Non-verbal Predication

Functional Grammar Series 15

Editors

A. Machtelt Bolkestein
Simon C. Dik
Casper de Groot
J. Lachlan Mackenzie

Mouton de Gruyter
Berlin · New York

Non-verbal Predication

Theory, Typology, Diachrony

by

Kees Hengeveld

Mouton de Gruyter
Berlin · New York 1992

Mouton de Gruyter (formerly Mouton, The Hague)
is a Division of Walter de Gruyter & Co., Berlin.

∞ Printed on acid-free paper which falls within the guidelines of the ANSI to ensure permanence and durability.

Library of Congress Cataloging-in-Publication Data

Hengeveld, Kees, 1957–
Non-verbal prediction : theory, typology, diachrony / Kees Hengeveld.
p. cm. – (Functional grammar series ; 15)
Includes bibliographical references and indexes.
ISBN 3-11-013713-5 (acid-free paper)
1. Grammar, Comparative and general–Verb phrase. 2. Functionalism (Linguistics) I. Title. II. Series.
P281.H46 1992
415–dc20 92-22942
CIP

Die Deutsche Bibliothek – Cataloging-in-Publication Data

Hengeveld, Kees:
Non-verbal predication : theory, typology, diachrony / by Kees Hengeveld. – Berlin ; New York : Mouton de Gruyter, 1992
(Functional grammar series ; 15)
ISBN 3-11-013713-5
NE: GT

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Printing: Arthur Collignon GmbH, Berlin. – Binding: Lüderitz & Bauer, Berlin. –
Printed in Germany.

To Matty and Anna

Acknowledgements

This book is the result of several years of research into the intricacies of non-verbal predication. During this period, and well before that, Simon Dik has played an important role in its coming into being. He not only introduced me into the basic principles of general linguistics when I had just arrived at the University of Amsterdam, but also taught me the basic principles of Functional Grammar, recognized and materialized my interest for academic research, and supervised the research project which led to this study. His inspiration, guidance, and criticism have greatly influenced the final shape of this book. I would like to express my deep gratitude to him for his invaluable help in all stages of my formation as a linguist.

The general spirit in which this book was written is partly due to many discussions within the workgroup on Functional Grammar at the University of Amsterdam. From among the members of this group I would like to single out Machtelt Bolkestein, Casper de Groot, and Jan Rijkhoff, the discussions with whom at different stages of the preparation of this book have been particularly fruitful.

Hotze Mulder corrected my English, as so many times before. I am most grateful to him for his help.

For their help in the collection and interpretation of data on individual languages I would like to thank Ionie Beck (Jamaican Creole), Martine Cuvalay-Haak (Arabic), Michael Fortescue (West Greenlandic), Casper de Groot (Hungarian), Lars Kristoffersen (West Greenlandic), Igor Nedjalkov (Gilyak), Vladimir Nedjalkov (Chukchee), Gerjan van Schaaik (Turkish), Jan Snyman (!Xũ), Arie Spruit (Abkhaz), and Tonjes Veenstra (Jamaican Creole).

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Abbreviations

In glosses

1	first person
2	second person
3	third person
ABS	absolutive
ACC	accusative
ADJR	adjectivalizer
ADVR	adverbializer
ART	article
ATTR	attributive
AUX	auxiliary
CL	noun-class
CLFR	classifier
CMPLR	complementizer
COND	conditional
CONN	connective
CONT	continuative
COP	copula
DAT	dative
DECL	declarative
DEF	definite
DEM	demonstrative
DES	desiderative
DU	dual
DUR	durative
EX	existential
EXCL	exclusive
EXCLM	exclamation
EMPH	emphatic
F	feminine
FIN	finite
FUT	future
GEN	genitive
H	human
HAB	habitual
HON	honorific
IMP	imperative
IMPF	imperfective
IMPRS	impersonal
INDV	indicative
INDEF	indefinite
INF	infinitive
INFR	inferential
INGR	ingressive
INT	interrogative
LOC	locative
M	masculine
N	neuter
NEG	negative
NFIN	non-finite
NH	non-human
NOM	nominative
NPAST	non-past
NR	nominalizer
NSG	non-singular
OBJ	object
OBLIG	obligative
OPT	optative
PART	participle
PAST	past
PF	perfective
PL	plural
PNCT	punctual
POS	positive
POSS	possessive
POT	potential
PRED	predicative
PRES	present
PREV	preverb
PRIV	privative
PROPR	proprietive
PROSP	prospective
PROX	proximate
PTT	partitive
PURP	purposive
QUOT	quotative
RDP	reduplication
REAL	realized
REL	relative

