause. For example, why is it that the modal verb *willen* 'want' lacks the ability of perception verbs to assign accusative case to the subject of their infinitival complement. Is this simply a lexical property of the verbs involved, or are we dealing with different syntactic

structures? And, why is it that the subject of the infinitival clause is realized as PRO when the modal verb *moeten* is deontic but not when it is epistemic; cf. Klooster (1986)?

(51) a. *Jan wil [Marie komen].
Jan wants Marie come
Intended reading: 'Jan wants Marie to come.'
b. Jan moet [PRO om drie uur aanwezig zijn]. [deontic]
Jan must at three o'clock present be
'Jan must be present at 3.p.m.'
c. Jan$_i$ moet [t_i om drie uur aanwezig geweest zijn]. [epistemic]
Jan must at three o'clock present be
'Jan must have been present at 3.p.m.'

Since we do not have anything insightful to offer on the first question, we leave it as an unsolved issue for future research. The second question poses a severe problem for the traditional formulation of control theory in Chomsky (1981), which in effect states that °traces of movement and PRO cannot occur in the same syntactic configuration. The answer may lie in an appeal to the alternative proposal in Koster (1978:ch.2) and, more specifically, Koster (1984a/1984b) that the difference is a property of the antecedent of the empty category (trace/PRO); we will briefly return to this issue in the conclusion of Section 5.2.2.1.

4.4.3. Te-*infinitivals*

This section shows that from an observational point of view clausal complements headed by a *te*-infinitive can be divided into at least three subtypes: one type that exhibits behavior similar to *om* + *te* infinitivals, one type exhibiting behavior similar to bare infinitivals, and a third type that exhibits mixed behavior. The main characteristics of the three types are given in (52).

(52) • Types of *te*-infinitivals
a. Opaque: no clause splitting and no IPP-effect
b. Transparent: clause splitting and IPP-effect
c. Semi-transparent: clause splitting and no IPP

The abbreviation IPP stands for the *infinitivus-pro-participio* effect, the phenomenon that matrix verbs sometimes cannot appear as past participles in perfect-tense constructions but must surface as infinitives. Section 4.4.2, sub III, has shown that this effect is obligatory in constructions with bare infinitivals, but Subsections I to III below will demonstrate that this does not hold for *te*-infinitivals; obligatory IPP is only found with transparent *te*-infinitivals.

The term CLAUSE SPLITTING refers to the phenomenon that infinitival clauses can be discontinuous: the infinitive and its arguments may surface on different sides of the matrix verb in clause-final position. Evidence has been presented in section 4.4.2, sub II, that in the case of bare infinitivals clause splitting is a concomitant effect of °verb clustering, that is, the formation of an *impermeable series of verbs* in clause-final position. Subsection IV will show, however, that clause splitting is probably not a uniform process in the case of *te*-infinitivals: transparent and semi-

transparent *te*-infinitivals are different in that only the former involve verb clustering in the technical sense given above.

The term OPAQUE (or INCOHERENT) as applied to the infinitival clause refers to the fact that such clauses constitute an independent clausal domain in the sense that they may block locally restricted syntactic dependencies like °NP-movement or °binding of the weak reflexive *zich* 'him/her/itself'. TRANSPARENT (or COHERENT) infinitives, on the other hand, behave in certain respects as if they constitute a single clause with the matrix clause: they do not block such dependencies.

Another term for transparency found in the literature is RESTRUCTURING, which has a transformational background in that it was assumed that an underlying biclausal structure is transformationally restructured such that the embedded infinitival clause forms a monoclausal structure with the matrix clause; see Evers (1975), Rizzi (1982:ch.1) and much subsequent work. Since several more recent approaches do not adopt this transformational view, we will not use this notion in this work in order to avoid unnecessary theoretical bias.

I. Opaque te*-infinitivals*

Verbs taking opaque *te*-infinitival complement clauses are, e.g., NOM-DAT verbs, PO-verbs and particle verbs; see Evers (1975:39ff) and Den Besten et al. (1988). The primeless examples in (53) show that such verbs do not allow clause splitting; like *om* + *te*-infinitivals, the *te*-infinitival is in extraposed position, that is, placed in a position following the matrix verb in clause-final position. The primed examples further show that the matrix verbs appear as participles in the perfect tense, that is, as in the case of infinitival clauses introduced by *om*, there is no IPP-effect. For convenience, we will italicize the *te*-infinitivals in the examples below and refrain from indicating their implied PRO-subject for the sake of simplicity.

(53) a. dat het hem <**het boek*> berouwt <*het boek*> *gekocht te hebben*.
that it him the book regrets bought to have
'that he regrets it that he has bought the book.'

a′. Het heeft hem berouwd/*berouwen *het boek gekocht te hebben*.
it has him regretted/repent the book bought to have
'He has regretted it that he has bought the book.'

b. dat Jan ertoe <**het boek*> neigt <*het boek*> *te kopen*.
that Jan to.it the book inclines to buy
'that Jan is inclined to buy the book.'

b′. Jan is ertoe geneigd/*neigen *het boek te kopen*.
Jan is to.it inclined/incline the book to buy
'Jan is inclined to buy the book.'

c. dat Peter Marie <??*dat boek*> opdraagt <*dat boek*> *te kopen*.
that Peter Marie that book prt.-ordered to buy
'that Peter orders Marie to buy that book.'

c′. Peter heeft Marie opgedragen/*opdragen *dat boek te kopen*.
Peter has Marie prt.-ordered/prt.-order that book to buy
'Peter has ordered Marie to buy that book.'

Opaque infinitivals appear to be characterized by the fact that they do not have the syntactic function of direct object of the matrix verb, nor are they assigned a °thematic role by it. The infinitival clauses in the (a)-examples above function as subjects and may also be introduced by the anticipatory subject pronoun *het* 'it'. The infinitival clauses in the (b)-examples correspond to the nominal part of a PP-complement of the matrix verb, as is clear from the fact that they can be introduced by the °anticipatory pronominal PP *ertoe* 'to it'. The infinitival clauses in the (c)-examples, finally, are not arguments of the verb at all but licensed as °logical SUBJECTs of the verbal particle *op*; see Section 2.2.1.

II. Transparent te-*infinitivals*

Verbs selecting a transparent infinitival complement often have a modal or aspectual interpretation. Examples are the modal verbs *schijnen* 'to seem', *lijken* 'to appear' and *blijken* 'to turn out'. That the infinitival complements of these verbs are transparent is clear from the fact that they are obligatorily split; whereas the *te*-infinitive in (54) must follow the matrix verb in clause-final position, its object must precede it.

(54) dat Jan <*een nieuwe auto*> schijnt <**een nieuwe auto*> *te kopen*.
that Jan a new car seems to buy
'that Jan seems to be buying a new car.'

That the infinitival complement in (54) is transparent is also clearly shown by the fact that we are dealing with °subject raising, that is, promotion of the subject of the infinitival clause to °nominative subject of the higher clause. This will become clear when we consider the near-equivalent examples in (55): the subject of the finite complement clause in (55a) appears as the nominative subject of the entire sentence in (55b), in which the complement clause is infinitival.

(55) a. Het schijnt *dat* *Jan een nieuwe auto koopt*.
it seems that Jan a new car buys
'It seems that Jan is buying a new car.'
b. dat *Jan een nieuwe auto* schijnt *te kopen*.
that Jan a new car seems to buy
'that Jan seems to be buying a new car.'

Unfortunately, it is more difficult to illustrate that the modal verbs *schijnen* 'to seem', *lijken* 'to appear' and *blijken* 'to appear' trigger the IPP-effect, for the simple reason that not all speakers allow them to occur in perfect-tense constructions, especially not if they take an infinitival complement. Speakers that do allow IPP, however, normally prefer the use of an infinitive.

