Johan Nordlander

Towards a Semantics of Linguistic Time

Exploring Some Basic Time Concepts
with Special Reference to English and Krio

SWEDISH SCIENCE PRESS • UPPSALA • SWEDEN

Errata:

- p.13: note 3, 1 l. f. top:*
cart? -> cart
- p.22: 19 l. f. bottom:*
four Krio -> three Krio
- p.25: 7 l. f. top:*
in is simplest -> in its simplest
- p.31: 11 l. f. top:*
Sections 2.11 -> Section 2.11
- p.32: 4 l. f. bottom:*
Section -> section
- p.33: 5 l. f. top:*
Section -> section
- p.37: 12 l. f. bottom:*
Sections -> sections
- p.41: 4 l. f. bottom:*
distinction which -> distinction, which
- p.56: 4 l. f. bottom:*
he -> the
- p.58: 7 l. f. top:*
our interpretation -> our interpretations
- p.59: 1 l. f. bottom:*
Figure (4) -> Figure 4
- p.64: 10 l. f. top:*
Sections -> Section
- p. 82: 13 l. f. top:*
(1993) -> (1994)
- p.117: 9 l. f. bottom:*
This is that standpoint -> This is the standpoint
- p.82: 8 l. f. bottom:*
modal meaning that we -> modal meaning we
- p.122: 3 l. f. top:*
you 're -> you're
- p.160: 17 l. f. bottom:*
able't/have -> able't/have
- p.171-181: right header:*
Reference Book and Articles -> Reference Books and Articles
- p. 182: 2 l. f. bottom:*
Harward -> Harvard
- p.184: 9 l. f. bottom:*
LONDON, OSLO, BERGEN CORPUS-> LANCASTER, OSLO/BERGEN CORPUS

UNIVERSITY OF UMEÅ DISSERTATION
ISSN 0345-0155 ISBN 91-7191-261-4

From the Department of English, Faculty of Humanities,
Umeå University, Sweden

Towards a Semantics of Linguistic Time

Exploring Some Basic Time Concepts with
Special Reference to English and Krio

AN ACADEMIC DISSERTATION

which will, on the proper authority of the Chancellor's Office of
Umeå University for passing the doctoral examination, be
publicly defended in hörsal E, Humanisthuset, on Saturday, 22th
February, 1997, at 10.15 a.m.

Johan Nordlander

Umeå University
Umeå 1997

Abstract

Using English and the West-African creole language Krio as the objects of investigation, this study proposes an analysis in which verbs and the paradigms pertaining to verbs are conceived of as being the only direct carriers of linguistic time encoding. The fundamental assumption is that nominals encode substance, be it concrete or abstract, and that verbals encode abstract substance with time.

The theoretical backdrop is provided by Derek Bickerton's *Roots of Language* (1981) and "The Language Bioprogram Hypothesis" (1984) in which he proposes a set of conceptually fundamental distinctions. These distinctions: the state/process; the durative/punctual; the realis/irrealis; and the anterior/non-anterior; are discussed in relation to four dynamicity values of verbal nuclei: *stative*; *processive*; *eventive*; and *telic*. These are proposed by the present author, but draw on Bernard Comrie's aspectual analysis in *Aspect* (1976).

Three different layers of analysis are put forward: (1) the *nucleic*, which consists of the verbal carrying the meaning core of a situation; (2) the *verbal constituency*, in which we find all TMA encoding, that is, the tense, mood and aspect of the situation; and (3) the (verbal) *situation*, which is conceived of as a superordinate, maximum unit of description.

It is argued that the dynamicity value of the verbal nucleus to a large extent determines and limits the possible aspectual, modal and temporal interpretations of the situation.

Keywords: English, Krio; distinction; tense, temporality; mood, modality; aspect, aspectuality; nucleus; dynamicity; verbal constituency; (verbal) situation; phase; stative, state; processive, process; eventive, event; telic, bounded.

Towards a Semantics of Linguistic Time

© Johan Nordlander

Cover illustration
Berit Nordlander

Editor
Per Råberg
Faculty of Arts
Umeå University
S-901 87 Umeå, Sweden

Distributed by
Swedish Science Press
Box 118
S-751 04 Uppsala, Sweden

Printed in Sweden by
Umeå University Printing Office, 1997

ISSN 0345-0155
ISBN 91-7191-261-4

Towards a Semantics of Linguistic Time

Exploring Some Basic Time Concepts

with

Special Reference to English and Krio

Johan Nordlander

Johan Nordlander. *Towards a Semantics of Linguistic Time. Exploring Some Basic Time Concepts.*

Department of English, Umeå University. S-901 87 Umeå, Sweden.

Monograph 1997, 196 pp.

Acta Universitatis Umensis. Umeå Studies in the Humanities 134.

ISSN 0345-0155

ISBN 91-7191-261-4

Distributed by

Swedish Science Press, Box 118, S-751 04 Uppsala, Sweden.

Abstract

Using English and the West-African creole language Krio as the objects of investigation, this study proposes an analysis in which verbs and the paradigms pertaining to verbs are conceived of as being the only direct carriers of linguistic time encoding. The fundamental assumption is that nominals encode substance, be it concrete or abstract, and that verbals encode abstract substance with time.

The theoretical backdrop is provided by Derek Bickerton's *Roots of Language* (1981) and "The Language Bioprogram Hypothesis" (1984) in which he proposes a set of conceptually fundamental distinctions. These distinctions: the state/process; the durative/punctual; the realis/irrealis; and the anterior/non-anterior; are discussed in relation to four dynamicity values of verbal nuclei: *stative*; *processive*; *eventive*; and *telic*. These are proposed by the present author, but draw on Bernard Comrie's aspectual analysis in *Aspect* (1976).

Three different layers of analysis are put forward: (1) the *nucleic*, which consists of the verbal carrying the meaning core of a situation; (2) the *verbal constituency*, in which we find all TMA encoding, that is, the tense, mood and aspect of the situation; and (3) the (verbal) *situation*, which is conceived of as a super-ordinate, maximum unit of description.

It is argued that the dynamicity value of the verbal nucleus to a large extent determines and limits the possible aspectual, modal and temporal interpretations of the situation.

Keywords: English, Krio; distinction; tense, temporality; mood, modality; aspect, aspectuality; nucleus; dynamicity; verbal constituency; (verbal) situation; phase; stative, state; processive, process; eventive, event; telic, bounded.

to

Grim Edmund, Maja Saulite, Erik Andris and Joel Alfreds.

Sofri, sofri, kech monki!

Table of Contents

Table of Contents	i
Abbreviations	iv
Typographic Conventions	iv
The Krio Examples	v
Acknowledgements	vii

Chapter One

Introduction	1
1.1 Background	1
1.2 Basic Philosophical Considerations	3
1.3 The Bickertonian Distinctions	7
1.4 Previous Related Studies	11
1.4.1 Vendler's Aspectuality	12
1.4.2 Comrie's Aspectology	14
1.4.3 The Traditional Grammarians' View	16
1.4.4 Studies of Mood and Modality	19
1.5 Aims	21
1.6 Method and Outline	22

Chapter Two

The Basic Concepts	25
2.1 Introduction	25
2.2 Linguistic Time	25
2.3 Definition of the Verbal Nucleus	28
2.4 Definition of Situation	33
2.5 Definition of Phase	36
2.6 Dynamicity	38
2.7 The State/Non-State Distinction	41
2.7.1 State Dynamicity	43
2.7.2 Non-State Dynamicity	44

2.8	Nucleic Dynamicity	48
2.8.1	Defining Nuclei in Terms of Dynamicity	48
2.8.2	Coinciding and Conflicting Dynamicity Properties	53
2.8.3	Nucleic Dynamicity: Summary	57
2.9	Situational Dynamicity	58
2.9.1	Situational Dynamicity: Summary	61
2.10	Nucleus versus Situation	61
2.11	Structure of the Situation	63
2.12	Summary	65

Chapter Three

The Supremacy of the State/Non-State Distinction	67
3.1 Introduction	67
3.2 A Speculative Background	67
3.3 The Case of Krio	71
3.4 The Case of English	80
3.5 Summary	83

Chapter Four

The Situational Nucleus	85
4.1 Introduction	85
4.2 The Conceptual Content of the Nucleus	86
4.2.1 Complex Nucleic Constructions	88
4.3 Multi-Verbal Constructions	90
4.3.1 Auxiliary Verbal Constructions	91
4.3.2 Serialized Verbal Constructions	94
4.3.2.1 Serial Verbs Proper (94)	
4.3.2.2 Verbal Complement Constructions (97)	
4.4 The Impact of Nucleic Dynamicity	102
4.5 Summary	105

Chapter Five

The Verbal Constituency	107
5.1 Introduction	107
5.2 Internal Time—Aspect	111
5.3 Factual Time—Mood	115
5.4 External Time—Tense	120
5.5 The TMA-Carrier	125
5.5.1 English “Compound Tenses”	126
5.5.2 The Copula	128
5.5.3 The Krio TMA-Phrase	131
5.6 Summary	132

Chapter Six

Peripheral Situational Modification	135
6.1 Introduction	135
6.2 Aspectual Modification	138
6.2.1 Aspectual Modification Focusing on the Entire Situation	139
6.2.2 Aspectual Modification Focusing on the Completion Phase	140
6.2.2.1 The Bounded/Unbounded Distinction (142)	
6.2.2.2 The Perfect (143)	
6.2.3 Aspectual Modification: Summary	153
6.3 Modal Modification	154
6.3.1 Modality by Modal Auxiliary Verbs	156
6.3.1.1 The English Modal Auxiliaries (156)	
6.3.1.2 The Krio Irrealis Markers (158)	
6.3.2 Modal Modification: Summary	161
6.4 Summary	162

Chapter Seven

Conclusion	165
Bibliography	169
Reference Books and Articles	169
Dictionaries	183
Corpora and other Source Materials	184
Indices	185
Author Index	185
Subject Index	186

Abbreviations

ABIL	ability	AdvP	adverbial phrase
ANT	anterior	BE	copula <i>be</i>
CZR	complementizer	DET	determiner
EXT	existential <i>be</i>	FGR	foregrounder <i>be</i>
FUT	future	HAB	habitual
IMP	imperfective	IRR	irrealis
LOCBE	locative <i>be</i>	N-ANT	non-anterior
NEG	negator	NP	noun phrase
OBJ	object	OBL	obligation
PERF	perfective	PFCT	perfect
PL	plural	POSS	possessive
POT	potentiality	PREP	preposition
REAL	realis	REL	relative pronoun
SG	singular	V ₁	matrix verb
V ₂	serial verb		

Typographic Conventions

- Examples of words and expressions are in italics: *run*, *run*, *He finds abducted children*.
- Translations and meaning are within inverted commas: ‘run’, ‘state of having dinner’.
- Quotations within the body-text are within double inverted commas: “the normal context or situation for occurrence of that object”.
- For emphasis, bold face is used: **aspect**, **within**.

The Krio Examples

The Krio examples will be presented as below:

- # Dis tri layn dem ya go prizent di Krio egzampul dem.
this three [[line] PL] here [IRR_{FUT} [present]] the Krio [[example] PL]
These three lines will present the Krio examples.
This is the reference line.

The first line will be the Krio example; the second will be a morpheme-by-morpheme, Anglicised presentation of the example; the third line will provide an English translation; and finally, the fourth line, when applicable, will give a reference to the source of the example.

In some of the Krio examples two non-English letters, adopted from the IPA alphabet of phonetic notation, may appear: “ɛ”, “ɛ”, representing the open e-sound, [ɛ]; and “ɔ”, “ɔ”, representing the open o-sound, [ɔ].