REM	remote
RSLT	resultative
SBJ	subject
SG	singular
SS	same subject
STAT	stative
TOP	topic
TR	transitive
VAL	validator
VOL	volitional
VR	verbalizer

In representations[1]

Word classes

ß	any word class
A	adjective
Adv	adverb
N	noun
Pro	pronoun
Quant	quantifier
V	verb
Vaux	auxiliary verb

Illocutionary predicates

ILL	any illocutionary predicate
DECL	declarative
IMP	imperative

Syntactic functions

Synt	any syntactic function
Obj	object
Subj	subject

Pragmatic functions

Pragm	any pragmatic function
Foc	focus
Pres	presentative
Top	topic

Semantic functions

Sem	any semantic function
ø	zero
Ag	agent
Circ	circumstance
Exp	experiencer
Go	goal (patient)
Loc	location
Po	positioner
Poss	possessor
Propr	proprietive
Rec	recipient
Ref	reference
So	source
Temp	time

1. See also figure 4 on page 11.

Π-operators

ant	anterior
cond	conditional
ingr	ingressive
irr	unrealized
mit	mitigation
neg	negative
poss	possibility
post	posterior
pres	present
progr	progressive
sim	simultaneous

Term operators

Ω	any term operator
1	singular
A	anaphoric
d	definite
g	generic
i	indefinite
m	plural
prox	proximate
R	relative
rem	remote

0. Introduction

This study of theoretical, typological, and diachronic aspects of non-verbal predication starts from the hypothesis, brought forward in Dik (1980, 1983, 1987), that all constructions containing a form of the (equivalent of the) verb *to be* on the one hand, and those containing no verb at all on the other, are members of a single class of non-verbal predications. This approach allows for a unified treatment of nominal, copula, locative, existential, and possessive constructions and makes it possible to generalize across languages that do and those that do not make use of one or more copulas in the expression of non-verbal predications.

The main constituents of the constructions that I will be concerned with are (i) a main predicate of a category other than verb and (ii) its argument(s). These constituents may or may not be accompanied by (iii) a copula. The intended construction types thus have the following general format, where the actual order in which the constituents are presented is irrelevant:

(1) Argument(s) (Copula) $\text{Predicate}_{\neq V}$

Constructions conforming to this general format will be termed *non-verbal predications*. Any auxiliary element occurring in such constructions, including pronominal copula morphemes, existential particles, and the like will be termed *copula*. Some (pseudo-) English examples are given in (2):

		Argument	(Copula)	$\text{Predicate}_{\neq V}$
(2)	a.	*John*	*ø*	*ill*
	b.	*Peter*	*he*	*my best friend*
	c.	*the dog*	*is*	*in the garden*
	d.	*a meeting*	*there.is*	*at ten o'clock*

The construction types illustrated in (2) differ with respect to the type of the main predicate (an adjective in (2a), a noun phrase in (2b), a prepositional phrase in (2c-2d)) and with respect to the type of copula (no copula in (2a), a pronominal copula in (2b), a verbal copula in (2c), an existential copula in (2d)). They have in common that their main predicate is of a category other than verb, and this is what makes them qualify as instances of non-verbal predication.

The theoretical part of this study is written within the framework of Functional Grammar. This theory not only provides the hypothesis that is at the heart of this study, but will also serve as the framework for the analysis of the typological data. The Functional Grammar formalism will thus serve as a metalanguage within which the linguistic observations made are reformulated. The need for such a metalanguage is particularly felt in the investigation of language universals, since this type of research requires the possibility to generalize over typologically highly divergent languages.