(56) dat Jan een nieuwe auto heeft %schijnen/*geschenen te kopen.
that Jan a new car has seem/seemed to buy
'that Jan has seemed to buy a new car.'

Other examples of transparent *te*-infinitivals mentioned both by Evers (1975:5) and Den Besten et al. (1988) are the somewhat formal/obsolete semi-modals *dienen* 'to be obliged to', *plegen* 'to be accustomed/tend' and *weten* 'to be able to', which

seem to have a deontic interpretation and are probably best analyzed as °control structures. It is, however, hard to find support for this analysis given that the infinitival clauses cannot be pronominalized without the loss of the modal interpretation of the matrix verbs. The transparent nature of the *te*-infinitivals in (57) is clear from the fact that clause splitting and the IPP-effect are obligatory in these examples.

(57) a. dat Jan <*dat boek*> dient <**dat boek*> *te lezen*.
that Jan that book is.obliged to read
'that Jan has to read that book,'
a′. dat Jan dat boek heeft dienen/*gediend te lezen.
that Jan that book has be.obliged/been.obliged to read
'that Jan has had to read that book.'
b. dat Marie <*dat boek*> weet <**dat boek*> *te bemachtigen*.
that Marie that book knows to obtain
'that Marie is able (knows how) to obtain that book.'
b′. dat Marie dat boek heeft weten/*geweten te bemachtigen.
that Marie that book has know/known to obtain
'that Marie has been able to obtain that book.'

III. Semi-transparent te*-infinitivals*

Evers (1975) suggested that *te*-infinitivals functioning as theme arguments and surfacing as direct objects can (in our terms) be either opaque or transparent, but he also noted that some verbs, his class IIIb, are not very particular in the sense that they can select either type. We illustrate this in (58) with perfect-tense constructions containing the matrix verb *proberen* 'to try'. The fact that the verb appears as a participle in (58a) but as an infinitive in (58b) suggests that we are dealing with, respectively, an opaque and a transparent infinitival clause in these examples. This is also supported by the fact that the infinitival clause is split in (58b), but not in (58a). Following the standard hypothesis of the time that Dutch has an underlying OV-order, Evers accounted for this by assuming that the direct object clause is base-generated to the left of the matrix verb, and that (58a) and (58b) are derived by, respectively, EXTRAPOSITION of the entire clause and VERB RAISING of the infinitival verb *te lezen* 'to read'.

(58) a. dat Jan heeft t_i geprobeerd *[PRO dat boek te lezen]*$_i$. [opaque]
that Jan has tried that book to read
'that Jan has tried to read that book.'
b. dat Jan [*PRO dat boek* $t_{\text{te lezen}}$] heeft proberen *te lezen*. [transparent]
that Jan that book has try to read
'that Jan has tried to read that book.'

The examples in (59) suggest, however, that it is not sufficient to assume that certain verbs optionally trigger extraposition or verb raising. The unacceptability of example (59a) first shows that extraposition indeed requires that the matrix verb surfaces as a past participle in perfect-tense constructions; there are no extraposition constructions that involve IPP in Standard Dutch (but see Barbiers et al., 2008: Section 2.3.6.1.3, for a number of Flemish and Frisian dialects that do accept

examples such as (59a)). Den Besten et al. (1988) found, however, that clause splitting is very common when the matrix verb appears as a participle, that is, clause splitting does not require IPP as is clear from the fact that it is easy to find example (59b) alongside (58b); cf. Gerritsen (1991: Map 25), Haeseryn et al. (1997:950-2), Barbiers et al. (2008), and taaladvies.net/taal/advies/vraag/674.

(59) a. *dat Jan heeft proberen *dat boek te lezen*.
that Jan has try that book to read
'that Jan has tried to read that book.'
b. dat Jan *dat boek* heeft geprobeerd *te lezen*. [semi-transparent]
that Jan that book has tried to read
'that Jan has tried to read that book.'

Note in passing that the verb *proberen* is special in that it seems equally acceptable with opaque, transparent and semi-transparent infinitival complement clauses. Many verbs are more restrictive in this respect (although there is always some variation in what speakers do or do not accept): *besluiten* 'to decide', for example, can only take opaque or semi-transparent *te*-infinitivals, as is clear from the fact illustrated in (60b′) that it is incompatible with the IPP-effect.

(60) a. dat Jan <*dat boek*> besloot <*dat boek*> *te lezen*.
that Jan that book decided to read
'that Jan has decided to read that book.'
b. dat Jan <*dat boek*> heeft <*dat boek*> besloten *te lezen*. [opaque/semi-tr.]
that Jan that book has decided to read
'that Jan decided to read that book.'
b′. *dat Jan *dat boek* heeft besloten/*?besluiten *te lezen*. [transparent]
that Jan that book has decided/decide to read
'that Jan has decided to read that book.'

IV. Potential problems with the classification of te-*infinitivals*

The main conclusion to be drawn from Subsections I to III is that from an observational point of view we can distinguish the three types of *te*-infinitivals in (61) on the basis of whether or not clause splitting and IPP are possible.

(61) • Types of *te*-infinitivals
a. Opaque: no clause splitting and no IPP-effect
b. Transparent: clause splitting and IPP-effect
c. Semi-transparent: clause splitting and no IPP

It should be pointed out, however, that semi-transparent *te*-infinitivals differ from transparent ones in that the former do not require that *all* non-verbal constituents of the infinitival clause precede the matrix verb; cf. the contrast between the two examples in (62). This bears out that clause splitting of semi-transparent *te*-infinitivals is not the result of verb clustering in the technical sense defined in the introduction to this section, that is, the formation of an *impermeable series of verbs* in clause-final position.

(62) a. dat Marie *die jongen* <*een kus*> heeft proberen <**een kus*> *te geven*.
that Marie that boy a kiss has try to give
b. dat Marie die *jongen* <*een kus*> heeft geprobeerd <*een kus*> *te geven*.
that Marie that boy a kiss has tried to give
'that Marie has tried to give that boy a kiss.'

Constructions with semi-transparent *te*-infinitivals like (59b) and (62b) were referred to as the third construction in Den Besten et al. (1988), but have become known later as the REMNANT EXTRAPOSITION construction. Den Besten et al. (1988) derived the construction by a combination of °extraposition of the *te*-infinitival and leftward movement of one or more of its constituents. As a result, the extraposed phrase consists of merely a remnant of the original *te*-infinitival (see also Reuland 1981). If we adopt the leftward movement analysis (while leaving open the question as to whether extraposition involves rightward movement of the infinitival clause), the representations of (59b) in (62b) are as given in (63).

(63) a. dat Jan dat boek$_i$ heeft geprobeerd [PRO t_i te lezen].
b. dat Marie die jongen$_i$ een kus$_j$ heeft geprobeerd [PRO t_i t_j te geven].
b′. dat Marie die jongen$_i$ heeft geprobeerd [PRO t_i een kus te geven].

The fact that the direct object *een kus* 'a kiss' in (62b) may either precede or follow the clause-final verbs implies that the postulated leftward movement is optional. This means that it is no longer obvious that the *te*-infinitivals in examples such as (64) should be considered opaque as they can also be analyzed as semi-transparent clauses without the postulated leftward movements in (63).

(64) a. dat Jan heeft geprobeerd *dat boek te lezen*.
that Jan has tried that book to read
'that Jan has tried to read that book.'
b. dat Marie heeft geprobeerd die *jongen een kus te geven*.
that Marie has tried that boy a kiss to give
'that Marie has tried to give that boy a kiss.'