The morphological presentation at the second line is to be interpreted as follows:

- Items presented in small capitals; “FCR”, “PL”, “IRR” and “FUT”, represent abstract morphemes the meanings of which are found in the section “Abbreviations” above.
- Subscripted small capitals; “_{FUT}” in “IRR_{FUT}” indicate a further qualification of the head morpheme, “IRR”.
- Square brackets, “[]” surround phrases centered around one head word; [[example] PL], in which *example* is the head and PL is the plural marker.
- Parentheses, “()” surround items which are not represented on the surface level of the example but which carry an unmarked semantic value of some kind. For example [(ANT) [ple]], which is to be understood as the anterior tense of the verb *ple*.

Acknowledgements

There are of course a lot of people whom I wish to thank. First, and above all, my supervisor Professor *Gunnar Persson*, Department of Communication and Languages, Luleå University, who in some miraculous way managed to put up with my sometimes strange ideas, while at the same time guiding me through the awkward job of writing this thesis.

I would also like to thank the following eminent scholars and teachers: Professor *Henryk Kardela*, Maria Curie-Skłodowska University, Lublin, Poland, for putting a great deal of effort into reading and commenting on my work in progress manuscript. Professor *Bengt Odenstedt*, Department of English, Umeå University, for reading and commenting on matters of style. Dr. *Berit Wik*, for checking my English and for masses of encouragement. *Pat Shrimpton*, foreign lecturer par excellence, Department of English, Umeå University, for giving valuable comments on English verbal grammar. *Nev Shrimpton*, foreign lecturer, Department of English, Umeå University, for reading and commenting on my work in progress and maybe more importantly, for our discussions about Krio in general and Krio pre-verbal particles in particular. *Jan Robbins*, foreign lecturer, Department of English, Umeå University, for some sort of general encouragement, on the nature of which I really cannot put my finger. *Philip Grey*, foreign lecturer, Department of English, Umeå University, for discussions regarding English grammar, but more importantly, for buying me beer when I was left without funding for that sort of life essential activity. *Tony Huzzard*, foreign lecturer, Department of English, Umeå University, for grammatical judgements on strange English constructions. Dr. *Mark Troy*, Department of English, Umeå University, for numerous discussions and laughs about peculiar and anomalous *ing*-forms. *Lars HübINETTE*, Department of English, Umeå University, for the fridge.

The three secretaries at the Department of English, Umeå University: *Gerd Lilljegen*, *Christina Karlberg* and *Gunn-Marie Forsberg*, deserve a special *thank you* just for being there.

An extremely important group of people, my fellow doctoral students and comrades in arms, are also entitled to my gratitude: *Anders Steinvall*, for being my harshest critic. *Patrik Svensson*, for being a good neighbour. *Stephen Haughey*, for help with the book title and for checking the language of my entire manuscript. *Sulayman Njie*, for his comments on my Krio examples and for the Salonean dresses he brought home and gave to Maja.

In addition to the above-mentioned people I would also like to express my gratitude to the following people: Professor Emeritus *Sigurd Fries*, for showing me the value of diachronic language studies. Professor *Salikoko S. Mufwene*, Department of Linguistics, University of Chicago, for contacting me via the internet, and sending me some articles, after having seen his own name mentioned on my home page. *Guy Sohier*, Department of French, Umeå University, for help with my French. *Heiner Schorn*, Department of Informatics, Umeå University, for giving me valuable tips on how to use and explore the internet. *Svante Goding*, UMDAC, for helping me with those computer problems I was not able to solve myself. *Göran Thyni*, for computational and philosophical discussions. The *Leonenet Community*, for their readiness to help me with my Krio.

Last, but definitely not least, the staff at Kolbäcken's Nursery School in Umeå, needs a special mention: *Karin Lantto*, *Karin Lindström*, *Patricia Byström*, *Anders Bergström*, *Arne Keil*, *Britta Oskarsson*, *Mia Lindqvist*, *Eva Moilanen*, *Greta Addo*, *Annika Olsson*, *Eva-Lena Öhlund* and *Jan Brännvall*, for taking almost as much part in the raising of my children as I have done myself.

Umeå in January 1997
Johan Nordlander

1

Introduction

1.1 Background

In my work with the creole language of Sierra Leone, Krio, I have gradually arrived at the realization that in this language tense, the “grammaticalised expression of location in time” (Comrie 1985: 9), often appears to be subordinate to aspect—the internal structure of individual events. That is, the first and most important grammatical distinction to be marked in the Krio verb phrase is the distinction between what appear to be the perfective and imperfective aspects; only as a secondary consequence of this distinction is the tense of the phrase indicated.

The above-mentioned feature of Krio verbal marking would indicate that this language is an aspect-oriented language as opposed to the tense orientation of English implicitly assumed by Comrie (1976, 1985). This is best illustrated by comparing a Krio non-stative verb, *apin*, ‘happen’, in a situation with present time reference, with the same verb occurring in a past situation:

- 1 Di tin den we *de apin* naw nɔ bin de apin fɔstɛm.
the [[thing] PL] REL [IMP [happen]] now NEG [ANT IMP [happen]] firsttime
The things which are happening now weren't happening before.
God Pas Konsibul, act 3: scene 2: p.29
- 2 Di tin den we *apin* nɔ bin de apin fɔstɛm.
the [[thing] PL] REL [[ANT] [happen]] NEG [ANT IMP [happen]] firsttime
The things which happened weren't happening before.

Here we see that (1) refers to the present moment, the moment in time which is chosen by the speaker as the point of reference, whereas (2) refers to the past, a moment in time preceding the actual temporal point of reference. The important thing to note here is that in (1) the reference to the present moment is given not by a tense marker but by the marker of imperfective aspect,

de, whereas in (2) past time is indicated solely by the stem form of the verb.

Admittedly, this alone does not show that in (1) we are dealing with an aspect rather than a tense marker. If this division, present = *de* versus past = stem form, was the reflection of a general rule in Krio verbal marking, we could conclude that *de* indeed constitutes a tense marker proper. This is not the case, however, as there is a group of verbs which do not require any marking in order to refer to the present time. These are verbs such as *no*, 'know', *redi*, 'be ready'¹, etc.; in short, stative verbs.

- 3 *A no se yu bin gud.*
 I know CZR [you (SG)] [ANT [good]]
 I know that you were good.
 Gɔd Pas Konsibul, act 1: p.8

In order for these verbs, the statives, to refer to the past they need marking. This is done by the insertion of the anterior tense marker *bin*, which shifts the time of the situation back to some point preceding the actual moment of reference. Thus

- 4 *A bin no se yu bin gud.*
 I [ANT [know]] CZR [you (SG)] [ANT [good]]
 I knew that you were good.

indicates a situation which took place at some time in the past, using the moment of utterance as the reference point. The reason for this difference in tense and aspect marking between stative and non-stative verbs is said to be that statives are inherently imperfective and thus in no need of an imperfective marker. This is

¹ The observant reader may object that *redi* is not a verb but an adjective. However, in Krio—and in many other creoles—there is a class of stative (adjectival) verbs, many members of which are lexically derived from lexifier language adjectives but which in cases like this behave syntactically and semantically like verbs. That is, they are subject to exactly the same rules of TMA and NEG marking as are non-adjectival verbs.

Moreover, we will see in Section 4.2 that the distinction between verbs and predicative adjectives such as *(be) nice*, *(be) ready*, etc., has no bearing on the present theory, a distinction which for that matter could be described as a superficial morphological difference in Standard English which may or may not manifest itself in other languages.

not the case with non-statives since they are generally thought of as completed actions unless otherwise marked.¹ That is, they need imperfective marking if a lack of completion is to be communicated. This indicates, as we will see in Chapter 5, that there is a contingency relation between aspect and tense, in the sense that the perfective aspect usually entails anteriority, or “before-ness”, whereas the imperfective aspect entails simultaneity, viewed from the moment in time chosen as the point of reference.

Worth remembering, in connection with the above is that the state/non-state distinction has at least one direct and important effect upon the English verb system as well. The well-known fact that statives and non-statives show differences in their readiness to accept the progressive form. The former usually do not, and the latter do.

Considerations such as these have made me wonder if the verb systems, or more precisely the underlying foundation of temporal conceptions of languages such as English really are too different from Krio, at least as far as tense, mood and aspect (TMA) are concerned. It is my contention that a closer examination will reveal a number of deeply rooted conceptual and structural similarities between the verbal systems, in the broadest sense of the term, of these languages. This despite the existence of the clear differences in morphological realization that do exist.

1.2 Basic Philosophical Considerations

Any discussion of tense, mood and aspect, and the linguistic encoding of these semantic categories, will have to touch upon the nature of time itself. One of the most important scientific theories of the 20th century is Einstein’s relativity theory which basically regards space and time as dimensional reflections of the same phenomenon. Or in the words of Heidegger (1992: 3E):

Space is nothing in itself; there is no absolute space. It exists merely by way of the bodies and energies contained in it.

¹ The state/non-state distinction and its impact on tense, mood and aspect marking in Krio and English, will be discussed in Section 2.7 and Ch.3.

[...] Time too is nothing. It persists merely as a consequence of the events taking place within it.¹

One complication is that both space and time are psychological realities, with or without concrete bodies, energies and events. In this respect we can assume that both spatiality and temporality are encoded in language. The question is how?

The standpoint taken in this study is that our conceptions of both space and time are grounded in the same basic categorial oppositions, namely background versus foreground, reality versus imagination and before versus simultaneous; but that language has chosen to encode spatiality in nominals and temporality in verbals (cf. Magnusson and Persson 1986: 15–17). Note in this respect the fact that bodies and energies were said to be contained in space, but that events take place in time.

From a linguistic point of view, however, this Einsteinian conception of time (and space) leads to two questions, the answers of which turn out to be not mutually exclusive: (1) Is linguistic time an entity in its own right which is to be described as such? and/or, (2) is it to be handled as a spatial metaphor?

The former standpoint seems to be the one taken in the framework of Cognitive Grammar as conceived of by Langacker (1990, 1994, 1995a, 1995b). In CG, time in its most basic conception appears to be regarded as a verbal category in its own right which is the implication of the following observation by Langacker (1994: 32):

[T]he ‘raw experience’ of time passing is no doubt pre-cultural and universal [...]. I claim that this basic temporal experience functions linguistically as part of the characterization of every verb.

The latter standpoint seems to be that of Lakoff and Johnson (1980), when they claim, discussing metaphors in general that

¹ Translation by William McNeill. The original text reads:

Der Raum ist an sich nichts; es gibt keinen absoluten Raum. Er existiert nur durch die in ihm enthaltenen Körper und Energien. [...] Auch die Zeit ist nichts. Sie besteht nur infolge der sich in ihr abspielenden Ereignisse.

[...], time in English is structured in terms of the TIME IS A MOVING OBJECT metaphor, [...] (p.42)

But there is another way in which we conceptualize the passing of time:

TIME IS STATIONARY AND WE MOVE THROUGH IT. (p.43)

Lakoff and Johnson appear to claim that time may be conceptualized as a spatial metaphor since it is a fact that objects move through space, and stationarity can only be in relation to space.

However, irrespective of the position we take on this issue, we must conclude that time is a psychological reality and as such it constitutes a good candidate for being linguistically encoded in one way or the other.

While it is usually taken for granted that tense and aspect are verbal categories of time (cf. Comrie 1976 and 1985), in the sense that they are taken to stand in some relation to time, this is not the case for mood. As previously noted, tense is traditionally said to locate situations externally somewhere on a time scale, whereas aspect is claimed to characterize the internal temporal nature of these situations (see also Ch.5). On the other hand, the category of mood is usually not associated directly with time. In the present framework, however, this is considered a rather *ad hoc* analysis which says nothing about the cognitive status of these categories, the very foundations upon which tense, mood and aspect are built.

One important consequence of Bickerton's TMA analysis (presented below in Section 1.3) is that the category of mood is given a place **within** the verbal encoding of time since it is seen as stating the factuality or hypotheticality of situations **in time**. That is, situations are depicted as existing in time (realis) or as not existing in time (irrealis).