The organization of the material is as follows:

Chapters 1 and 2 contain preliminary information necessary for a proper understanding of later chapters. A brief outline of some relevant aspects of Functional Grammar is given in chapter 1. Chapter 2 gives an account of the method used to arrive at the language sample from which the data for this study are taken.

Chapters 3, 4, and 5 investigate non-verbal predication from a primarily theoretical perspective. Chapter 3 defines and delimits some notions crucial to the field of non-verbal predication. In chapter 4 the categorial differences between verbal and non-verbal predicates are investigated and a new typology of parts-of-speech systems is developed. Chapter 5 then presents a full classification of non-verbal predication types, building on the results of the preceding chapters.

Chapters 6, 7, 8 are of a primarily typological nature. Chapter 6 investigates the degree of non-verbal predicability of the languages of the sample, i.e. the extent to which they make use of the non-verbal predication types distinguished in chapter 5. Chapter 7 deals with the alternatives languages use for non-predicable non-verbal predication types. Chapter 8 studies the expression formats languages use for predicable non-verbal predication types, including the extent to which they require the presence of copulas of different types. In all three chapters the variation found across languages is shown to be highly systematic.

Chapters 9 and 10 put the typological data in a wider typological and diachronic perspective. Chapter 9 shows that there is a systematic correlation between the system of non-verbal predication displayed by a language on the one hand, and its parts-of-speech system on the other. Chapter 10 looks at systems of non-verbal predication, as emerging from chapter 9, from a diachronic perspective.

Chapter 11 is a chapter in its own right, in that it investigates theoretical, typological, and diachronic aspects of the use of non-verbal predication in the expression of tense, mood, aspect, and polarity distinctions. The *auxiliary uses* of non-verbal predication types are described in relation to their basic uses.

Chapter 12 brings together the findings of the previous chapters in terms of a general typology, based on the major parameters determining the way in which and the extent to which languages make use of non-verbal predication.

1. Some basic principles of Functional Grammar

1.0. Introduction

Functional Grammar, full descriptions of which can be found in Dik (1989) and Siewierska (1991), is a theory of grammar which aims at providing a model for describing language in terms of its communicative function, i.e. as an instrument of social interaction, and tries to do so in a typologically, pragmatically, and psychologically adequate way.

Functional Grammar starts with the construction of underlying semantic structures, which are converted into linguistic expressions through expression rules. The basic mechanisms of Functional Grammar, in so far as relevant for the ensuing chapters, are explained step by step in the following sections. More detailed descriptions of crucial aspects of Functional Grammar will be given at the relevant places.

1.1. Predicate frames

All basic lexical elements of a language are stored in the lexicon in the form of predicate frames, which, apart from a predicate, contain a number of argument positions, representing the participants that obligatorily[1] take part in the state of affairs designated by the predicate. The predicate is provided with an indication of its categorial status. Each argument position is provided with a semantic function, indicating a participant role. Some examples:

(1) $read_{V}\ (x_1)_{Ag}\ (x_2)_{Go}$
(2) $old_{A}\ (x_1)_{\emptyset}$
(3) $man_{N}\ (x_1)_{\emptyset}$
(4) $brother_{N}\ (x_1)_{\emptyset}\ (x_2)_{Ref}$

The verbal (V) predicate *read* in (1) has two argument positions (x_n) with the semantic functions Agent (Ag) and Goal (Go). The adjectival (A) predicate *old* in (2) and the nominal (N) predicate *man* in (3) have one argument position with the semantic function Zero (Ø), which is used for participants carrying the property designated by the predicate. The nominal predicate *brother* in (4) has two argument positions with the semantic functions Zero and Reference (Ref). The latter is used for participants with reference to which the relation designated by the predicate holds (Mackenzie 1983: 38).

---

1. Note that under certain restricted conditions, in particular recoverability from the context, these participants may remain unexpressed.

Besides basic predicate frames such as those in (1)-(4) there are derived predicate frames. These are created by means of predicate formation rules which have predicates as their input and derived predicates as their output. Predicate formation rules thus take care of derivational morphology but may also yield combinations of words which function as unified predicates. Both basic and derived predicates are contained in the fund, which, apart from predicates, also contains terms.