All of this might indicate that Den Besten et al. (1988) were wrong in assuming that there are opaque *te*-infinitivals, and that rather we have to assume that all *te*-infinitivals are (semi-)transparent. If so, the "opaque" cases discussed in Subsection I cannot be described by appealing to the label "clause type". Since (semi-)transparent infinitival clauses differ crucially from the opaque infinitival clauses discussed in Subsection I in that they (i) are selected as internal arguments of a verb and (ii) have the syntactic function of direct object, this may be the key to the solution. This will be one of the topics addressed in our more extensive discussion of *te*-infinitivals in Section 5.2.2.

4.5. Non-main verbs

Non-main verbs differ from main verbs: they do not denote states of affairs, but express additional (temporal, modal, aspectual, etc.) information about states of affairs denoted by main verbs. This implies that non-main verbs are normally accompanied by the projection of a main verb. Moreover, constructions with non-

main verbs are characterized by the fact that the main verbs in them are never finite. The examples in (65) also show that the form of the non-finite main verb depends on the type of non-main verb: perfect and passive auxiliaries, for example, combine with past/passive participles, modal/aspectual verbs combine with bare infinitivals, and semi-aspectual verbs combine with *te*-infinitivals.

(65) • Types of non-main verbs

a. Jan heeft dat boek *gelezen*. [perfect auxiliary]
Jan has that book read
'Jan has read that book.'

b. Het boek werd me (door Peter) *toegestuurd*. [passive auxiliary]
the book was me by Peter prt.-sent
'The book was sent to me (by Peter).'

c. Jan wil/gaat dat boek *kopen*. [modal/aspectual verb]
Jan wants/goes that book buy
'Jan wants/is going to buy that book.'

d. Jan zit dat boek *te lezen*. [semi-aspectual verb]
Jan sits that book to read
'Jan is reading that book.'

Although the set of non-main verbs traditionally assumed is substantially larger than the four groups mentioned in (65), we will confine ourselves to these verbs for the purpose of illustration; Section 5.2 will provide a more exhaustive discussion.

I. Perfect and passive auxiliaries

Auxiliaries like *hebben* and *zijn* are temporal in the sense that the perfect-tense constructions they are part of situate the state of affairs prior to a specific point in time. Example (66a), for instance, situates the arrival of Marie prior to the speech time (which is the default value), as the fact that it can be modified by the time adverbial *gisteren* 'yesterday' but not by the time adverbial *morgen* 'tomorrow' makes quite clear. In addition, perfect-tense constructions may under certain conditions also have aspectual implications by expressing that the state of affairs denoted by the main verb is completed in the sense that some logically implied endpoint has been reached: example (66b), for example, can only be used when Jan has told the full story. We refer the reader to Section 1.5.1 for a more detailed discussion of the semantics of the perfect tense.

(66) a. Marie is (gisteren/*morgen) gearriveerd.
Marie is yesterday/tomorrow arrived
'Marie arrived/Marie arrived yesterday.'

b. Jan heeft me het verhaal (gisteren/*morgen) verteld.
Jan has me the story yesterday/tomorrow told
'Jan has told me the story (yesterday).'

Participles are also used in combination with the auxiliaries *worden* 'to be' and *zijn* 'to have been' in regular passive constructions like (67a&b) and the auxiliary *krijgen* 'to get' in so-called *krijgen*-passive constructions such as (67c).

(67) a. Het boek werd me (door Peter) toegestuurd.
the book was me by Peter prt.-sent
'The book was sent to me (by Peter).'
b. Het boek is me (door Peter) toegestuurd.
the book has.been me by Peter prt.-sent
'The book has been sent to me (by Peter).'
c. Ik kreeg het boek (door Peter) toegestuurd.
I got the book by Peter prt.-sent
'I was sent the book (by Peter).'

Note in passing that the auxiliary verb *zijn* in (67b) is sometimes analyzed not as a passive but as a perfect auxiliary given that the passive participle *geworden* can at least marginally be added to such examples. If correct, this means that *worden* and *krijgen* would exhaust the set of passive auxiliaries, but see Section 6.2.2 for a potential problem for this conclusion.

That the auxiliaries discussed in this section are only instrumental in creating perfect tense or passive constructions immediately accounts for the fact that they cannot be used as heads of clauses (although *zijn* 'to be' and *worden* 'to become' do occur as copulas, and *hebben* 'to have' and *krijgen* 'to get' can also be used as main verbs of possession).

II. Modal/aspectual verbs

The examples in (68) show that modal and aspectual verbs like *willen* and *gaan* differ from temporal and passive auxiliaries in that they do not combine with participles but require the main verb to take the form of a bare infinitive.

(68) a. Jan wil dat boek morgen kopen.
Jan wants that book tomorrow buy
'Jan wants to buy that book tomorrow.'
b. Jan gaat morgen dat boek kopen.
Jan goes tomorrow that book buy
'Jan is going to buy that book tomorrow.'

The primeless examples in (69) show that modal and aspectual verbs also differ from main verbs in that they exhibit the *infinitivus-pro-participio* (IPP) effect; they do not take the form of a participle in perfect-tense constructions, but of an infinitive. The primed examples have been added to show that *willen* and *gaan* do appear as participles are used as main verbs.

(69) a. Jan heeft dat boek altijd al willen/*gewild kopen.
Jan has that book always already want/wanted buy
'Jan has always wanted to buy that book.'
a′. Jan heeft dat boek altijd al gewild/*willen.
Jan has that book always already wanted/want
'Jan has always wanted have that book.'

b. Jan is dat boek gaan/*gegaan kopen.
Jan has that book go/gone buy
'Jan has gone to buy that book.'
b′. Jan is naar de winkel gegaan/*gaan.
Jan is to the shop gone/go
'Jan has gone to the shop.'

If modal and aspectual verbs supplement the event expressed by the main verb with specific modal/aspectual information, we expect that these verbs cannot be used without a main verb. This is indeed borne out in the case of the aspectual verbs, but not in the case of the modal verbs: the (a)-examples in (70) show that the string *een ijsje kopen* can be pronominalized by means of *het* 'it' or *dat* 'that'; the (b)-examples show that this is not possible with aspectual verbs (although speakers do accept °left dislocation constructions like *Een ijsje kopen, dat gaan we zeker!* 'Buying ice cream we certainly will!'; we refer the reader to Section 4.6, sub II, for reasons for assuming that this does not involve pronominalization).

(70) a. Jan wil [een ijsje kopen]. a′. Jan wil het/dat.
Jan wants an ice.cream buy Jan wants it/that
'Jan wants to buy an ice cream.'
b. Jan gaat [een ijsje kopen]. b′. *Jan gaat het/dat.
Jan goes an ice.cream buy Jan goes it/that
'Jan is going to buy an ice cream.'

Of course, one might try to solve this problem with modal verbs by assuming that example (70a′) in fact contains a phonetically empty verb that corresponds to the semantically light verb *doen* 'to do' in (71a), but this would leave unexplained why this verb cannot co-occur with the aspectual verb *gaan*.

(71) a. Jan wil het/dat doen. a′. Jan wil het/dat ∅
Jan wants it/that do Jan wants it/that ∅
b. Jan gaat het/dat doen. b′. *Jan gaat het/dat ∅.
Jan goes it/that do/∅ Jan goes it/that ∅

Furthermore, this line of thinking might lead us to expect the modal verb *willen* to exhibit the IPP-effect irrespective of whether the clause contains the verb *doen* or its phonetically empty counterpart ∅. The examples in (72) show that this expectation is not borne out: the effect does not occur when *doen* is not present.

(72) a. Jan heeft het/dat willen/*gewild doen.
Jan has it/that want/wanted do
b. Jan heeft het/dat gewild /*willen ∅.
Jan has it/that wanted/want ∅

Finally, the fact illustrated in (73) that modal verbs differ from aspectual verbs like *gaan* in that they can be combined with a nominal object is problematic for the view that the former is a non-main verb.