In addition, Fleischman (1995: 543) in a footnote referring to an article by Slobin and Aksu from 1986, writes that, although on the theoretical level tense, mood and aspect "are clearly distinct categories", "they cannot always be teased apart and studied in isolation from one another". Moreover, we will see, particularly in Sections 5.1 and 5.3 and in Chapter 6, that in the case of mood, there are indeed strong entailments with respect to tense

and aspect. Looking a bit further into the nature of these three verbal categories, we notice that all can be said to build on (or be extensions of) one binary distinction each:

- the background/foreground distinction – aspect
- the reality/imagination distinction – mood
- the beforeness/simultaneity distinction – tense

None of these distinctions is primarily a distinction rooted in time only. Instead they might be said to conceptualize and grammaticalize three distinctions, the mastering of which gives a survival advantage¹ in the form of:

- 1 A capability to single out the percepts of salient (therefore potentially dangerous) happenings, the foreground, from the background. This capability is of course not restricted to temporal background/foreground relations (while *x* was developing, *y* took place) since corresponding spatial relations (*x* is located in front of *y*)² also exist.
- 2 A capability to judge whether something *can/may/will* etc., *happen* (imagination), or *has already happened/is already happening* (reality). We judge the existence or non-existence of an entity located in space, in time, or in both. *There is a car* tells us that somewhere in space is an object, ‘a car’, but it also tells us that this ‘car’ has an existence which can be measured in terms of a time span. That is, not only does the car have a ‘spatial existence’, but it also ‘exists temporally’.
- 3 A capability to order events sequentially. That is, if you do *x*, then *y* will happen, (*x* is before/anterior to *y*), or *x* is taking place right *now* (*x* is simultaneous with *now*). Not only events can be ordered sequentially, objects too can be arranged in a sequence. The difference is that events are order-

¹ These ideas are more elaborately developed in Bickerton (1981: Ch.4) in which he motivates his theory of increased survival potential gained by mastering these three distinctions.

² The notion of a foreground/background distinction (figure/ground) is also a cornerstone of cognitive grammar, cf. Langacker (1990, 1994, 1995a, 1995b).

ed temporally, whereas objects are ordered spatially. The nature of sequential ordering remains the same, though.

The conclusion to be drawn from this is that, if the assumption that the verbal categories of tense, mood and aspect have their cognitive basis in the three more general distinctions; before/simultaneous, real/hypothetical and background/foreground, all of which can be said to apply equally well to both spatial and temporal entities, then we are surely justified in granting the category of mood temporal status.

Verbal categories are therefore categories of time since the descriptions of verbals, as opposed to nominals, must be made in terms of time, rather than in terms of space which is the case with nominals. Verbals have their extensions in time, whereas nominals have their extensions in space¹.

As previously noted, the important assumption in this study is that in language, **time is directly encoded only** in verbals and the paradigms pertaining to verbs, and that this fact is one major distinguishing factor between verbal expressions and nominal ones. Nominals carry space encoding, not time encoding. Verbals carry time encoding, not space encoding. In Section 2.2 we will discuss more specifically the notion of linguistic time and its implications for the present study.

1.3 The Bickertonian Distinctions

This section will present the basic theoretical framework upon which the present study is based. It closely follows the one outlined by Bickerton in *Dynamics of a Creole System* (1975), which he further elaborated in *Roots of Language* (1981) and in the article "The Language Bioprogram Hypothesis" (1984a). In *Roots* Bickerton points out the importance of what he calls the state-process² distinction (SPD) in the creation of creole languages in general and for the realization—and interpretation—of tense and aspect in the creole verb phrase in particular. He assumes (1981:

¹ This extension in space of nominals may be concrete, as with 'a car', or abstract, as with 'a feeling'.

² Further on this distinction will be referred to as the state/non-state distinction.

160) that the state/non-state distinction is innate, not because of any universality as such but

[...] because it plays a crucial role in creole grammars. There, statives are distinguished from nonstatives by the fact that the nonpunctual marker never attaches to the former;

The result of this role of the state/non-state distinction is that the creole grammar makes a covert distinction between statives and non-statives as far as tense and aspect marking is concerned (see examples (1) through (4) in Section 1.1).

In Krio, however, we sometimes find the imperfective marker *de* attached to a stative verb, as in example (5) below.

- 5 Isata, a *de fred* yu.
 Isata I [IMP [afraid]] you
 Isata, I am afraid of you/I fear you.
 Petikot Kɔna, p.35

This use of the imperfective marker resembles that of English when a stative verb receives progressive/imperfective marking, often in order to restrict the situation in some way or the other. For example, progressivizing *hear* in expressions such as

- 6 He *is hearing* voices.

in which the state depicted is restricted or delimited to a certain occasion or period in time. Suffice it to say, neither Krio nor English adheres strictly to the constraints on verbal marking proposed by Bickerton. However, as we will see in the following chapters, when these two languages violate this assumed restriction on verb marking, they do so in order to convey meanings of a highly marked nature, indicating quite a different sort of imperfectivity than that indicated by **non-states** marked for imperfectivity.¹ The result is that in the end we will see that the state/non-state distinction (rather than the durative/punctual one) constitutes a fundamental dichotomy in the verb systems of Krio and English.

¹ For an account of markedness theory, cf. Jakobson & Pomorska (1990).

In “The Language Bioprogram Hypothesis” (1984a) Bickerton formulates more specific definitions of what is only implicit in *Roots*: namely the three basic conceptual distinctions: durative/punctual, aspect; realis/irrealis, mood; anterior/non-anterior, tense, all three distinctions of which are manifested grammatically in the creole verb phrase. In Bickerton’s view these three distinctions are always implemented in the verbal system when children of pidgin-speaking parents create a creole language.¹

According to Bickerton (1984a: 182) one distinction affects

[...] aspect, and distinguishes non-punctual (events, past or present, that have measurable duration or are repeated) from punctual (single, completed events).

In Krio the imperfective marker (in Bickerton’s terms, *non-punctual* marker) is *de* (see examples (1) and (5) above). In English the same marking is carried out by the *be* verb-*ing* syntagm, that is, the progressive form (example (6) above). We will see in Section 5.2 that the aspect distinction is a matter of internal time relations in the sense that it makes clear whether the situation has an internal temporal structure—imperfective aspect—or has none—perfective aspect.

Another (Bickerton 1984a: 182) distinction affects

[...] modality, and again uses an invariant particle to distinguish irrealis (future, conditional, or imagined events) from realis (any event that has actually occurred or is occurring).

Strictly speaking, what Bickerton refers to as *modality* is defined in the present study as *mood*, reserving modality, along with aspectuality and temporality, for the characterization of the entire situation (see Section 2.11 and Ch.6). In Krio the most common way of marking irrealis mood is with *go*, the marker of future:

¹ There is not enough room in the present study to give an account of pidgin and creole theory in general and the creation of creoles in particular which would do justice to the vast and growing literature on these subjects. The interested reader is referred to works by Arends, Muysken & Smith, eds., (1995); Bickerton (1981, 1984a, 1990); Mufwene (1986, 1996a); Mülhäusler (1986); Romaine (1988); Todd (1974, 1984).

- 7 *Wi go tɔk ɔda tɛm.*
 we [IRR [talk]] other time
 We'll talk to each other some other time.
 Bad Man Betɛ Pas ɛnti Os, scene 1: p.9

However, contrary to Bickerton's prediction that creole languages will make use of only one invariable irrealis marker, Krio has two additional ones, *fɔ*, the marker of improbable future, counter-factuality, etc., and *kin* which is a kind of ability (sometimes habituality) marker.¹ These three markers have split the "irrealis cake" in Krio among themselves, each of them conveying an additional and more specific meaning than pure irrealis.

With respect to this specialization of meaning, the Krio system of irrealis marking is like that of English, in which irrealis mood is indicated by a fairly large number of modal auxiliary verbs such as *can*, *will*, and *might*, or, very rarely, by the subjunctive mood. In Section 5.3 we will see that in the present framework mood is conceived of as constituting a distinction between factual and hypothetical time, in the sense that realis points to a time-plane on which the events are asserted, the past and the present, and irrealis points to a time-plane on which the events are hypothesized in one way or the other, the future, etc.

Finally, Bickerton's (1984a: 182) third distinction affects

[...] tense, and is marked by an invariant particle preceding the verb and other INFL constituents. The reference point for tense is never the "point present" or the "moment of speech" familiar to speakers of European languages, but rather the time of the topic under discussion, which may or may not have present reference.

The Krio marker of tense, the anterior marker *bin*, indicates that some situation took place **before** some other situation or moment in time chosen as the reference point (see example (4) above). Thus the anterior marker is basically a marker of situational sequence in the sense that it clarifies the **order** of situations/events rather than the **location** of these events in time (see Section 5.4). The similarity to the Standard English system of

¹ Sections 5.3 and 6.3 will deal more extensively with the Krio mood markers.

marking past and present tenses is obvious of course, although normally the past and the present are considered to be locations in time rather than indicators of sequential order. In short, the purpose of tense is to indicate the (sequential) relations holding **between** situations and their points of reference, and therefore this distinction is a question of external time relations.

Important to note with respect to all the four distinctions above is that in the present study they are conceived of as binary in the Jakobsonian sense (Jakobson & Pomorska 1990: 137):

The conception of binary opposition at any level of the linguistic system as a relation between a mark and the **absence** of this mark [...] [emphasis mine]

It will be shown in the present study that these four basic distinctions are also basic to the verbal systems of English and Krio in the sense that (1) the classification of different verbs as either stative or non-stative to a large extent, if not exclusively, determines how these verbs are to be handled grammatically and morphologically, and (2) that tense, mood and aspect are always expressed whatever the situation, either explicitly by some way of marking or implicitly by the absence of marking.

It will be argued in Section 2.7 and Chapter 3 that Bickerton's four basic distinctions should be hierarchically ordered, in the sense that the state/non-state distinction is a covert distinction whose domain is the verbal nucleus¹, the lexical content of the main situational verbal, whereas the other three distinctions are properties of the verbal constituency², the obligatory part of the situation. The interaction between these levels will then yield the tense, mood and aspect values of the situations in question.

1.4 Previous Related Studies

In Sections 1.4.1 through 1.4.4 we will briefly examine some influential works dealing with tense, mood and aspect problems: Vend-

¹ *Nucleus* is defined and discussed in Section 2.3 and Ch.4, *situation* in Sections 2.4 and 2.11.

² The term *verbal constituency* will be defined in Section 2.11 and Ch.5.

ler's (1967) conception of aspectuality/Aktionsarten in 1.4.1, Comrie's (1976) view on aspect and aspectuality in 1.4.2, the traditional grammarians' approach to tense and aspect in English, represented by Quirk, *et al.* (1985 & 1990) in 1.4.3, and finally in 1.4.4, we will discuss some views on mood and modality.

1.4.1 Vendler's Aspectuality

One important contribution to the study of aspect/aspectuality¹ and tense and temporality is Vendler's (1967: 97–98) realization that “the time element remains crucial” for the study of aspectual issues such as processes, states, occurrences, etc. This leads him to state (1967: 98):

[...], if we focus our attention primarily upon the time schemata presupposed by various verbs, we are able to throw light on some of the obscurities which still remain in these matters.

The “time schemata” discussed by Vendler resemble to some extent the notion of nucleic dynamicity proposed in the present work, as he explicitly states that they are “presupposed by various **verbs**”, (my emphasis). The main problem with Vendler's very influential (cf. Declerck 1979, for example) account of aspectuality is that in his discussion he fails to distinguish between the verbs and the situations in which they occur. This leads to claims like the following (1967: 102):

Thus we have arrived at the time schemata of two important species of **verb**. Let us call the first type, that of *running*, *pushing a cart*, and so forth, “activity terms,” and the second type, that of *running a mile*, *drawing a circle*, and so forth, “accomplishment terms”. [emphasis mine]

Apart from *activity* and *accomplishment* terms, Vendler also re-

¹ It seems that Vendler never uses the terms *aspect* and *aspectuality* in “Verbs and Times” (1967). Instead he uses the label *time schemata* as a cover term for the phenomena he sets out to investigate.

cognizes what he calls *achievement* terms (*kill, reach the summit, etc.*) and *state* terms (*love, be nice, believe, etc.*).¹ For Vendler, activities and accomplishments are distinguished from achievements and states by the fact that the latter group is said to lack continuous tenses (1967: 102).