1.2. Term formation

In the argument positions of a predicate frame terms can be inserted. Terms are referring expressions of the following general format:

(5) $(x_i: \Phi_1(x_i): \Phi_2(x_i): \ldots :\Phi_n(x_i))$

in which x_i is a term variable which represents the referent set of the term and each $\Phi(x_i)$ constitutes an *open predication in* x_i which further restricts the set of potential referents of the term. The predicates necessary for the construction of these open predications are taken from the fund. Consider the following example:

(6) *the old man reading a book*
$(x_i: man_N\ (x_i)_\emptyset: old_A\ (x_i)_\emptyset: [\text{sim}\ read_V\ (x_i)_{Ag}\ (x_j: book\ (x_j)_\emptyset)_{Go}])$
sim = simultaneity operator

Three different qualities are predicated of the referent of the term in (6) by means of the open predications listed in (7):

(7) a. $man_N\ (x_i)_\emptyset$
'x_i is a man'
b. $old_A\ (x_i)_\emptyset$
'x_i is old'
c. $[\text{sim}\ read_V\ (x_i)_{Ag}\ (x_j: book\ (x_j)_\emptyset)_{Go}]$
'x_i is reading a book'

1.3. The representation of states of affairs

In order to arrive at a predication, which designates a state of affairs, terms are inserted into the argument slots of a predicate frame. The resulting structure is applied to a variable (e) which represents the particular state of affairs towards which the speaker wants to direct the addressee's attention (Vet 1986: 2-3), as in the following example:

(8) *The old man reads a book.*
$(e_i$: [$read_V$ (x_i: man_N $(x_i)_\emptyset$: old_A $(x_i)_\emptyset)_{Ag}$ (x_j: $book_N$ $(x_j)_\emptyset)_{Go}$] $(e_i))$

In (8) the intended state of affairs e_i is defined as one which concerns the reading of a book x_j by an old man x_i. The part between square brackets is called a nuclear predication, the structure as a whole an extended predication.[2]

1.4. Syntactic and pragmatic functions

Apart from semantic functions, arguments may carry syntactic and pragmatic functions. Syntactic functions specify the (grammatical) perspective from which a state of affairs is presented. The syntactic function Subject is assigned to the term which serves as the primary vantage point from which the state of affairs is presented. The syntactic function Object is assigned to the term which serves as the secondary vantage point from which the state of affairs is presented. This can be illustrated by means of the following sentences:

(9) *John* (AgSubj) *read the book* (Go).
(10) *The book* (GoSubj) *was read by John* (Ag).
(11) *John* (AgSubj) *gave the book* (GoObj) *to Mary* (Rec).
(12) *John* (AgSubj) *gave Mary* (RecObj) *the book* (Go).

The difference between (9) and (10) can be seen as conditioned by the fact that the syntactic function Subject is assigned to the Agent argument *John* in (9) and to the Goal argument *the book* in (10). The difference between (11) and (12) can be seen as conditioned by the fact that the syntactic function Object is assigned to the Goal argument *the book* in (11) and the Recipient argument *Mary* in (12).

Pragmatic functions specify the informational status of constituents. Constituents with Topic function refer to "entities "about" which information is provided or requested in the discourse" (Dik 1989: 266), constituents with Focus function constitute "the most important or salient parts of what we say about the topical things" (Dik 1989: 264). This is illustrated in the following sentences, in which capitalization indicates emphasis:

(13) *JOHN* (AgSubjFoc) *read the book* (GoTop).
(14) *John* (AgSubjTop) *read THE BOOK* (GoFoc).

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2. Dik (1989:57) furthermore recognizes a *core predication* consisting of a nuclear predication together with predicate operators and predicate satellites (see below).

The pragmatic function Focus, in this case expressed by intonational means, is assigned to *John* in (13) and to *the book* in (14).

Apart from the clause-internal pragmatic functions just illustrated, there are clause-external pragmatic functions. A constituent with the pragmatic function Theme presents an entity with respect to which it is relevant to pronounce the following clause. A constituent with pragmatic function Tail represents an afterthought. The following sentences illustrate these functions:

(15) *John* (Theme), *he didn't read the book.*
(16) *He didn't read the book, John* (Tail).