(73) a. Jan wil een ijsje.
Jan wants an ice.cream
'Jan want to have an ice cream.'
b. *Jan gaat een ijsje.
Jan goes an ice.cream

The examples above are intended to bring out that it is not *a priori* clear that the question as to whether or not a specific verb can be used as the only verb of a clause is cast iron proof for establishing whether or not that specific verb is a main verb. We will return to this issue in Section 4.6.

III. Semi-aspectual verbs

Semi-aspectual verbs correspond to main verbs like *zitten* 'to sit', *liggen* 'to lie', *hangen* 'to hang' and *staan* 'to stand' in (74), which refer to a certain posture or position of the subject of the clause, and certain verbs of movement like *lopen* 'to walk'.

(74) a. Het boek staat in de kast.
the book stands in the bookcase
'The book is in the bookcase.'
b. Het boek ligt op tafel.
the book lies on table
'The book is lying on the table.'

In their semi-aspectual use the lexical meaning of the main verb can but need not be present; examples like those in (75) can be used comfortably when the speaker cannot observe the referent of the subject of the clause and is thus not able to tell whether this referent is actually sitting or walking at the moment of speech. The primary function of the semi-aspectual verb is to indicate that we are dealing with an ongoing event and we are thus dealing with a progressive construction comparable to the English progressive construction: see the renderings given in (75).

(75) a. Jan zit momenteel te lezen.
Jan sits at.present to read
'Jan is reading at the moment.'
b. Els loopt momenteel over het probleem te piekeren.
Els walks at.present on that problem to worry
'Els is worrying about that problem at the moment.'

The examples in (75) also show that semi-aspectual verbs differ from the modal and aspectual verbs in (68) in that they do not combine with bare infinitivals but with so-called *te*-infinitivals: leaving out the infinitival marker *te* leads to ungrammaticality. This is, however, not the case in the corresponding perfect-tense constructions in (76), in which the marker *te* can be dropped. The examples in (76) make it clear as well that the semi-aspectual verbs exhibit the IPP-effect; replacement of the infinitive *zitten*/*lopen* by the participle *gezeten*/*gelopen* leads to ungrammaticality

(76) a. Jan heeft de hele dag zitten (te) lezen.
Jan has the whole day sit to read
'Jan has been reading the whole day.'
b. Els heeft de hele dag over het probleem lopen (?te) piekeren.
Els has the whole day on the problem walk to worry
'Els has been worrying about that problem all day.'

IV. Non-main verbs are part of a verbal complex

The previous subsections have shown that non-main verbs impose certain restrictions on the morphological form of the main verb: temporal and passive auxiliaries select participles, modal/aspectual verbs select bare infinitivals, and (finite) semi-aspectual verbs select *te*-infinitivals. What we have not shown yet is that non-main verbs and the main verb they select obligatorily form a °verbal complex, in which the main verb refers to some state of affairs and the non-main verbs function as modifiers providing supplementary information. This is clear from the fact that an embedded main verb cannot normally be the °head of an independent finite clause introduced by the complementizer *dat* 'that' or an infinitival clause introduced by the complementizer *om*. We illustrate this in (77) for the aspectual verb *gaan* and the semi-aspectual verb *zitten*; the number sign # is used to indicate that (77b) is possible if *zitten* is construed as a main verb and the infinitival clause is an adverbial purpose clause: "Jan sits in order to read the book".

(77) a. *Jan gaat dat hij het boek leest.
Jan goes that he the book reads
b. #Jan zit om dat boek te lezen.
Jan sits COMP that book to read

Observe that this test shows again that a modal verb like *willen* 'to want' can be used as a main verb; see the discussion of (72) in Subsection II. We will return to the issue in Section 4.6.

(78) a. Jan wil op tijd komen.
Jan wants in time arrive
'Jan wants to arrive there on time.'
b. Jan wil dat hij op tijd komt.
Jan want that he in time arrives
'Jan wants that he'll arrive there on time.'

V. Placement of the non-main verb in the clause

All examples in the subsections above have been presented as main with the non-main verb in second position. In most varieties of Dutch spoken in the Netherlands the auxiliaries cluster with the main verb in clause-final position; the arguments of the main verb must precede the non-main verb even when the main verb follows it. This clausal split is illustrated in (79) for the perfect auxiliary *hebben* 'to have', the modal verb *willen* 'to want' and the semi-aspectual verb *zitten* 'to sit'.

(79) a. dat Jan <het boek> heeft <*het boek> gelezen.
that Jan the book has read
'that Jan has read the book.'
b. dat Jan <het boek> wil <%het boek> lezen.
that Jan the book wants read
'that Jan wants to read the book.'
c. dat Jan <het boek> zit <%het boek> te lezen.
that Jan the book sits to read
'that Jan is reading the book.'

We should note, however, that certain southern varieties of Dutch (including the standard variety spoken in Belgium) do allow the object to intervene between non-main verbs and (*te*-)infinitives, hence the use of the percentage sign in (79b&c). See Barbiers (2008: Section 2.3.1) and Chapter 7 for more detailed information.

VI. Conclusion

The previous subsections have shown that auxiliaries must be accompanied by a main verb in the same clause. Furthermore, non-main verbs place restrictions on the form of the main verb they select: temporal and passive auxiliaries select participles, modal and aspectual verbs select bare infinitivals, and (finite) semi-aspectual verbs select *te*-infinitivals. Non-main verbs do not combine with clauses introduced by the complementizer *dat* or *om*, which strongly suggests that non-main verbs must form a single verbal complex with a main verb. Finally, we have seen that in the varieties of Dutch spoken in the Netherlands, clauses with non-main verbs exhibit monoclausal behavior in the sense that they trigger °verb clustering, as a result of which the projection of the main verb must be split if the non-main verb is in clause-final position.

4.6. The distinction between main and non-main verbs

Although native speakers normally have little difficulty in distinguishing main from non-main verbs, there are cases in which making a decision is not so straightforward; see the remarks on the behavior of the modal verb *willen* in Section 4.5, sub II and IV. The question now arises what the crucial differences between main and non-main verbs are. We will consider two options: (i) the question as to whether the non-main and the infinitival main verb enter a °verbal complex in the complex resulting in monoclausal behavior, and (ii) the question as to whether the verb can be considered predicational in nature. We will argue that the second option is to be preferred despite the fact that this will give rise to a somewhat different dividing line between non-main and main verbs than traditionally assumed; cf., e.g., Haeseryn et al. (1997).

I. Mono- versus biclausal behavior

Main and non-main verbs play a different semantic role in the clause. The former function semantically as *n*-place predicates and are therefore typically the (semantic and syntactic) °head of a clause; sentences that contain two main verbs are thus normally biclausal. The fact that the addition of a non-main verb to a clause such as

(80a) does not affect the number of arguments that can be expressed is normally taken as evidence that non-main verbs are not predicates. Instead, they are assumed to add, e.g., temporal, aspectual or modal information to the meaning expressed by the main verb.

(80) a. Jan leest het boek. [main verb only]
Jan reads the book
b. Jan heeft het boek gelezen. [perfect auxiliary]
Jan has the book read
c. Jan wil/gaat het boek lezen. [modal/aspectual verb]
Jan wants/goes the book read
d. Jan zit het boek te lezen. [semi-aspectual verb]
Jan sits the book to read

Let us therefore for the moment assume that non-main verbs must, but main verbs cannot combine with another main verb in a structure exhibiting monoclausal behavior, and that we can test this for infinitival constructions by assuming that mono- and biclausal structures systematically differ with respect to °verb clustering and the *infinitivus-pro-participio* (IPP) effect in the way indicated in Table 2.

Table 2: Structures exhibiting mono- and biclausal behavior

	MONOCLAUSAL	BICLAUSAL
VERB CLUSTERING	+	—
INFINITIVUS-PRO-PARTICIPIO	+	—

The examples in (81) illustrate the monoclausal properties of structures containing the semi-aspectual verb *zitten*. First, example (81a) shows that the semi-aspectual verb and the main verb *lezen* form a verb cluster, as a result of which the infinitival verb *zitten* is separated from its direct object *het boek* 'the book'. Second, example (81b) shows that the IPP-effect is obligatory.