Disregarding the inaccurate assumption that achievements and states lack continuous tenses², the problem which Vendler does not recognize here is that his equation of, or rather failure to distinguish between, the verb and its situation makes it impossible to explain the causes of whatever differences of aspectual meaning he claims to have identified. The present study will show that we can explain these differences in a coherent and satisfactory fashion if we keep a strict division between the verbal nucleus of the situation and the situation as a whole.³ For example, in Vendler's terms the verb *sing* will have to be given a double classification according to which linguistic environment it occurs in. Thus a Vendlerian analysis of examples (8) and (9) below

8 Shelly *is singing*.

¹ There is a very rough correspondence between Vendler's terms *state*, *activity*, *accomplishment* and *achievement*, and those used in the present work, *stative*, *processive*, *telic* and *eventive*, respectively. The major difference is that the latter terms are said to be dynamicity values of the verbal nucleus rather than labels on different kinds of situations. This will be further elaborated in Ch.2.

² They might lack continuous 'senses' but not tenses for two reasons: (1) That which Vendler refers to is the progressive syntagm, *be* plus verb-*ing*, which in fact does appear both with eventives (Vendler's achievements) and statives, and (2) the progressive syntagm is not a tense marker, but an aspect marker. There are no continuous *tenses*, in other words.

Therefore, we may claim that what Vendler would appear to take as a lack of continuous tense in expressions such as *be killing somebody*, and *be hearing something*, must instead refer to a lack of continuousness, that is, a continuous sense, in these expressions.

³ Another complication for Vendler is the fact that he does not appear to take argument structure into account. That is, the difference between *He is running a mile* and *He is pushing a cart*? is said to be that the former is an accomplishment but the latter is an activity. However, although both situations contain a processive nucleus, *run* and *push*, it is the way their arguments are organized which is different since *a mile* is an adverbial, whereas *a cart* is a direct object (cf. Allerton 1982 & 1995). That is, the different "time schemata" of these two expressions are brought forth, not by the verbs themselves but in conjunction with their arguments. Thus nothing is said about the "presupposed time schemata" of these verbs.

9 Shelly *is singing* a song.

would say that *sing* in (8) is an “activity” and *sing* in (9) is an “accomplishment”. The main problem with this is that it does not say anything at all about the relation holding between *sing*, which constitutes the verbal nucleus of both examples, and the linguistic environments in which we find it. As a result of this, nothing is said about the factors that are involved in creating the final notions of “accomplishment”, or “activity”, etc. Indeed, it implies that the ‘singing’ itself is different in some mysterious way.

In the present framework, *sing* in (8) constitutes the processive nucleus in an unbounded process situation, whereas in (9)¹ it is the processive nucleus in a bounded process situation. This analysis captures the affinity between the two situations. Moreover, it also points to something that Vendler’s analysis is incapable of identifying, namely that there is a certain directional relation holding between the verb (nucleus) in isolation and the expression in which it occurs.

One conclusion to be drawn from Vendler’s special kind of aspectual and temporal analysis (time schemata analysis) is that it operates only on the situational level, assuming a totally *ad hoc* analysis of the verbal nucleus and verbal constituency in that it does not take into account the dynamicity² properties of the individual verbal nuclei, nor even notionally recognizes the existence of these properties. The analytic framework presented in this work accounts for these dynamicity values, regarding them as the starting point for all time-related analyses of language.

1.4.2 Comrie’s Aspectology

One other influential contribution to the study of aspect and aspectuality is Comrie’s *Aspect* (1976) which stresses the important

¹ In (9) the boundedness is created by the complement, rather than by any feature of *sing* itself. The verbal bounded/unbounded distinction and its connection to the nominal specific/generic distinction is discussed in Section 6.2.2.1.

² *Dynamicity* will be discussed in Sections 2.6 through 2.9.1. Here it is enough to say that it is a categorial cover term for stativity, processiveness, eventiveness and telicity, all terms of which express a certain relation between the development (or non-development) of a verbal nucleus (or situation) and time.

connection between the stative/dynamic and the imperfective/perfective distinctions. He also hints at a tripartite distinction between state, process and event situations, which will provide a theoretical background for the discussions in Chapter 2, aimed at providing definitions of the four classes of verbal (nucleic) dynamicity, *stative*, *processive*, *eventive* and *telic* nuclei.

The primary object of Comrie's book is to account for the great number of aspectual distinctions available to human languages in general, and for the grammatical category of aspect in particular. Therefore, just as Vendler (1967) does, he concentrates on the verbal situation at the expense of the isolated verb.

Indeed, in *Aspect*, Comrie does not seem to feel any need for an elaborate theory of nucleic dynamicity as conceived of in the present work. Thus, in discussing telic and atelic situations (1976: 44–48), he is led astray by his efforts to maintain a clear situational bias in the sense that he applies the definition of telicity in a very vague fashion. In fact, he seems unwilling to provide any definition **at all** of telic verbs, because of the difficulties he sees in supplying such a definition. Instead, when talking about the inappropriateness of automatically giving telic status to verbs occurring in telic situations he makes the following claim (1976: 45):

However, situations are not described by verbs alone, but rather by the verb together with its arguments (subject and objects). Thus although *John is singing* describes an atelic situation, the sentence *John is singing a song* describes a telic situation, since this situation has a well-defined terminal point, namely when John comes to the end of the song in question.

It is true that verbs alone do not describe, or characterize, situations, and it is also true that we have to take the verb's arguments into consideration when determining its dynamicity. But, and this is the weak point in Comrie's reasoning, situations do not, and cannot even in principle, characterize isolated verbs at all. This fact rules out as irrelevant any situational arguments in a discussion of nucleic dynamicity, here telicity. Thus Comrie is mistaken in implying that the telicity of the situation *John is singing a song* says something conclusive about the telic or atelic status of the verb *sing*. His stand-point is founded on a misconception.

tion of what constitutes the problem; how to define telicity itself, and how to define its categorial affiliation. The view argued for in the present work (see Section 2.8) is that there is a group of verbal nuclei which adhere to the criteria for telicity outlined by Garey (1957). Nuclei of this group combine the process of processive verbs with an implicit end-point, in such a way that the process is contingent on its end-point.

Therefore, in the present framework, telicity is viewed as a nucleic feature, which roughly corresponds to boundedness on the situational level, the difference being that telicity refers to the internal nucleic development, whereas boundedness is the same quality referring to the situation as a whole (see Section 6.2.2.1).

It seems that the reason for Comrie's interest in the situation at the expense of the verb is that he is first and foremost interested in what **message** is put across to the hearer/reader by the different means of aspectual marking available, and not in **how** the speaker chooses this or that particular aspectual marking.

1.4.3 The Traditional Grammarians' View

Another approach to tense-aspect related problems is the joint efforts of Greenbaum and Quirk in *A Student's Grammar of the English Language* (1990) and that of Quirk and Greenbaum together with Leech and Svartvik in *A Comprehensive Grammar of the English Language* (1985). These recent works on English grammar will here serve to represent the views of traditionally working grammarians. In these grammars, the authors try to give an outline of the various temporal and aspectual possibilities available to the speaker of Standard British English. Their approach is to use the distinction between *stative* and *dynamic senses* of verbs and from this standpoint they analyse and classify a number of situations. Typical examples of these classes are: the *state present* (1985: 179), example (10); the *event past* (1985: 186), example (11) and the *past perfective*¹ (1985: 195), example (12):

¹ Quirk *et al.* insist on the label *perfective* for the perfect construction and they do not seem to distinguish between the *perfective* and the *perfect*. In Sections 5.2 and 6.2.2.2 these two categories will be distinguished.

- 10 Two and three *make* five.
We *live* near Toronto.
- 11 The eruption of Vesuvius *destroyed* Pompeii.
- 12 When we bought it, the house *had been* empty for several years.

Unlike the shortcomings of Comrie, those of Quirk *et al.* are not a question of excluding the isolated verb from the investigation but of confusing verbal values/senses with situational ones in such a way that the object of investigation becomes unclear. For example in Greenbaum & Quirk (1990: 48) we learn that:

A verb may shift from one category to another. *Have*, for example, is usually stative: *She has two sisters*. But it has a dynamic sense in *We have dinner at Maxim's quite frequently*.

Here, they confuse the issues in a two-fold fashion. Not only do they fail to see that from a prototypical point of view (see Section 2.3), *have*—as an isolated verbal nucleus—is **always** a stative verb. They also overlook the fact that the verbal situation *have dinner* is a state situation because of the fact that we cannot discern any different phases (see Section 2.5) in this situation. Either you are ‘in the state of having dinner’ or you are not. It may be the case that ‘having dinner’ involves a number of different courses, of changes of plates, etc., but this does not alter the fact that an analysis of *have dinner* should in fact yield the answer that here we have a stative verb, *have*, in a state situation, *have dinner*.

Thus, when Greenbaum & Quirk refer to the main verb *have* in the sentence *We have dinner at Maxim's quite frequently* as having a dynamic sense, they are in reality referring to the fact that the verbal situation *have dinner* occurs at a certain irregular frequency. It is this frequency, overtly manifested in the adverbial *quite frequently*, that gives the situation this so-called dynamic sense. It makes the state *have dinner* a part of a superordinate situation which indeed is dynamic since it is a process, that is, the process of ‘repeatedly having dinner’. This, however, has no bearing whatsoever on the fact that *have* is a stative verb, and that *have dinner* is a state.

Fig. 1: Situational structure of *We have dinner at Maxim's ...* .

The tree diagram in the above figure shows the situational structure of *We have dinner at Maxim's quite frequently* and how this structure is centered around the nucleic verb *have*. And from this it is quite clear that Quirk *et al.* are mistaken in assuming that there exists a one-to-one relation between the dynamics of the verb and that of the situation.

The situational structure of Figure 1 would thus be that the verbal constituency, VC, is made up of a stative simple nucleus, *have*, which takes the non-anterior tense, realis mood and imperfective aspect.¹ The nucleus, *have*, of this VC, in turn takes an obligatory argument, here in the shape of a nominal non-specific/generic² complement, *dinner*, which does not alter the tense, mood and aspect values of the VC. Then the VC plus complement is modified by the frequentative modifier, *quite frequently*, giving it its final situational meaning.

In the present work we will, as indicated above, approach the problems attached to the method of analysis proposed and used by Quirk *et al.*, by claiming that in order to investigate the full situation in terms of time, the verbal nucleus, that is, the equivalent of a main verb, must first be given a dynamicity analysis. Only then is it possible to proceed any further and analyse and interpret the time encoding of the entire situation.

¹ For the definitions of the tenses (anterior and non-anterior), moods (realis and irrealis) and aspects (perfective and imperfective) (see Ch.5).

² As all non-specific complements it marks the situation for unboundedness (see Section 6.2.2.1 for a discussion of the bounded/unbounded distinction).

1.4.4 Studies of Mood and Modality

It is indicated, both in Section 1.2 and 1.3, that in the present framework mood is seen as a category of time, on a par with tense and aspect. This, however, turns out to be a very uncommon approach, judging from previous studies of mood and modality. Works dealing with this specific area of linguistic research (cf. Duffley 1994, Palmer 1986, Quirk *et al.* 1985: Ch.4, for example), tend to discuss modality primarily in terms of the different semantics of various modal categories such as *volition*, *obligation*, *possibility*, *prediction*, etc. The connection between mood and modality, on the one hand, and time on the other, is recognized very cursorily, if at all, by these authors. When it is, it is often done in terms of future time reference by the modal auxiliary *will*. That is, the future is analysed as a tense, marked by a predominantly modal auxiliary verb. Comrie (1976: 2, note 2) appears to feel that there is an important connection between mood and tense when he mentions that

[t]he so-called future tense of many languages has modal as well as tense value; throughout this book the traditional term ‘future tense’ is used, though it should be borne in mind that this is often as much a mood as a tense.