1.5. The representation of utterances

A theory of language which wishes to take into account the instrumental nature of language cannot content itself with a system which accounts for representational aspects of language only. Descriptions of states of affairs are put to use in utterances, in which the speaker offers these descriptions to an addressee. Utterances may contain, apart from a description of a state of affairs, linguistic elements through which the speaker indicates his attitude towards the information he is presenting, as well as his intention in producing the utterance. In order to account for these linguistic elements I propose in Hengeveld (1988, 1989, 1990a) to represent utterances by means of a multi-layered hierarchical structure, inspired by Foley—Van Valin (1984). The general format of this model is given in Figure 1.

The structure in Figure 1 as a whole gives a representation of the speech act (E_1). Within this speech act a propositional content (X_1) is communicated. This propositional content contains a description of a state of affairs (e_1) which involves one or more individuals (x_1) ... (x_n).

The highest level of this structure is called, following Halliday (1970: 325), the *interpersonal level*. It is structured on the basis of an abstract illocutionary frame (ILL), such as DECL (declarative) or INT (interrogative), which has the speaker (S), the addressee (A) and the propositional content (X_1) as its arguments. The lowest level is called the *representational level*, following Bühler (1934: 28). This level is structured on the basis of a predicate frame, which has one or more individuals (x_1) ... (x_n) as its arguments.

Within the hierarchical structure presented in Figure 1 four layers, each provided with its own variable, can be distinguished. All variables are followed by restrictors of decreasing complexity, which contain the main information on their respective layers. The four layers are listed in (17):

(17) Layers (general format)

Clause:	$(E_1$: [ILL (S) (A) $(X_1$: etc. $(X_1))]$ $(E_1))$
Proposition:	$(X_1$: [$(e_1$: etc. $(e_1))]$ $(X_1))$
Predication:	$(e_1$: [$Pred_\beta$ $(x_1)^n]$ $(e_1))$[3]
Term:	$(x_1$: $Pred_N$ $(x_1))$

Each of these four layers represents an entity of a different order (Lyons 1977: 442-447). A term (x_1) represents an *individual*, a first order entity, which can be located in space and can be evaluated in terms of its existence. A predication (e_1) represents a *state of affairs*, a second order entity, which can be located in space and time and can be evaluated in terms of its reality. A proposition (X_1) represents a *propositional content*, a third order entity, which can be located neither in space nor in time and can be evaluated in terms of its truth. A clause (E_1) represents a *speech act*, a fourth order entity, which locates itself in space and time and can be evaluated in terms of its felicity.

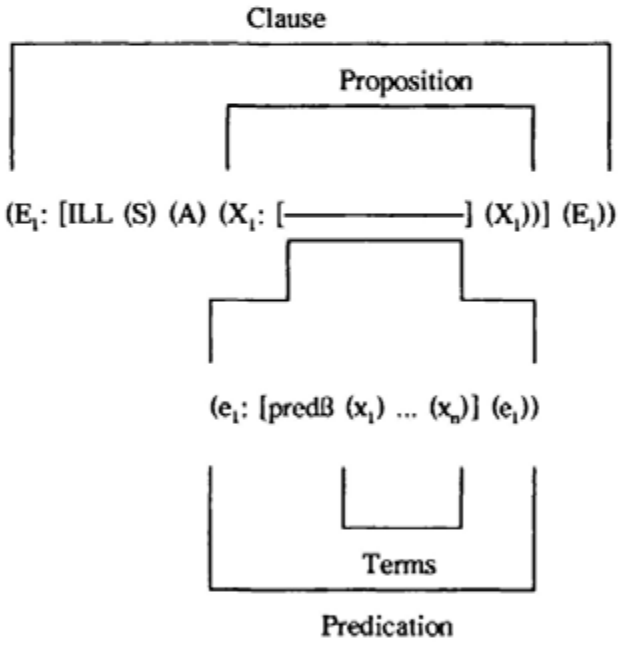


Figure 1. The representation of utterances

3. The ^{n} in this formula indicates that a predication may contain more than one term.

1.6. Terms and entities

So far it has been tacitly assumed that terms, i.e. referential expressions with a nominal head, refer to first order entities. There are, however, also terms that refer to second, third, and fourth order entities, i.e. the entity types that play an important role in the hierarchical organization of the clause as well. These terms are based on head nouns that designate non-first order entities.