(81) a. dat Jan <dat boek> zit <%dat boek> te lezen. [verb clustering]
that Jan that book sits to read
'that Jan is reading that book.'
b. Jan heeft dat boek zitten/*gezeten te lezen. [IPP]
Jan has that book sit/sat to read
'Jan has been reading that book.'

We should note, however, that verb clustering is somewhat obscured in the varieties of Dutch spoken in Belgium since these allow permeation of the verb cluster by various elements; for example, the order in (81a) marked by a percentage sign is acceptable in some of these varieties. Further, we should note that passive constructions are exempt from the IPP-effect; we will ignore this here but return to it in Section 6.2.2.

The examples in (82) illustrate the biclausal properties of structures containing the main verb *beweren* 'to claim': example (82a) shows that the object *het boek* 'the book' of the verb *lezen* 'to read' can intervene between *beweren* and *lezen* 'to read' and (82b) shows that the IPP-effect does not arise.

(82) a. dat Jan beweert dat boek te lezen. [no verb clustering]
that Jan claims that book to read
b. Jan heeft beweerd/*beweren dat boek te lezen. [no IPP]
Jan has claimed/claim that book to read

Now consider example (83a), in which the verb *proberen* 'to try' semantically functions as a two-place predicate with an agentive subject and an infinitival direct object clause. That we are dealing with a regular direct object clause is clear from the fact illustrated in (83b) that the infinitival clause can be pronominalized or be replaced by a referential noun phrase.

(83) a. Jan probeerde (om) dat boek te lezen.
Jan tried COMP that book to read
'Jan tried to read that book.'
b. Jan probeerde het/een nieuw merk sigaretten.
Jan tried it/ a new brand [of] cigarettes
'Jan tried it/a new brand of cigarettes.'

Example (83a) also shows that the infinitival complement of *proberen* can be either an *om* + *te*-infinitival or a *te*-infinitival without the complementizer *om*. We will see shortly that these infinitival complements exhibit a somewhat different behavior, but, first, the examples in (84) show that the two types of infinitival clause may be placed after the verb *proberen* in clause-final position, and that *proberen* must occur as a past participle in the corresponding perfect-tense construction. This is fully consistent with the earlier claim that *proberen* is a main verb.

(84) a. dat Jan probeert (*om*) *dat boek te lezen*.
that Jan tries COMP that book to read
'that Jan is trying to read that book.'
b. dat Jan heeft geprobeerd/*proberen (*om*) *dat boek te lezen*.
that Jan has tried/try COMP that book to read
'that Jan has tried to read that book.'

The examples in (85) show, however, that the *te*-infinitival without *om* is special in that it is also compatible with the IPP-effect, provided that the object of the infinitival verb *lezen* precedes *proberen*: the word order in (85b) is unacceptable.

(85) a. dat Jan *dat boek* heeft proberen *te lezen*.
that Jan that book has tried to read
'that Jan has tried to read that book.'
b. *Jan heeft proberen *dat boek te lezen*.

This shows that *proberen* may also trigger monoclausal behavior, from which we may conclude that it does not always behave like a run-of-the mill main verb, but may be of a hybrid nature in the sense that it also exhibit properties of non-main verbs. The fact that *proberen* is not an isolated case and that there are more unsuspected main verbs which can enter a verbal complex and thus trigger monoclausal behavior strongly suggests that having this option is not a defining

property of non-main verbs. This is confirmed by the fact that constructions with bare infinitivals always exhibit monoclausal behavior, irrespective of whether the selecting verb is a main or a non-main verb: this is illustrated in (86) for the aspectual verb *gaan* and the main verb *horen* 'to hear'.

(86) a. dat hij *een liedje* gaat *zingen*. [verb clustering]
that he a song goes sing
'that he's going to sing a song'

a′. dat hij een liedje is gaan zingen. [infinitivus-pro-participio]
that he a song is gone sing
'that he has started singing a song'

b. dat ik *hem een liedje* hoor *zingen*. [verb clustering]
that I him a song hear sing
'that I hear him sing a song.'

b′. dat ik hem een liedje heb horen zingen. [infinitivus-pro-participio]
that I him a song have heard sing
'that I've heard him sing a song.'

All of this implies that the hypothesis that main verbs differ from non-main verbs in that they cannot combine with another main verb in a structure that exhibits monoclausal behavior is refuted, and, consequently, that we have to look for other means to distinguish main from non-main verbs.

II. The predicational nature of the verb

This subsection investigates two other syntactic properties that seem related to the predicational nature of main versus the non-predicational nature of non-main verbs. The predicational nature of main verbs like *beweren* 'to claim' and *proberen* 'to try' is clear from the fact that they do not require a °projection of a main verb as their complement; the primed examples in (87), in which the italicized infinitival clauses of the primeless examples are pronominalized or replaced by a noun phrase, unambiguously show that we are dealing with two-place predicates, that is, regular transitive main verbs.

(87) a. Jan beweerde *dat boek te lezen*.
Jan claimed that book to read

a′. Jan beweerde het/de vreemdste dingen.
Jan claimed it/the weirdest things

b. Jan probeert *dat boek te lezen*.
Jan tried that book to read

b′. Jan probeerde het/een stickie.
Jan tried it/a joint

Non-main verbs like the aspectual verb *gaan* in the (a)-examples in (88), on the other hand, are clearly not predicational, as is clear from the fact that they normally do not allow pronominalization of the projection of the infinitival main verb: the verb *gaan* is not able to license the subject and the object pronoun, which clearly shows that it does not behave like a transitive verb. A potential problem is, however, that the (b)-examples show that modal verbs exhibit unexpected behavior

in this respect; example (88b′) shows that pronominalization is possible (see also Section 4.5, sub II, where the same point was made).

(88) a. Jan gaat *het boek lezen*.
Jan goes the book read
'Jan is going to read the book.'

a′. *Jan gaat het/dat.
Jan goes it/that

b. Jan wil *het boek lezen*.
Jan wants the book read
'Jan wants to read the book.'

b′. Jan wil het/dat.
Jan wants it/that

Another potential problem is that we wrongly expect that main verbs always allow pronominalization of their infinitival complement. Consider the (b)-examples in (89) with the causative/permissive verb *laten*. Example (89b) shows that *laten* adds an argument to those selected by the embedded main verb *lezen* in (89a), from which we may safely conclude that it is a two-place predicate that selects a nominal subject and an object clause. Example (89b′) shows, however that *laten* does not allow pronominalization of the embedded infinitival clause. The (c)-examples are added to show that perception verbs such as *zien* 'to see' do behave as expected by allowing pronominalization of the embedded clause.

(89) a. Jan leest het boek.
Jan reads the book

b. Zij laat *Jan het boek lezen*.
she makes Jan the book read
'She makes/lets Peter read the book.'

b′. *Zij laat het/dat.
she makes it/that

c. Zij zag *Jan het boek lezen*.
she saw Jan the book read
'She saw Jan read the book.'

c′. Zij zag het/dat.
she saw it/that

We have seen that there are two ways to establish whether a verb that combines with an infinitival verb is propositional in nature. The easiest way is to investigate whether it is able to introduce an argument that is not licensed by the embedded main verb; if this is the case, the °matrix verb clearly has an argument structure of its own. The second way is to investigate whether the projection of the infinitival verb can be pronominalized; if so, we may conclude that the pronoun must be semantically licensed and therefore functions as an argument of the verb. Table 3 provides the results of these tests for the verbs in (88) and (89).