As opposed to the traditional view of mood and modality, it was argued in Sections 1.2 and 1.3, that mood is indeed a category of time. In Sections 5.3 and 6.3, below, it will be further argued that semantic categories such as *volition*, *obligation*, *possibility*, *prediction*, etc., together with the so-called future tense, are all different shades of modality, just as *habituality*, *iterativity*, *continuouslyness* etc. are different shades of (imperfective) aspectuality (rather than aspects in their own rights) (see Section 5.2).

There are linguists, however, Fleischman (1995) and Givón (1995), for example, who have discussed the connections and affinities between irrealis mood and other verbal categories of time.

Thus Fleischman (1995: 535) sees a strong correlation between the imperfective aspect, particularly when marked for past time/anterior reference, and an irrealis implication:

Thus it is not coincidental, I submit, that in languages with a perfective/imperfective opposition in the past, irrealis quotation styles consistently privilege imperfective past tenses.

Fleischman's (1995: 519–520) list of various uses of the past imperfective conveying some kind of irrealis modality comprises for example children's make-believe games, dream narrations, indirect quotation style, etc. What all these uses have in common is the feature of non-completiveness, or openendedness. That is, the situations in question are all depicted as devoid of a terminating developmental phase (see Section 2.5). The crucial notion here is termination, since by definition it takes place in terms of time: That which is terminated has lost its existence in time. One result of this lack of termination may be that doubt is thrown on the factuality of the situation (see Sections 5.3 and 6.3), since these situations contain no asserted end-point. In short, they may be viewed as hypothetical. The point being that this hypotheticality is transmitted, not by a dedicated mood particle or inflection, but by whatever way imperfectivity is transmitted. In English this may be done by the syntagm *be* plus *past* plus verb-*ing*.

Another linguist hinting at a semantic link between irrealis mood and a category of time is Givón (1995: 116), who sees a connection between habituality (an aspectual, thus time, category) and irrealis:

Semantically, however, they [habituals] resemble irrealis in some fundamental ways. To begin with, unlike realis, which typically signals that an event has occurred (or state persisted) at some specific time, a habitual-marked assertion does not refer to any particular event that occurred at any specific time.

What seems to be the important characteristic of habituals linking these expressions to the irrealis mood, is non-specificity as regards the existence of any specific event,¹ in a series of recurring

¹ We can of course argue that a habitual expression asserts the existence, in time, of a **series** of recurring events, rather than the hypotheticality of the events themselves. In such a case the connection is not between habituality and irrealis mood but between habituality and realis mood. Either way, we have a semantic connection between a category of time (habitual aspectuality) and mood.

events, at a certain location in time. In other words, no assertion is made concerning any one of these recurring events, and therefore these events may be viewed as hypothetical and irrealis.

In both Fleischman (1995) and Givón (1995) we find arguments for an implicational link between irrealis mood and some aspectual category of time. This connection strengthens the validity of the standpoint taken in the present work that mood is a time category too, on a par with aspect and tense. Furthermore, mood, like aspect and tense, is always marked within the verbal constituency, either as realis or irrealis. Of these two moods, realis is in the majority of cases seen as the unmarked choice, since it has no overt marking in English and Krio, whereas irrealis is usually the marked choice, mostly conveyed by overt markers, such as the English modal auxiliaries or the Krio, pre-verbal mood particles (see Section 5.3). Modality, on the other hand, is viewed as a peripheral, optional, elaboration of the situation in terms of an additional layer of meaning (see Section 6.3).

1.5 Aims

The main purpose of this study is to show that Bickerton's (1981, 1984a) postulation of the four, conceptually basic binary distinctions, state/non-state, durative/punctual, realis/irrealis and finally anterior/non-anterior, can be used as a starting point for the analysis—in conjunction with a dynamicity analysis of the isolated verbal nucleus—of the relations between time and the verb systems of English and Krio. It will be shown that these distinctions are equally important, albeit with slightly differing results, to the verb systems of English and Krio. It could also be said that this thesis has a number of interrelated purposes:

- To show that by understanding the interplay between nucleic (verbal) dynamicity, and tense and temporality; mood and modality; and aspect and aspectuality, we can reinterpret our conceptions of these categories.
- To discuss and refine the terminology pertaining to this area of linguistic investigation.

- In view of the above, to briefly compare English with the less investigated and hence less known creole, Krio, spoken mainly in Freetown, the capital of Sierra Leone.

In addition to these more straightforward aims, it is hoped that this study will help break down the (sometimes sound proofed) walls between creolistics and mainstream linguistics. The sad fact is that there is a noticeable lack of authors on creolistic topics in the bibliographies of non-creolist linguists, even when working on related topics.

1.6 Method and Outline

The Krio data are primarily authentic material which is extracted from a corpus consisting of four Krio plays: *Petikot Kɔna*, *Gɔd Pas Kɔnsibul*, *Bad Man Betɛ Pas Emti Os* and the Krio New Testament, *Gud Nyus Fɔ Olman*. In addition to this, some constructed Krio examples have been added when needed, mainly for contrastive purposes. All Krio examples and the translations, however, have been checked for grammaticality and sense appropriateness by speakers of Krio, both native¹ and non-native².

The English language data, on the other hand, have only to a minor degree been taken from corpus sources, such as the London, Oslo, Bergen (LOB) corpus, etc. Needless to say, the remaining, constructed English examples have been thoroughly discussed with and examined by native speakers of both American and British English.

In Chapter 2, **The Basic Concepts**, the basic notions and structure of the present framework and its terminology will be presented and discussed. A brief outline of the structure of verbal situations will also be given.

In Chapter 3, **The Supremacy of the State/Non-State Distinction**, it will be shown that the covert state/non-state distinc-

¹ I feel indebted to the Leonenet community on the internet which has provided very insightful and valuable answers to my inquiries regarding Krio grammar.

² Among these I feel a special gratitude to Sulayman Njie, non-native speaker of Gambian Krio, with whom I have had innumerable discussions about the translations of Krio into English (and Swedish).

tion, as opposed to, say, the durative/punctual distinction, is conceptually basic for the treatment of verbal expressions.

In Chapter 4, **The Nucleus**, the *nucleus*, which is the semantic core of the verbal situation, will be discussed in such a way as to elucidate what may, and may not, constitute the nucleus of a situation.

In Chapter 5, **The Verbal Constituency**, the elements that together with the nucleus make up the *verbal constituency*, VC, will be presented and defined.

In Chapter 6, **Peripheral Situational Modification**, some interesting non-obligatory elements of the situation will be discussed.

Finally, Chapter 7, consists of a brief summary of the study and its main conclusions.

2

The Basic Concepts

2.1 Introduction

In Chapter 1 some key concepts for the present investigation were hinted at, most of which are fairly straightforward and require no further definition. However, some of these concepts must be more closely defined before we can move on in our investigation: (1) *nucleus*, the core of conceptual verbal meaning of the situation which in its simplest form is instantiated by a main verb; (2) *situation*, because this is the maximal linguistic element, centred around one and only one verbal nucleus; (3) *phase*, since all nuclei and situations are measured in terms of (developmental) phases; (4) *dynamicity*, because the internal development of nuclei and situations is characterised in terms of internal development.

This chapter will moreover contain a short formulaic and schematic description of the general structure of verbal situations as they are conceived of in the present framework. First, however, the notion of linguistic time will be discussed.

2.2 Linguistic Time

The concept of **time** is of crucial importance to a full appreciation of the present theory, since this is a theory of how time in its three dimensions is manifested in language. These three dimensions of linguistic time are assumed to be (1) the aspect/aspectual one which is grounded in our conception of backgrounded versus foregrounded temporal phenomena (see page 6); (2) the mood/modality one with its conceptual basis in our capabilities to single out real temporal phenomena from hypothetical ones (see page 6); and (3) the tense/temporality one, based on the no-

tions of beforeness and simultaneity (see page 6).

One important assumption behind this theory is that the only category directly encoding time in language is in fact the verb, and that other categories such as time adverbials, etc., only encode time indirectly in the sense that they only relate situations to locations in time, or to developments over time, rather than encode these temporal locations and developments directly. For example, the temporal adverbial *yesterday*, as in

13 *Yesterday*, John sold his car.

which at first sight appears to locate this situation in the past, viewed from *today*, only serves to specify **relationally** whatever particular point of reference we are dealing with. The reason is that, in its adverbial use, *yesterday*, has no independent meaning. Its meaning is only determined in relation to some other linguistic, or extra-linguistic element. In fact, the grammaticality of expressions such as

14 *Yesterday* is always located in the past.

shows that whatever temporal value resides in *yesterday*, this value can only be defined relationally. There certainly appears to be no incompatibility between the present tense and *yesterday* in (14). The reason is that when used as the subject of a construction, *yesterday* does in fact have an independent meaning in the sense that it is given an abstract substance which enables it to function as the subject. That is, *yesterday* in (14) is a nominal and nominals have their extensions in space rather than in time as is the case with verbals (see Section 1.2).

But how exactly are we to understand the concept of time as it is manifested in language? Maybe even more importantly, can we do this at all given our preconceived notions of tense, mood and aspect?

To answer these questions, and acquire a useful tool for our description of tense, mood and aspect, we will resort to the common metaphor of *time is a line* (cf. Quirk *et al.* 1985: 175) running from an undefined starting-point in the past, via the present moment of speech/present focus of discourse, (S), into the future:

Fig. 2: The Time Line, from the past to the future.

There are two major qualifications we will have to make as regards this time line¹ and the status of the present moment of speech/present focus of discourse.

FIRST, logically speaking, the present moment has no duration at all and thus temporal location of events in the present should in principle be impossible. Linguistically speaking, however, events do take place/exist simultaneously with the present moment and so we will follow Quirk *et al.* (1985: 175) in saying

... that ‘present’ is defined in an inclusive rather than an exclusive way: something is defined as ‘present’ if it has existence at the present moment, allowing for the possibility that its existence may also stretch into the past and into the future.

The essence of this is that any event that can be said to co-extend with that ever-moving moment we call the present, will also take the present tense. For example, in both (15) and (16)

15 Sarajevo *is* the capital of Bosnia.

16 John really *loves* to lecture.

the situations centred around the two stative verbs *be* and *love* are co-extensive with the present moment; the result is that no other tense than the present is possible, even though both of these sentences can be said to describe situations that definitely have past time locations which may also extend into the future. The point is that since the present moment/discourse focus is included

¹ When necessary, in discussions of temporal development, a somewhat simplified version of Reichenbach’s system of tenses—as it is presented by Binnick (1991: 112)—will be used. According to Binnick, Reichenbach defines tenses as relations holding between times.

In this (Reichenbach’s) terminology ‘S’ stands for *the time of the speech act*; ‘E’ is *the time of the event or state of affairs*, and finally ‘R’ stands for *the reference point, the temporal ‘point of view’*.

within the situations, the present tense is obligatory.

SECOND, the present moment constitutes the very point in time when asserted time becomes hypothetical time, or as Comrie (1985: 43) says:

The past subsumes what may already have taken place and, barring science fiction, is immutable, beyond the control of our present actions. The future, however, is necessarily more speculative, in that any prediction we make about the future might be changed by intervening events, including our own conscious intervention. Thus, in a very real sense the past is more definite than the future. Following from this, one might argue that while the difference between past and present is indeed one of tense, that between future on the one hand and past and present on the other should be treated as a difference of mood rather than one of tense.