Nouns such as *departure*, *mistake*, and *visit* designate second order entities and may therefore be called, following Lyons (1977: 446), second order nouns. Similarly, nouns such as *idea* and *reason* designate third order entities and may be called third order nouns, and nouns such as *order* and *question* designate fourth order entities and may be called fourth order nouns.

The differences between these nouns and the terms based on them may be accounted for using the different variables distinguished in the previous sections. Thus, the following representations may be used for first (18), second (19), third (20), and fourth order nouns and the terms based upon them:

(18) $man_N\ (x_1)_\emptyset \rightarrow (x_i\colon man_N\ (x_i)_\emptyset)$

(19) $mistake_N\ (e_1)_\emptyset \rightarrow (e_i\colon mistake_N\ (e_i)_\emptyset)$

(20) $idea_N\ (X_1)_\emptyset \rightarrow (X_i\colon idea_N\ (X_i)_\emptyset)$

(21) $order_N\ (E_1)_\emptyset \rightarrow (E_i\colon order_N\ (E_i)_\emptyset)$

Whenever a statement applies to terms regardless of the particular type of entity to which they refer, the variable α, which ranges over x, e, X, and E, will be used. For instance, the general representation of a predication should be as in (22):

(22) $(e_1\colon [pred_\beta\ (\alpha_1)\ \ldots\ (\alpha_n)]\ (e_1))$

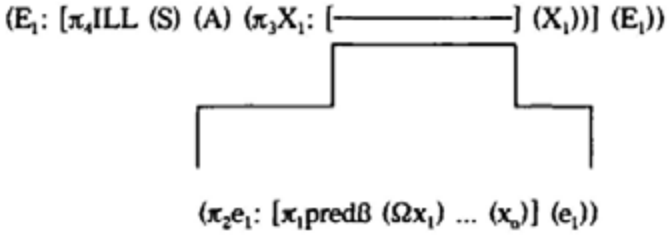
The two argument positions within this predication are provided with an α-variable since in principle terms referring to entities of any order may fill these positions.

1.7. Operators

Each of the relevant units of clause structure discussed so far can be modified by operators. Operators are abstract elements representing semantic distinctions expressed by grammatical means. In Figure 2 the different types of operator are located in the model of the clause.

All operator types have functions which are characteristic of the level at which they operate. Term operators (Ω) represent grammatical distinctions which specify additional properties of (sets of) entities, such as number and definiteness. Predicate operators (π_1) represent grammatical distinctions which specify additional properties

of states of affairs. Many aspectual distinctions are captured by this type of operator. Predication operators (π_2) represent grammatical distinctions which specify the setting of a state of affairs. They take care of e.g. tense distinctions. Proposition operators (π_3) represent grammatical distinctions which specify the propositional attitude of the speaker, as in the case of evidential modality. Illocution operators (π_4) represent grammatical distinctions which modify the force of a speech act, and thus take care of e.g. the reinforcing use of emphatic morphemes.



Ω: Term operators
π_1: Predicate operators π_2: Predication operators
π_3: Proposition operators π_4: Illocution operators

Figure 2. Operators

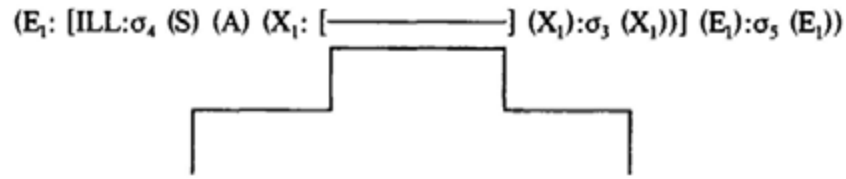
The example in (23) illustrates the functions of the different classes of operators:

(23) *The croupier might have been cheating.*

The individual *the croupier* is characterized as singular and definite. These properties are taken care of by term operators (Ω). The main predicate *cheat* is accompanied by several auxiliaries. The auxiliary *be* and the participial form of the predicate together express progressive aspect, an additional property of the state of affairs. This is taken care of by a predicate operator (π_1). The temporal setting of the state of affairs as a whole is given by means of the auxiliary *have*, which is taken care of by a predication operator (π_2). The speaker's attitude towards the information he is presenting is signalled by a form of the modal auxiliary *may*, the expression of a proposition operator (π_3). By putting this modal in the past tense the speaker expresses some reservations concerning his statement, which is the expression of an illocution operator (π_4).