Table 3: A comparison of aspectual, modal and causative verbs

VERB TYPE	ADDITIONAL ARGUMENT	PRONOMINALIZATION	EXAMPLE
aspectual	—	—	(88a)
modal	—	+	(88b)
causative	+	—	(89a)
perception	+	+	(89b)

Assuming that the distinction between main and non-main verbs is really determined by the question as to whether the verb is predicational in nature, we have to conclude that of the four verb types discussed here, only the aspectual verbs

can be considered non-main verbs. This implies that the dividing line between these two sets will be slightly different than normally assumed in more traditional grammars. For example, whereas modal verbs are normally considered non-main verbs, we are bound to conclude that they are main verbs; see Klooster (1984/1986).

For completeness' sake, we conclude by noting that the pronominalization test must be applied with care; not all structures containing the pronoun *dat*/*het* can be used to show that the verb under investigation is predicational in nature. There appear to be two complications. First, the examples in (90) show that secondary predicates can also be pronominalized by the pronoun *dat*; the intended interpretation of the pronoun is indicated by means of coindexing. The acceptability of the second conjunct in these examples does not show that the copular verb *zijn* is a two-place predicate; as Section 2.2 has shown, it is simply a verb taking a predicative small-clause complement.

(90) a. Jan is slim$_i$ en Marie is dat$_i$ ook.
Jan is smart and Marie is that too
b. Jan is [een goede leerling]$_i$ en Marie is dat$_i$ ook.
Jan is an apt pupil and Marie is that too

Second, the examples in (91) show that °left dislocation constructions should also be set aside. The fact illustrated in (91a) that the pronoun *dat* can be used to refer to the left-dislocated participle phrase does not show that the perfect auxiliary *hebben* is a two-place predicate. In fact, if we took example (91a) as evidence for assuming that the perfect auxiliary *hebben* is two-place predicate, we would be forced to conclude on the basis of examples like (91b&c) that it can also be a three- or even a four-place predicate, a conclusion that is clearly untenable.

(91) a. [Boeken gelezen]$_i$ dat$_i$ heeft hij niet.
books read that has he not
'He hasn't read books.'
b. [Gelezen]$_i$ dat$_i$ heeft hij dat boek niet.
read that has he that book not
'He hasn't read that book.'
c. [Gegeven]$_i$ dat$_i$ heeft hij Peter dat boek niet.
given that has he Peter that book not
'He hasn't given Peter that book.'

III. Why we discuss non-main verb constructions as subcases of complementation

We normally use the term complement as equivalent with the term °internal argument; it refers, e.g., to arguments of verbs that are assigned a °thematic role like goal or theme. Given that Section 4.6 has argued that main and non-main verbs differ in that only the former are predicational in nature, and that the latter are not able to select any arguments, we could restrict the term verbal complement such that it only refers to verbal arguments of main verbs. Nevertheless, we will adopt a somewhat looser notion of verbal complements that also includes the verbal projections in the domain of non-main verbs. The main reason for doing so is that we have seen that non-main verbs impose certain morphosyntactic selection

restrictions on the main verb: perfect auxiliaries, for example, must combine with past participles, aspectual verbs only combine with bare infinitivals, and semi-aspectual verbs normally combine with *te*-infinitivals. By stating that non-main verbs select the projection of the main verb as their complement, these selection restrictions can be accounted for.

(92) a. Jan heeft dat boek *gelezen*. [perfect auxiliary]
Jan has that book read
'Jan has read that book.'
b. Jan gaat dat boek *kopen*. [modal/aspectual verb]
Jan goes that book buy
'Jan is going buy that book.'
d. Jan zit dat boek *te lezen*. [semi-aspectual verb]
Jan sits that book to read
'Jan is reading that book.'

By discussing verbal complements of main and non-main verbs in a single chapter, it will also become easier to compare the behavior of such verbal complements. That this is desirable is clear from the fact that Subsection II has shown that besides clear-cut cases of main and non-main verbs, there are also verbs that are of a more hybrid nature; we will see numerous other cases in Section 5.2.2 and 5.2.3.

IV. Conclusion

This section discussed a number of properties of main and non-main verbs. Main verbs function semantically as *n*-place predicates and are therefore typically the (semantic and syntactic) head of some clause; if the sentence contains two main verbs, they are prototypically expressed in a biclausal structure. Non-main verbs, on the other hand, are not predicates but provide additional information to the meaning expressed by the main verb. As a result, non-main verbs must combine with a main clause in a verbal complex and thus trigger monoclausal behavior; they exhibit the two properties indicated in Table 4, repeated from Subsection I.

Table 4: Structures exhibiting mono- and biclausal behavior

	MONOCLAUSAL	BICLAUSAL
VERB CLUSTERING	+	—
INFINITIVUS-PRO-PARTICIPIO	+	—

It is nevertheless not always easy to determine whether we are dealing with a main or a non-main verb, given that some verbs exhibit a somewhat hybrid behavior. Subsection II was devoted to the question as to how we can distinguish main from non-main verb. We argued that it is not sufficient to show that a verb enters into a verbal complex with an infinitival main verb and then draw the conclusion that we are dealing with a non-main verbs, given that main verbs like *proberen* 'to try' also have this property. Therefore we decided that we need to investigate the predicational nature of the verb in question: if addition of this verb results in the addition of an argument that is not licensed by the non-finite main verb, or if the projection of the non-finite main verb can be pronominalized, we are dealing with a

main verb. This leads to a classification slightly different from what is normally assumed in descriptive grammars. We illustrated this for modal verbs like *willen*, which are normally classified a non-main verbs but must be considered to be main verbs according to our criterion. Section 5.2 will show that this also holds for a number of other verb types.

Chapter 5 Projection of verb phrases IIIb: Argument and complementive clauses

DOI: 10.5117/9789089647313-2

Introduction

This chapter provides an exhaustive discussion of dependent clauses functioning as °arguments or °complementives. Section 5.1 starts with finite argument clauses; we will consider in detail subject, direct object, and prepositional clauses.

(1) a. dat duidelijk is [dat Marie de nieuwe voorzitter wordt]. [subject]
that clear is that Marie the new chairman becomes
'that it is clear that Marie will be the new Chair.'
b. dat Jan niet gemeld heeft [dat hij weg zou zijn]. [direct object]
that Jan not reported has that he away would be
'that Jan hasn't reported that he'd be away.'
c. dat Peter erover klaagt [dat het regent]. [prepositional object]
that Peter about.it complains that it rains
'that Peter is complaining about that it is raining.'

Section 5.1 also includes a discussion of fragment clauses and *wh*-extraction. A typical example of fragment clauses is given in (2a), in which the *wh*-word *who* is interpreted in the same way as the embedded clause in *Ik weet niet wie Jan gisteren heeft bezocht* 'I do not know who Jan has visited yesterday.' *Wh*-extraction is illustrated in (2b) by means of *wh*-movement of the direct object of the °complement clause; the °trace t_i indicates the normal position of the direct object.

(2) a. Jan heeft gisteren iemand bezocht, maar ik weet niet wie.
Jan has yesterday someone visited but I know not who
'Jan visited someone yesterday but I don't know who.'
b. Wat$_i$ denk je [$_{\text{CLAUSE}}$ dat Marie t_i morgen zal kopen]?
what think you that Marie tomorrow will buy
'What do you think that Marie will buy tomorrow?'

Section 5.2 discusses three types of formally different types of infinitival clauses: *Om* + *te*-infinitivals, *te*-infinitivals and bare infinitivals. Some typical examples are given in (3), which typically have an implicit (phonetically empty) subject pronoun, normally represented as PRO; an important issue will be what the conditions on the interpretation of °PRO are (°control theory).