To summarize, the inclusiveness of the present as observed by Quirk *et al.*, and the obvious linguistic categorial asymmetry between past time and future time noted by Comrie, result in a need to recognize two major temporal oppositions: (1) the tense opposition of past versus non-past, and (2) the mood opposition of future versus non-future.

2.3 Definition of the Verbal Nucleus

This section is intended as a short introductory account of the general nature of the verbal core of situations. However, it will not account for the lexical content and morphological composition of the nucleus as this will be further elaborated on in Chapter 4.

In order to analyse situations in terms of linguistic time, a first prerequisite is the analysis and classification of the verbal nucleic core of the situations in question, in particular as regards its (the nucleus') internal dynamicity. This means defining exactly what this verbal core consists of, and isolating it from the rest of the situation.

Moreover, the implicit assumption which is relevant to the present study, following from such an isolative definition of the

nucleus, is that the meanings of individual tokens belonging to a certain nucleic type will not vary as far as their dynamicity values are concerned. Instead, any apparent variability of nucleic dynamicity will be ascribed to elements other than the nucleus.¹ The nucleus itself will be assumed to carry an **invariant** dynamicity value. This assumption is akin to the axiomatic claim of Tobin (1994: 8–9) that

[...] the concept of invariant meaning is that *all* the discourse and contextual functions, usages, and ‘meanings’, i.e. in sign-oriented terms—*all the* MESSAGES associated with a linguistic sign—are derived from and accounted for by the invariant meaning itself.

By this is not to say that, in the framework of the present study, the Krio verb *rɔn*, which translates as ‘run’ in English and ‘springa’ in Swedish, would necessarily cover exactly the same semantic ground as its closest English and Swedish equivalents. The only claim it makes is that the basic, underlying **concept** ‘run’, in whatever lexicalized guise it appears, will carry the same dynamicity value, cross-linguistically.²

Having identified the dynamicity of the nucleus, the steps following this will take this nucleic dynamicity as the starting point for the continued analysis of the situational time encoding of the utterance in question. This leads to the assumption that situational time is to be stated with reference to the dynamicity value of the nucleus. In brief, this means that in the present study the term *nucleus* will denote the equivalent of a main verb in isolation, detached from the situation in which it occurs. In order to arrive at this definition we will have to strip the verbal item in question of

¹ Cf. Declerck (1979) and Vendler (1967), for example, to find examples of analyses with no distinction between nucleic and situational dynamicity.

² Note that we are not dealing with the general meanings of verbs such as *run*, *saunter*, *dash*, etc., we are dealing with just one semantic feature of verbs, that of dynamicity. This means that the fact that the specific and total meanings of these verbs may vary, possibly infinitely, has little or no effect on the analysis of the way time is encoded in situations in which these verbs occur. Of all the semantic features we may be able to identify in the general meaning of a verbal nucleus, only nucleic dynamicity will have direct consequences for the time encoding of these situations.

all its overt linguistic and extralinguistic contexts, and keep only our semantic understanding of it. In this respect it is important to note that we cannot perform this contextual stripping simply by mechanically excluding all free morphemes from the nucleus, since in some important cases the nucleus is in fact made up of two or more elements which combine to yield the lexical content of the nucleus. For example, in a so-called phrasal verb construction such as

17 He *turned down* my application.

the nucleus with the meaning ‘reject’ is a complex formed by the verb *turn* and the adverb *down* (see Section 4.2.1 on complex nucleic constructions). Neither can we include all bound morphemes within the nucleus for the plain and simple reason that some of them, for example inflectional morphemes such as the past tense morpheme in

18 He *rejected* my application.

carry an independent meaning, here the past/anterior tense, which does not constitute part of the meaning of the nucleus. The lexical content of *reject* is not altered or changed in any way by the past tense morpheme. This will also be discussed below.

There are two important points to note about this isolative definition of *nucleus*.

FIRST, we may compare the nucleus to the kind of context-free definitions of individual verbs which are found in dictionaries. These definitions are starting points to, or gateways into, the dictionary entry in question. For example, in the definition below, taken from the *OED*, we find nothing which says anything about the context in which *die* means ‘to lose life’, etc.

19 die

1. a. *intr.* To lose life, cease to live, suffer death; to expire.
(OED, CD-ROM version)

Further on in this entry there follow a number of examples and quotations serving to illustrate how *die* is used in context. These

examples and quotations cannot, however, be understood without taking the “gateway” definition, here (19), into account.

The analogy between verbal nuclei and dictionary definitions lies in the fact that both stand in an *asymmetric* relationship (see page 62) to their situation and quotations, respectively. That is, without first having analysed the nucleus or grasped the dictionary definition we cannot, even in principle, start to analyse the situation or understand the quotations.

SECOND, inflections and other verbal modifiers such as TMA markers, etc., are not properties of the nucleus *per se* but of the situation, or rather, of the *verbal constituency* (see Sections 2.11 and Ch.5), which is one of the two obligatory elements in the verbal situation. Other elements such as the prepositional adverb in phrasal verbs like *turn down* and prefixes such as German *ver-* in *versprechen*, ‘promise’, will have to be seen as integrated within the nucleus (see Ch.4).

Before we go on, a word of caution is needed as regards prototypes in general, and the relation between nucleic dynamicity values and the prototypical dynamicity of verbal situations in particular. As Rosch (1978: 43) points out, prototype theories are theories about context, and it is suggested in the above that in order to arrive at the nucleic dynamicity of a certain verbal concept, this nucleus must be stripped of its context. This would suggest that it is impossible to isolate the dynamicity value, seen as prototypical for a given nucleus (for example processive for *run*, eventive for *hit*), on the grounds that prototypes cannot be identified without contextual information. But if this is true, how can it then be explained that language users are able to understand lexical items, apparently **without** any overt context whatsoever? The reason is, in the words of Rosch (1978: 43), that:

[...] when a context is not specified in an experiment, people must contribute their own context. Presumably, they do not do so randomly. Indeed, it seems likely that, in the absence of a specified context, subjects **assume what they consider the normal context** or situation for occurrence of that object. [emphasis mine]

What Rosch means is that there must be some kind of default, in-

ternalized, context which is supplied in those cases when overt linguistic and extralinguistic context is not available. Moreover, we have no reason to believe that this supplied context is in any way concrete—that is, receiving a realized linguistic form—but rather constitutes an abstract representation—in a formulaic form such as: [AGENT *hit* PATIENT]—of what Rosch above (1978: 43) calls “the normal context or situation for occurrence of that object.” The conclusion to be drawn from this is that this abstract default context constitutes an integrated feature of the concept, and, as a consequence of this integration, affects our judgment of the nucleic dynamicity.

One example of such a conceptually integrated context would be the argument structures of verbs, which according to Bickerton (1990: 67) are universal. Discussing the difficulties that foreign language learners face and the mistakes they are likely to make, he states:

In only one area do we never make mistakes, indeed our success is so complete we probably never realize how effortlessly we are ‘learning’.

That area is argument structure. If a foreign language has a verb that means ‘sleep’, we can be sure it will have only one obligatory argument. [...] Moreover, the roles of those arguments will in every case be the roles that English verbs assign.

It may be to overstate the applicability and rigidity of argument structures to imply, as Bickerton does, that a verb with a certain meaning, whenever it occurs cross-linguistically will turn out to have the same (surface) argument structure.¹ But he is most certainly correct if *verb* is understood, as indicated above in this Section, as the decontextualized concept of (the equivalent of) a main verb. Then the “universal” argument structure is that (abstractly represented) context which according to Rosch is assumed to be the normal one for any arbitrarily chosen linguistic

¹ For example, the Swedish equivalent of English *learn*, that is, *lära sig*, takes an obligatory reflexive argument/pronoun: *He learnt a lesson.* -> *Han lärde sig en läxa.* There is no difference in meaning, however, between English *learn* and Swedish *lära sig*.

object. In the context of the present theory, one particular verbal nucleus. The point to be made, however, is not that argument structure has any direct bearing upon nucleic dynamicity but that the seemingly paradoxical notion of context-less definition which is proposed in this Section, in fact turns out to be no paradox.

As for the relevance of conceptual prototypicality to the present study, it will be argued (see Section 2.8) that dynamicity, along with argument structure for instance, is integrated within the basic verbal concept.

Finally, yet another important consequence of a decontextualized definition of the verbal nucleus, is that the grammatical categories of *tense*, *mood*, and *aspect*, are, as we saw above, not properties of the isolated verbal nucleus even though they belong to the main syntagm in which the verb appears. Instead, we will see in Ch.5 that they are properties of what is defined as the *verbal constituency*.

2.4 Definition of *Situation*

In the present study the term *situation* will be taken to denote a compound of (a) the linguistic environment in which a verbal nucleus operates and (b) the mental representation of the real world event which is depicted. Here we must note that this definition of situation is close, but not identical to, the second, alternative one, listed by Klein (1994: 9–10):

A situation is usually considered to be something in the external world—a state, a process, an event which involves a certain number of participants. An alternative view is to take situations to be **internal representations** in our head, rather than something in the external world. [emphasis mine]

But the problem with a description of situations exclusively in terms of internal representation is precisely that which Klein hints at a few lines later on (1994: 10):

An utterance is a partial description of a situation. It specifies some, but not all, features of this situation.

In essence this means that *situation* includes utterance but also that the only way to discuss situations is with reference to utterances. Therefore, since the purpose of the present study is to provide a framework in which linguistic time encoding could be analysed, and since it is assumed that this analysis cannot be made without taking **both** the actual utterance (linguistic environment) **and** whatever this utterance refers to (mental representation) into account, *situation* will be defined as above.

In this respect *situation* may refer to the utterance as a whole, but also to verb phrases and other units syntactically kept together, in which we find one nucleus. This implies that the largest possible structure to which *situation* is applicable, has **no more** than one finite form of a verb. This allows for the fact that there are multi-situational structures in which the nuclei of some of the situations do not take a finite form. For example in:

20 *Running* down the hill he *noticed* a strange light to his left.

we find two situations (1) *running down the hill*, with no finite main verb, and (2) *he noticed a strange light to his left*, with a finite main verb.¹

Moreover, from this definition of the situation it also follows that the nucleic verb does not necessarily have to be the carrier of finiteness. That is, in a sentence like

21 He *has left* the country.

the nucleic verb *leave* assumes a non-finite form but finiteness is carried by the auxiliary *have*. Then compare example (21) with

22 He *has been trying* to leave the country for a long time now.

¹ A possible complication brought to my attention by Professor Henryk Kardela (p.c.) is the special form of ellipsis known as gapping, which refers to “the absence of a repeated VERB in CLAUSES which have been conjoined”, Crystal (1991: 149), cf. also Quirk *et al.* (1985: 894 & 974). Thus the sentence (a) *Mary went to Stockholm and Peter to Oslo* would be a reduced version of (b) *Mary went to Stockholm and Peter went to Oslo*. From a situational point of view the problem would then be: How many situations do we find in (a)? One or two? But in fact it does not matter since the situational analyses of ‘go’, whether it appears once, as in (a) or twice, as in (b), would be identical anyway.

in which the nucleic verb is not *leave* any more, but *try*, since in this case the syntagm *to leave ...* functions only as a complement of the nucleic verb in the sense outlined by Allerton (1982: 20):

A more complex type of this pattern is seen in the use of complementizers *to* and *that* **to convert whole sentences to noun phrases**. [emphasis mine]

Transferred into the framework of the present study this means that this syntagm takes on the role of a complement noun phrase (or sentence) irrespective of whether any further analysis of *to leave ...* would yield the result that it (*to leave ...*) is a clause headed by *try*. The point to be made here is instead that the result of this conversion is that *to leave ...* in this sentence is presented as having shed off its temporal load, and can thus syntactically be handled in the same way as noun phrases.¹

In fact, practically all considerations regarding grammatical tense/temporality, mood/modality and aspect/aspectuality are related to situations rather than to the verbal nuclei themselves.²

In *Aspect* (1976: 13) Comrie appears to take the situation to be the basic unit of investigation, but without any further qualification, when he discusses the lack of a general metalinguistic term which would cover the various subdivisions of aspectual differences between sentences:

In the present work the term 'situation' is used as this general cover-term, i.e. a situation may be either a state, or an event, or a process.