1.8. Satellites

Just as every layer may be modified by operators, so it may be further extended by satellites (Dik et al. 1990: 27-30; Hengeveld 1990a: 12-14), which represent adverbial constructions. In Figure 3 the different types of satellite are located in the model of the clause, in which they are represented following the method proposed in Vet (1986).



σ_1: Predicate satellites
σ_2: Predication satellites
σ_3: Proposition satellites
σ_4: Illocution satellites
σ_5: Clause satellites

Figure 3. Satellites

The functions of these satellites are comparable to those of the corresponding operators. *Predicate satellites* (σ_1) specify additional properties of the SoA (e.g. Manner, Direction), *predication satellites* (σ_1) specify the spatial, temporal, and cognitive setting of the SoA (e.g. Location, Time, Reason), *proposition satellites* are concerned with the validity of the propositional content (e.g. Attitude), and *illocution satellites* (σ_4) have to do with the speaker's communicative strategy (e.g. Manner (of speech act)). Finally, in order to account for textual relations, there is a class of *clause satellites* (σ_5). Satellites of this class capture the lexical means through which the speaker locates his utterance within the context of the discourse and thus restricts the set of potential perlocutions of this utterance.

The example in (24) illustrates these functions:

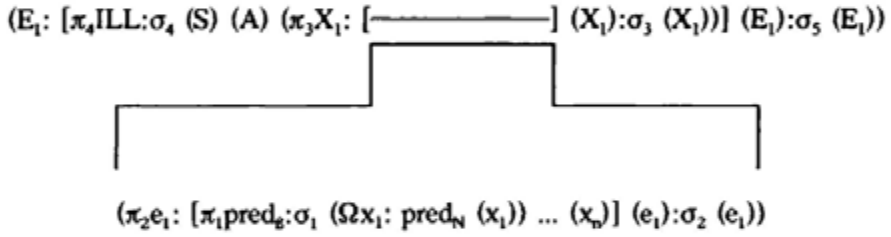
(24) *Honestly* (σ_4), *you certainly* (σ_3) *danced beautifully* (σ_1) *yesterday* (σ_2), *if I may say so* (σ_5).

In this sentence the manner satellite (σ_1) *beautifully* specifies an additional property of the SoA. The temporal satellite (σ_2) *yesterday* specifies the setting of the SoA. Through the attitudinal satellite (σ_3) *certainly* the speaker expresses his commitment

with respect to the propositional content. Through the manner satellite (σ_4) *honestly* the speaker reinforces the basic illocution of the utterance. Through the conditional satellite (σ_5) *if I may say so* the speaker contemplates the felicity of the speech act within the actual communicative setting.

1.9. Clause structure

In Figure 4 the full structure of the clause, including operators and satellites, is given.



Layers and frames		*Operators*	*Satellites*
E_1:	Clause		σ_5: Clause satellites
ILL:	Illocution	π_4: Illocution operators	σ_4: Illocution satellites
X_1:	Proposition	π_3: Proposition operators	σ_3: Proposition satellites
e_1:	Predication	π_2: Predication operators	σ_2: Predication satellites
$Pred_8$:	Predicate	π_1: Predicate operators	σ_1: Predicate satellites
x_1:	Term	Ω: Term operators	

Figure 4. The structure of the clause

In following chapters only those parts of this structure which are relevant to the points made will be given. By way of illustration one full representation is given in Figure 5, which is the clause structure underlying sentence (25).

(25) *The croupier might have been cheating yesterday.*

The semantic function *Ag* (agent) in Figure 5 has been discussed in 1.1, the operators *mit* (mitigation), *poss* (possibility), *past*, and *progr* (progressive) in 1.7, the satellite *yesterday* in 1.8. No attention is paid here to syntactic and pragmatic functions.