(3) a. Jan beloofde [om PRO het boek naar Els te sturen]. [*om* + *te*-infinitival]
Jan promised COMP the book to Els to send
'Jan promised to send the book to Els.'
b. Jan beweerde [PRO het boek naar Els te sturen]. [*te*-infinitival]
Jan claimed the book to Els to send
'Jan claimed to send the book to Els.'
c. Jan wilde [PRO het boek naar Els sturen]. [bare infinitival]
Jan wanted the book to Els send
'Jan wanted to send the book to Els.'

Section 5.2 also discusses °subject raising and *accusativus-cum-infinitivo* infinitivals such as (4). We will give reasons for assuming that the °nominative subject in (4a) is extracted from the infinitival clause and that the subject of the infinitival clause in

(4b) functions as the subject of the infinitival clause but is assigned °accusative case by the °matrix verb *horen* 'to hear'.

(4) a. Jan$_i$ schijnt [t_i een nieuwe auto te kopen]. [subject raising]
Jan seems a new car to buy
'Jan seems to buy a new car.'
b. Els hoorde [hen$_{acc}$ een liedje zingen]. [accusativus-cum-infinitivo]
Els heard them a song sing
'Els heard them sing a song.'

Section 5.3 concludes with a discussion of complementives, that is, clauses that function as secondary predicates; examples that are sometimes (perhaps incorrectly) analyzed as involving complementive clauses are the copular constructions in (5).

(5) a. Een feit is [dat hij te lui is].
a fact is that he too lazy is
'It's a fact is that he's too lazy.'
b. dat boek is moeilijk [(om) te lezen].
that book is hard COMP to read
'that book is hard to read.'

5.1. Finite argument clauses

Section 5.1.1 starts with a number of more general remarks concerning finite °argument clauses. Sections 5.1.2 through 5.1.4 discuss in more detail the use of finite clauses as direct objects, subjects and prepositional objects. Section 5.1.5 continues with a discussion of fragment clauses. A prototypical case of the type of fragment clauses we have in mind is provided by the so-called sluicing construction in (6b), which can be used as a reaction to example in (6a). Sluicing constructions are arguably derived by partial deletion of the phonetic contents of a finite clause, which is indicated here by means of crossing-out.

(6) a. Jan heeft gisteren iemand bezocht. [speaker A]
Jan has yesterday someone visited
'Jan visited someone yesterday.'
b. Kan je me ook zeggen wie ~~Jan gisteren bezocht heeft~~? [speaker B]
can you me also tell who Jan yesterday visited has
'Can you also tell me who (Jan visited yesterday)?'

Section 5.1.6 concludes with a brief discussion of *wh*-extraction from finite clauses, which is illustrated in (7) by means of *wh*-movement of a direct object; the *wh*-phrase *wat* in (7b) arguably originates in the same position as the direct object *dit boek* in (7a); consequently, the embedded clause in (7b) contains an interpretative gap, which we have indicated by means of the °trace t_i.

(7) a. Ik denk [$_{CLAUSE}$ dat Marie dit boek morgen zal kopen].
I think that Marie this book tomorrow will buy
b. Wat$_i$ denk je [$_{CLAUSE}$ dat Marie t_i morgen zal kopen]?
what think you that Marie tomorrow will buy
'What do you think that Marie will buy tomorrow?'

Wh-extraction is only possible from complement clauses of a limited set of verbs, and our discussion will focus especially on the properties that a °matrix verb must have in order to license *wh*-extraction. For a more general and extensive discussion of the restrictions on *wh*-movement the reader is referred to Section 11.3.1.

5.1.1. General introduction

This section provides a brief introduction to a number of more general issues concerning finite argument clauses. We begin with a brief discussion of the syntactic functions that argument clauses may have. This is followed by some remarks on their form, with special attention to the position of the finite verb and the form of their complementizer. We then investigate the anticipatory pronominal elements that can be used to introduce finite argument clauses. We conclude this introduction with a brief discussion of free relatives, which are sometimes also analyzed as argument clauses.

I. The syntactic function of finite argument clauses

Finite clauses regularly occur as arguments of verbs: they can be used as subject, direct object or as part of a prepositional object. Indirect objects are normally nominal, which seems related to the fact that they typically refer to living entities or institutions, not to propositions. The examples in (8) show that argument clauses are normally placed after the verbs in clause-final position. The reason for calling the embedded clause in (8c) a prepositional object and not a direct object is that it cannot be pronominalized by means of the pronoun *het*, but must be replaced by the pronominal PP *erover*. The properties of the three types of argument clauses in (8) will be discussed in greater detail in Sections 5.1.2 to 5.1.4.

(8) a. dat duidelijk is [dat Marie de nieuwe voorzitter wordt]. [subject]
that clear is that Marie the new chairman becomes
'that it is clear that Marie will be the new Chair.'

b. dat Jan niet gemeld heeft [dat hij weg zou zijn]. [direct object]
that Jan not reported has that he away would be
'that Jan hasn't reported that he wouldn't be there.'

c. dat Peter klaagt [dat het regent]. [prepositional object]
that Peter complains that it rains
'that Peter is complaining that it is raining.'

c′. dat Jan erover/*het klaagt.
that Jan about.it/it complains

II. The form of finite argument clauses

Finite argument clauses normally take the form of an embedded clause, that is, a clause with the finite verb in clause-final position, as in the indirect reported speech example in (9a). Possible exceptions to this general rule are found in the direct and semi-direct reported speech examples in (9b-c), in which the apparent dependent clause appears in main clause order, that is, with the finite verb in second position. For this reason cases of direct and semi-direct speech deserve special attention and they will therefore be discussed separately in Section 5.1.2.4.

(9) a. Jan zei [dat hij Marie *ging* bezoeken]. [indirect reported speech]
Jan said that he Marie went visit
'Jan said that he was going to visit Marie.'
b. Jan zei: "Ik *ga* Marie bezoeken." [direct reported speech]
Jan said I go Marie visit
'Jan said: "I'm going to visit Marie".'
c. Jan zei hij *ging* Marie bezoeken. [semi-direct reported speech]
Jan said he went Marie visit
'Jan said he was going to visit Marie.'

Examples (10a&b) show that declarative argument clauses are obligatorily introduced by the complementizer *dat* 'that', that is, unlike English *that*, Dutch *dat* cannot be omitted. Example (10c) further shows that Dutch also differs from German in that it does not allow embedded clauses without a complementizer and with °verb-second; see Haider (1985) for a discussion of verb-second in embedded clauses in German and Barbiers et al. (2005: Section 1.3.1.8) for a number of Dutch (especially eastern) dialects that may also have this construction. Observe that example (10c) is acceptable as a case of direct reported speech, but this is, of course, not the reading intended here.

(10) • Declarative argument clauses
a. Jan zegt [dat Peter ziek is]. [with complementizer]
Jan says that Peter ill is
'Jan says that Peter is ill.'
b. *Jan zegt [Ø Peter ziek is]. [without complementizer and without V2]
Jan says that Peter ill is
'Jan says Peter is ill.'
c. *Jan zegt [Peter is ziek]. [without complementizer and with V2]
Jan says Peter is ill

Interrogative argument clauses are introduced either by the complementizer *of* 'whether' or by a *wh*-phrase. In speech (but not in written language) it is also common that the *wh*-phrase in embedded *wh*-questions is followed by a complementizer: the complementizer *of* is used in the northern, whereas the complementizer *dat* is more common in the southern varieties; some (mainly northern) speakers even use the combination *of dat*; we refer the reader to Barbiers (2005: Section 1.3.1.5) for details on the geographical distribution of these options; see also Hoekstra & Zwart (1994), Sturm (1996) and Zwart & Hoekstra (1997) on the question as to whether *of dat* should be analyzed as a compound or as two separate words.

(11) • Interrogative argument clauses
a. Jan vraagt [of Peter ziek is]. [*yes*/*no*-question]
Jan asks whether Peter ill is
'Jan asks whether Peter is ill.'
b. Jan vraagt wie (of/dat) er ziek is. [*wh*-question]
Jan asks who whether/that there ill is
'Jan asks who is ill.'