In this study we will define the *situation* as a superordinate category of description, containing two obligatory parts and an optional one. The situation is centred around a nucleus which consists of the equivalent of a main verb³ in isolation (Section 2.3 and Ch.4). This nucleus is then augmented by a fixed number of con-

¹ For a discussion of verbal complement constructions (see Section 4.3.2.2).

² The exception to this is of course nucleic dynamicity which is a property of the isolated verbal concept.

³ The main verb equivalence mentioned here is a cover term, which in addition to simple verbal nuclei such as *run* in *He runs*, will also cover nuclei in the shape of phrasal verbs and predicatives such as *be nice* in *He is nice* (see Section 4.2).

stituents, the resulting sum of which makes up the verbal constituency¹ (see Ch.5). The third and optional part is made up of noun phrases, adverbials, some auxiliary verbs, etc. (for a basic structural account of the situation, see Section 2.9). The optionality of this third part, the *periphery* (see Ch.6) stems from the fact that none of these noun phrases, adverbials, auxiliary verbs, etc., are necessary in order to create a basic intransitive sentence like

23 Birds fly.

Just as we compared the context-free dictionary definition (see page 30) to the verbal nucleus, we may use the quotations and examples which we find as integrated parts of dictionary entries, as an illuminating analogy to the notion of *situation*. These quotations are comparable to, but not identical with, the situation. For example, in the entry *die*² in the *OALD* we find the quotation:

24 Flowers soon die if they are left without water.
(*OALD*)

Here we may note that we are not given a definition of the main verb directly but a sentence which will give us a sample of the linguistic context in which this verb may appear. Its **meaning**, however, is no different from that found in the entry *die* in *OED* (example (19), page 30). This sample (24) will, as is the intention of the lexicographers responsible for the dictionary, in combination with a definition like (19), help us when we try to understand what *die* means. But note again, however, that it is impossible to understand (24) without first having understood (19).

2.5 Definition of *Phase*

To account for the dynamicity of verbal nuclei and situations² in general, *phase* will be used. The term *phase*, for Comrie (1976:

¹ The verbal constituency consists of two major parts, the nucleus and the TMA (tense, mood and aspect) of the situation.

² For situations the term *procedural development* will sometimes be used in order to describe what corresponds to *dynamicity* on the nucleic level.

48), denotes one single section of the development (or non-development), that the situation goes through:

The term 'phase' will be used to refer to a situation at any given point of time in its duration.

Implicit in Comrie's definition is that phases expire. They reach a point at which they are replaced by the next consecutive phase in the nucleus/situation. However, we must be careful about how we apply the term *phase* since there is a difference between a phasal description of a verbal nucleus and that of a situation.

As regards verbal nuclei, *phase* is in the present study restricted to the description of the internal dynamicity of those nuclei. Therefore we may speak of certain inherent phasal characteristics of stative, processive, eventive and telic nuclei, respectively (see Sections 2.8 and 4.4). That is, all stative nuclei will on closer examination turn out to show the same phasal characteristics. The same is true of processive, eventive and telic ones. This phasal characteristic, or as it is termed in the present theory, *dynamicity value*, will then have certain effects on how utterances are produced and how they are interpreted. More specifically, the phasal characteristics of the nucleus together with the intended message will "force" (within certain limits) a certain shape upon the situation of which that nucleus is part (see Section 4.4).

In the description of the dynamicity development of situations on the other hand, phase has a much wider scope since, to put it very briefly, it is a generic cover-term for the different Sections of what Bache (1985: 109) calls the "procedural characteristics of situations" which in turn "are definable in terms of 'phasal constituency'". Thus a situation is described in terms of its inception phase via any intermediate phases to its completion phase, with a possible addition of a resultant state phase. For some more elaborate accounts of procedural development, cf. Binnick (1991: Ch.6) or Bache (1985), for example.

According to Comrie, all situations have phases, be they identical (states), different (processes) or single (events). Comrie's definition of *situational phase* will be used throughout this study but his **phasal definitions** of states, processes and events will be slightly adapted (see Sections 2.7.1 and 2.7.2) in order to account

for the asymmetrical relation between the dynamicity of nuclei and the prototypical procedural development of situations. That is, the dynamicity of the verbal nucleus is taken as the default, or **unmarked**¹, procedural development of the situation in which that nucleus occurs. Thus the unmarked procedural development of a situation with, say, a processive nucleus such as *sing*, in

25 The school children *are singing* a hymn, right now.

will be a process situation of some kind. The reversed relation, however, does not obtain since the mere fact that a situation turns out to have a process procedural development says nothing conclusive about the dynamicity of its nucleus. Thus the sentence

26 John *is dying* from pneumonia.

clearly indicates a process (procedural development), but its verbal nucleus is *die* which is eventive.

In phasal terms this means that we shall see that the unmarked state situation has but **one** phase, of potentially unlimited duration, since this is the phasal characteristic of a stative nucleus (see page 48). The unmarked process situation consists of a number of consecutive **identical** phases, the verbal nucleus of which is processive (see page 49). The unmarked event situation has only **one** durationless phase, indicating a switch from one state to another by a momentary burst of energy, which is centred around an eventive nucleus (see page 50). Finally, we have the unmarked bounded situation, which is a phasal **compound** composed of a process part which is contingent on an implicit completion of that process, the nucleus of which is telic (see page 51).

2.6 Dynamicity

In order to be able to fully analyse verbal situations with respect to time, we must first understand the complex nature of this prob-

¹ We will return to the notion of markedness later on, in Section 2.8. At this point it is enough to recognize that markedness and unmarkedness are measured in terms of (1) semantic specificity, (2) contextual dependence.

lem. The key to this analysis is the full appreciation of what in the present study is labelled the *dynamicity* of verbal nuclei and situations. Here, *dynamicity* is meant as a superordinate cover term for stativity, processiveness, eventiveness and telicity/boundedness. However, the notion of dynamicity, or the recognition of such a semantic subdomain, is by no means a new one. Thus in Bache (1985: 109), we find the term *actionality*

... to represent the abstract concept attached to the metalinguistic category of Aktionsart. Actionality may now be defined more specifically as *the procedural characteristics of a situation referred to*.

Moreover, Bertinetto (1994a), in a discussion about the relationships between progressivity and habituality on the one hand and stativity on the other, also uses the term *actionality*, in this case as a generic label describing what he calls "the type of event" (1994a: 392). He then goes on to list three basic actional oppositions: (1) punctual versus durative, (2) telic versus atelic and finally (3) static versus dynamic.

The term *actionality*, is, in the view of the present author, nevertheless not completely satisfactory, since it carries with it the notion of an explicit or implicit actor or agent. In fact, normally neither the presence of an agent nor the nature of this agent is relevant to the dynamicity characteristics of the procedural development. For example, *pour*, which may be analysed as a transitive, tri-valent verb, as in (27), could also occur as a zero-valent verb taking a prop-*it* as a dummy subject, as in (28):

27 *He* is pouring water down the slope.

28 *It* is pouring outside.

The verbal nucleus of these situations is *pour*, the dynamicity value of which is processive since it is made up of an indefinite number of identical consecutive phases. The point to be illustrated is that this processiveness seems to remain unaffected by the mere fact that in (27) we have a personal subject and in (28) there is no such subject. Or, at the conceptual level of analysis, it does not matter which of the two argument structures we ana-

lyse, the presence or absence of a subject argument of *pour* will turn out to yield the same dynamicity value.

If the presence or absence of a subject argument is irrelevant, the same goes for the nature of those subjects that indeed are present. There is no difference in phasal characteristics to be found in (29) as compared to (27) although the subject has changed from AGENT to PATIENT.

29 *Water* is pouring down the slope.

That is, the business of ‘water-pouring’ is no different in (29) than it is in (27). Both these sentences must be analysed as processes regardless of the semantic roles of their subjects, and thus we see that the nature of the subject is irrelevant to the phasal characteristics of the situation.

Dynamicity, unlike *actionality*, carries no such basic implication of an agent/actor and is thus a label that can appropriately be used to characterize what Bache (1985: 109) defines as “the procedural characteristics of a situation” (see also page 39) and which Bertinetto (1994a: 392) refers to as “the type of event”. One additional advantage with the term *dynamicity* as opposed to *actionality*, is the fact that the latter term seems only to be used in reference to situational development, whereas it should be apparent from the above that *dynamicity* is suitable for the discussion of verbal nuclei and situations alike. We will use the term *dynamicity* to denote (a) the nature of the internal development of verbal nuclei (see Ch.4), and (b) the procedural characteristics of situations (see Section 2.9). And, as we saw above in Section 2.5, the *dynamicity* of an investigated element is measured in terms of phases.

What has only been hinted at, however, is in what terms we are to ascribe *dynamicity* values to nuclei and situations. Or rather, which are the *dynamicity* characteristics of stative, processive, eventive and telic nuclei on the one hand, and of state, process, event and telic, or rather, bounded situations (that is, situations which indicate some kind of termination beyond the point of which they cannot continue, see Section 6.2.2.1) on the other? When does it in fact make sense to **use** these terms?

In this respect we must acknowledge that there is a differ-

ence in applicability between nucleic and situational dynamicity in that the former is conceptually encoded—part of the concept itself—whereas the latter is contextually determined—supplied by contextual elements such as definite noun phrases, adverbials, and even extralinguistic factors such as the time and place of the utterance, etc. The very nature of dynamicity as such, however, does not differ between nuclei and situations. That is, both nuclei and situations are measured in terms of stativity, processiveness, eventiveness and telicity/boundedness.

Section 2.7 will provide a general overview of verbal and situational dynamicity in terms of the state/non-state distinction. The terminology used in this section will in fact refer to prototypical instances of states and non-states (processes, events and telics). Thus reference in Section 2.7 will be made indiscriminately to both verbal and situational dynamicity. The reason is that the notion of prototypical dynamicity of situations entails that the value of the nucleic verbal concept extends to the situational level.¹ In other words, the prototypical, or default, dynamicity value of any arbitrarily chosen situation will be the same as the value of its verbal nucleus. This means that the prototypical state situation will have a stative nucleus; the prototypical process, a processive nucleus, etc.

The sections following Section 2.7, on *nucleic dynamicity*, 2.8, and *situational dynamicity*, 2.9, will deal with the dynamicity features of nuclei and situations, in terms of the state/non-state distinction which are peculiar to these categories, respectively.

2.7 The State/Non-State Distinction

The fact that many languages such as English and a great number of the Atlantic creoles seem to make a grammatical distinc-

¹ We will also see that prototypicality to a large extent depends on the relative markedness of nuclei and situations. For an eventive nucleus like *kick*, the prototypical situation will be temporally shifted backwards. That is, since these nuclei do not have a natural extension into the moment of speech, such an extension will be marked (by the present progressive, for example) in comparison to the unmarked use of *kick*, the simple past. Thus the prototypical situation with an eventive nucleus will be a construction such as *He kicked the ball over the fence*. For statives and processives no such temporal backwards-shift takes place.

tion between stative verbs and non-stative (see also Ch.3) ones, has been the object of many important linguistic studies.

For example, Quirk *et al.* (1985) include a large section on the semantics of the verb phrase in which they analyse a number of situation types, basically in terms of a stative/dynamic distinction. In their account (1985: 178) stative situations are defined as having “non-count” meaning and dynamic ones as having “count” meaning.¹

In Comrie (1976: 46) we find a two-fold system of criteria for distinguishing states from dynamics: (1) in terms of phasal analysis, identical phases (states) versus different phases (dynamics). (2) in terms of required input of energy (dynamics) versus no required input of energy. Bickerton, on the other hand, seems to take the state/non-state distinction for granted in the sense that neither in *Dynamics of a Creole System* (1975) nor in *Roots of Language* (1981) does he define any of these terms although they are very important for his line of reasoning. Overall, the consensus seems to be, in the words of Comrie (1976: 48), that

The distinction between states and dynamic situations is one that seems reasonably clear intuitively, and in practice one finds a large measure of agreement between individuals who are asked to classify situations as static or dynamic, [...]