If two embedded yes/no questions are coordinated by means of the disjunction *of* 'or', as in (12a), the complementizer of the second clause does not occur as *of* but as *dat* in order to avoid a sequence of two (homophonous) occurrences of *of*. That this is a surface phenomenon is clear from the fact illustrated in (12b) that the second complementizer must be realized as *of* when we replace the disjunction *of* by the more formal disjunction *dan wel* 'or'; see Haeseryn et al. (1997:547).

(12) a. Ik weet niet [of hij nog komt] of [dat/*of hij thuis blijft].
I know not whether he still comes or that/whether he home stays
'I don't know whether he's still coming or whether he'll stay at home.'
b. Ik weet niet [of hij nog komt] dan wel [of/*dat hij thuis blijft].
I know not whether he still comes or whether/that he home stays
'I don't know whether he's still coming or whether he'll stay at home.'

There is a small set of cases in which what would seem to be an argument clause is introduced by the conjunction *als* 'if/when'; cf. Haeseryn et al. (1997:1136&1153). The primeless examples in (13) show that such *als*-clauses are especially common in constructions with a subject/object experiencer, although the primed examples show that the experiencer may also remain implicit; observe that *het* functions as an °anticipatory pronoun associated with the *als*-clause. To our knowledge *als*-clauses of this type have received little attention in the literature so far, and, in fact, it remains to be demonstrated whether they do indeed function as argument clauses in these cases; this is why Section 5.1.2.2, sub IV, investigates them in more detail.

(13) • Argument clauses introduced by *als* 'if/when'?
a. $\text{Jan}_{\text{Experiencer}}$ waardeert het [als je hem helpt]. [subject experiencer]
Jan appreciates it if one him helps
'Jan appreciates it if you help him.'
a′. Het wordt gewaardeerd [als je hem helpt]. [implicit experiencer]
it is appreciated if you him helps
'It's appreciated if you help him.'
b. Het irriteert me [als je zingt]. [object experiencer]
it annoys me when you sing
'Your singing annoys me.'
b′. Het is irritant [als je zingt]. [implicit experiencer]
it is annoying when you sing
'Your singing annoys me.'

It is important to observe that the distinction between declarative and interrogative embedded clauses is formal rather than semantic: the embedded clause in (14a) is called declarative despite the fact that we are clearly not dealing with an assertion, and the embedded clauses in (14b&c) are called interrogative despite the fact that we are not dealing with true questions. Notwithstanding this, we will simply accept the traditional terminology.

(14) a. Jan vermoedt [dat hij ziek is]. [declarative clause]
Jan suspects that he ill is
'Jan suspects that he's ill.'

b. Jan betwijfelt [of hij op tijd zal aankomen]. [*yes*/*no*-question]
Jan doubts whether he on time will arrive
'Jan doubts whether he'll arrive in time.'
c. Els onderzoekt [wie het boek gestolen heeft]. [*wh*-question]
Els investigates who the book stolen has
'Els is investigating who has stolen the book.'

III. The anticipatory pronominal elements het *'it' and* er + P *'P + it'*

The examples in (15) show that finite argument clauses may be introduced by an anticipatory pronominal element (given in italics), which appears to the left of the clause-final verbs.

(15) a. dat *het* duidelijk is [dat Marie de nieuwe voorzitter wordt]. [subject]
that it clear is that Marie the new chairman becomes
'that it is clear that Marie will be the new Chair.'
b. dat Jan *het* niet gemeld heeft [dat hij weg zou gaan]. [direct object]
that Jan it not reported has that he away would go
'that Jan didn't report it that he'd go away.'
c. dat Peter *erover* klaagt [dat het regent]. [prepositional object]
that Peter about.it complains that it rains
'that Peter complains about it that it rains.'

The distribution of anticipatory pronominal elements is rather complex: Sections 5.1.2 to 5.1.4 will show that in many cases it is optional, but there are also cases in which it must or cannot occur. In addition, the presence or absence of the pronominal element may affect the syntactic behavior of argument clauses: example (16b), for example, shows that object clauses only allow *wh*-extraction if there is no anticipatory pronoun; see, e.g., Bennis (1986:ch.2)

(16) a. dat Jan (het) zei [dat Peter een nieuwe auto gekocht had].
that Jan it said that Peter a new car bought had
'that Jan said (it) that Peter had bought a new car.'
b. Wat$_i$ zei Jan (*het) [dat Peter t_i gekocht had]?
what said Jan it that Peter bought had
'What did Jan say that Peter had bought?'

If the anticipatory pronominal element is optional, its presence may trigger a somewhat different reading: sentence (16a) without the pronoun *het* presents the proposition expressed by the embedded clause as new information; (16a) with the pronoun, on the other hand, presents the embedded proposition as old information and adds to this that Jan was the source of the information. In cases such as (17), the presence of the anticipatory pronoun may trigger a factive reading of the object clause: example (17a) simply presents the proposition expressed by the embedded clause as new information, which may or may not be true, whereas (17b) presents this proposition as familiar truthful information.

(17) a. Jan heeft me gisteren verteld [dat hij decaan wordt].
Jan has me yesterday told that he dean becomes
'Jan told me yesterday that he'll become dean of the faculty.'
b. Jan heeft het me gisteren verteld [dat hij decaan wordt].
Jan has it me yesterday told that he dean becomes
'Jan told me yesterday that he'll become dean of the faculty.'

A similar contrast can be found in the passive counterparts of the examples in (17) in (18): the impersonal passive with the °expletive *er* 'there' in (18a) presents the proposition expressed by the embedded clause as new information that may be true or false, whereas the personal passive with the anticipatory subject pronoun *het* 'it' in (18b) presents it as familiar and true; see Haeseryn et al. (1997:1138) for similar intuitions. A more detailed description of the distribution of expletive *er* 'there' and the anticipatory subject pronoun *het* 'it' will be provided in Section 5.1.3, sub III.

(18) a. Er werd me gisteren verteld [dat hij decaan wordt].
there was me yesterday told that he dean becomes
'I was told yesterday that he'll become dean of the faculty.'
b. Het werd me gisteren verteld [dat hij decaan wordt].
it was me yesterday told that he dean becomes
'I was told yesterday that he'll become dean of the faculty.'

The question as to whether a factive reading arises is, however, more complex than the examples in (17) and (18) suggest. Examples (19a&b) show that regardless of the presence or absence of the anticipatory pronoun, the truth of propositions expressed by clausal objects of typically factive verbs like *betreuren* 'to regret' will normally be presupposed by the speaker, whereas the truth of propositions expressed by clausal objects of a typically non-factive verb like *beweren* 'to claim' will normally be left open. It is only with neutral verbs like *vertellen* 'to tell', which can be used both as factive and as non-factive verbs, that the presence of the anticipatory pronoun *het* will normally trigger the factive reading.

(19) a. Jan betreurt (het) [dat Marie ontslagen is]. [factive]
Jan regrets it that Marie fired is
'Jan regrets (it) that Marie has been fired.'
b. Jan beweert (het) [dat Marie ontslagen is]. [non-factive]
Jan claims it that Marie fired is
'Jan claims (it) that Marie has been fired.'
c. Jan vertelde me [dat Marie ontslagen is]. [non-factive]
Jan told me that Marie fired is
'Jan told me that Marie has been fired.'
c′. Jan vertelde het me [dat Marie ontslagen is]. [factive]
Jan told it me that Marie fired is
'Jan told it to me that Marie has been fired.'

Because the semantic effect of the anticipatory pronoun *het* is sometimes difficult to pinpoint even with neutral verbs like *vertellen*, we will not digress on this issue and leave further investigation of it to future research.