What we are faced with here is the fact that the state/non-state distinction in English and Krio appears to be of a cryptotypical character. That is, in these languages we are given no overt morphological clues whatsoever, as to the stative or non-stative status of verbs and situations. Instead, speakers are able to make those intuitive classifications necessary for a grammatically correct treatment of the categories in question (see Ch.3). However, in the present framework the state/non-state distinction is seen as a basic conceptual distinction (see Sections 1.2 and 1.3), and as such it has important consequences for the shape and interpretation of the verbal situation. Therefore the following sections

¹ Quirk *et al.* try to use an analogy with nouns in their definition of the state/dynamic distinction. Thus stative meanings of verbs like *know* are likened to uncountable nouns such as *furniture*, and dynamic meanings of verbs such as *drive* are compared to countables such as *chair*.

will try to sort out the definitions of these concepts and how and where they are applicable.

2.7.1 State Dynamicity

As we explained in Section 2.5, the dynamicity of nuclei and situations is to be measured in terms of phases. Thus, according to Comrie (1976: 49), an examination of the phasal characteristics of the stative verb *know* shows that

[...], all phases of the situation *John knows where I live* are identical; whichever point of time we choose to cut in on the situation of John's knowledge, we shall find **exactly the same situation**. [my emphasis]

But the crucial question here is this: Given that the notion of a number of consecutive identical phases presupposes a linguistically encoded progression of time, how can we speak of finding "exactly the same situation", no matter at which point we choose to cut in on that situation? The answer is that we do not. The only way in which we could find exactly the same situation in such a case would be if we always find the **same** phase at all points of interruption. This is precisely the case for states. It follows that when Comrie seems to claim that the absence of energy input and/or non-change is a defining criterion for states (1976: 49) he is overlooking the fact that **non-change** and **one phase** mutually presuppose each other. That is, non-change is a consequence of the restriction to only one singular phase: and one phase is a consequence of there existing no input of upholding energy.

This definition of state is also completely in line with Givón's (1979: 334) definition of states:

States involve no change over time, and [...] they may last shorter or longer stretches of time. But so long as they are coded in language as states, they are construed to involve no change across time.

In the framework of the present study, this leads to a definition,

different from that of Comrie above¹, of prototypical states as **mono-phasal** having (potentially) unlimited duration, the upholding of which excludes the possibility of positively defined input of energy. For example, in the sentence

30 John *lives in* Copenhagen.

we cannot discern more than one phase making up this situation. The very ‘state of living somewhere’ does not change or develop over time but instead it obtains **in** time. Neither does it require any input of energy in order to go on obtaining. Either you live or you do not live. No conscious effort is needed to keep on living once you live. The same goes for other states such as ‘to know something’ or ‘to feel something’, etc. Once you know or feel something these states (mono-phases) will go on unchanged/undeveloping until they are terminated. Therefore the situation depicted in example (30), with *live* as its nucleic verb, must indeed be seen as a state, due to lack of temporal development and energy input—in other words, no phasal development over time.

2.7.2 Non-State Dynamicity

Comrie (1976: 48–49) contrasts state situations with what he calls **dynamic** situations; in contradistinction to states, dynamic situations involve change over time and, as a consequence of this, require input of energy. Compare the mono-phasal state situation in (30) with

31 John *is playing* soccer (right now).

which clearly does not constitute a single unchanging phase, but rather a number of consecutive phases since there is an on-going supply of energy.

As was indicated in Section 2.5, Comrie’s definition of dynamics involves two sub-categories of non-states; *processes* and *events*. The present study, however, also recognizes a third non-

¹ Comrie’s (1976: 49) definition of *state*, “all phases of the situation [...] are identical; [...],” implies that states are multi-phasal.

state sub-category, namely that of *telics*. In general terms these will be defined as follows:

- *Processes*: Those that, just as in example (31), are made up of an indefinite number of identical, consecutive phases.¹
- *Events*: Those that involve only one phase in the shape of a momentary burst of energy, turning one state of affairs into another.
- *Telics*: Those that combine the characteristics of processes with those of events.

As far as the sub-categorization of dynamics/non-states is concerned, however, Comrie (1976: 51) limits its scope to only two subordinate dynamic situations; processes and events:

Both refer to dynamic situations; ‘process’ refers to the internal structure of a dynamic situation (there are thus no punctual processes), while ‘event’ refers to a dynamic situation as a single complete whole.

Although his definition of process is marred by the inconsistency of allowing processes to be defined as events (the internal structure of any situation may of course be seen as a complete whole) we will take the parenthetical comment that “there are thus no punctual processes” to mean that Comrie’s intention here is to indicate the difference between sentences such as (32) and (33). In

32 John *walks* to Copenhagen every spring.

the very ‘act of moving’ implies a certain amount of development or progression. The phases of this particular situation are all identical with, albeit consecutive to, each other, and the conclusion to be drawn is that this is a *process* situation. Examining

¹ This definition of *process* differs from that of Comrie (1976: 49) who characterizes processes as having different phases which “will be very different”. Moreover, the definition of *process* presented here also happens to be similar to Comrie’s (1976: 49) conception of *states* as consisting of a number of **identical** phases.

33 John *died* in Copenhagen.

we find that here the only conceivable phase is the switch from one state of affairs, 'the state of being alive', to another, 'the state of being dead'. Since this situation consists of just one single phase—the shift from one state into another—thus depicting this situation as a single complete whole, this must be an example of an *event* situation.

What Comrie does not explicitly account for in conjunction with his definitions of processes and events is that, in addition to these categories, we must acknowledge the existence of *telics*, the characteristics of which combine the phasal characteristic of a process—a number of consecutive, identical phases—with that of an event—one single state-switching phase. Or in other words, the progression towards a goal or result combines with the implicit attainment of that goal.

But exactly what is *telicity*? For Comrie telicity is basically a situational quality which he defines as follows (1976: 44–45):

The telic nature of a situation can often be tested in the following way: if a sentence referring to this situation in a form with imperfective meaning (such as the English Progressive) implies the sentence referring to the same situation in a form with perfect meaning (such as the English Perfect), then the situation is atelic; otherwise it is telic. [...]

Thus a telic situation is one that involves a process that leads up to a well-defined terminal point, beyond which the process cannot continue.

For Comrie there would be a telic expression in the sentence

34 John *is making* a chair in the attic.

since, from this sentence, it does not follow that 'John has made a chair in the attic'. From the prototypical interpretation of (34), 'a chair is in the making, but the completion of this chair has not taken place yet', it is also clear that the "well-defined terminal point", which Comrie claims is an important characteristic of telics (1976: 47), is implicit rather than absolute. It is enough to

know that the terminal point **will be** reached **if** the action of this situation is brought to its logical conclusion.

In Comrie's definition, however, we find nothing that actually refers to verbs *per se*, what in the present work are labelled verbal nuclei. As a consequence of this, he would have difficulties in explaining¹ the differences in treatment and interpretation which we find between telic nuclei such as *make* and *learn* on the one hand, and eventive ones, such as *kill* and *leave*, merely occurring in bounded situations. That is, situations in which an eventive nucleus is modified in one way or the other to denote situational boundedness:

35 John *is leaving* Copenhagen.

From (35) it does not follow that 'John has left Copenhagen', and therefore this situation is just as telic in Comrie's terms as is (34). Note the difference between (34) and (35): In (34) 'a chair is in the making', whereas in (35) 'John is right in the middle of a process which will eventually lead up to his leaving Copenhagen'.

Another difference between the situational implications created by nucleic telicity and eventiveness seems to be that a telic nucleus in a bounded situation entails realis mood, whereas eventives in bounded situations entail irrealis. Thus

36 He *is learning* to walk.

is bounded, with a *telic* nucleus, and there is no doubt thrown on the process of 'learning' itself, thus realis mood, but

37 He *is stopping* the car.

is bounded, with an *eventive* nucleus, and the implication is that the 'stopping' in itself constitutes the situational termination phase, which is located in the future, relative to the moment of utterance, thus irrealis mood.²

The differences in interpretation between (34) and (36), on the one hand, and (35) and (37), on the other, is based upon the

¹ As would scholars like Carey (1957) and Vendler (1967), to name only two.

² For a discussion of the realis/irrealis distinction; see Section 5.3.

fact that the verbal nuclei of these situations carry different dynamicity values, since *make* is telic but *leave* is eventive.

In the following sections we will deal more extensively with the characteristics of nucleic *telicity* and its corresponding situational quality, *boundedness*.

2.8 Nucleic Dynamicity

Since we now assume (see Section 2.3) that we are to treat the verbal nucleus as a decontextualized concept, it follows that here we are dealing with what we might want to call concept-inherent semantic values, or meanings, of verbal nuclei. This in turn means that our dynamicity classification of different verbs will be of a purely logical nature (this will be further explained below), which is not the case with situational classification.

A word of caution is needed as regards accounting for the dynamicity of nucleic verbal concepts: The nuclei that occur in this discussion and in the examples serving to illustrate this section, are of course not decontextualized since language cannot be illustrated without language. The assumption is, however, that stative, processive, eventive and telic nuclei relay these dynamicity values to the situations in which they occur, giving these situations the prototypical procedural dynamicity values predicted for state, process, event and bounded situations, respectively.

2.8.1 Defining Nuclei in Terms of Dynamicity

Stative nuclei

are mono-phasal and of a quasi-infinite nature, thus demanding no input of energy for their denotata to go on. Verbs like *be*, *have*, *live*, *hear*, etc., belong to this category.

The use of the prefix *quasi-* above is warranted because it indicates that here we are dealing with the internal time constituency of verbal nuclei, not the external one (see Sections 5.2 and 5.4). That is, nuclei of this type, stative, may be said to have infinite duration, but this is viewed relatively from within the nucleus

itself. Infinity in this case turns out to be the period during which a particular state of affairs obtains.

Processive nuclei

are multi-phasal and of a pragmatically temporary, developing nature, demanding input of energy for their denotata to go on. They denote an indefinite number of identical consecutive phases. Verbs like *run*, *walk*, *talk*, etc., belong to this category.

When we claim that processive nuclei are of a pragmatically temporary nature, we quite simply mean that although the development of the denotata of processives could theoretically go on for ever, the internal duration of these nuclei is limited. It is an important feature of processives that their referents cannot be “kept alive” forever. At one point in time they will “die” from lack of energy input. We do not, for example, expect somebody who is running to be able to do so for any longer period of time. Nobody can talk forever, etc.

Both stative and processive nuclei have the non-anterior as their unmarked temporal location,¹ as they are in essence durative and conceptually speaking have no point of termination encoded. Unless explicitly terminated in one way or the other, both stative and processive nuclei have the present moment within their scope. Therefore situations with stative or processive nuclei have very little contextual dependence in the simple present tense. For example, (38), stative *exist*, and (39), processive *run*,

38 Sean *exists*.

39 Sean *runs*.

rely very little on contextual information to be properly interpreted as depicting situations which are co-extensive with their points of reference, here is moment of speech. You might of course want to know **why** these utterances are produced but in fact nei-

¹ The fact that the pragmatics of *processives* imply limited duration—a duration that must end—may account for the fact that many creoles bundle processive verbal nuclei with eventive and telic ones, in a non-stative group which has the anterior as its unmarked temporal location (see Ch.3).

ther Sean's 'existence' nor his 'running', as such have been called into question. What is questioned is rather the relevance of the utterances.

Eventive nuclei

are mono-phasal and of a momentary nature, denoting a switch from one state of affairs to another. They constitute only one single durationless phase. Verbs like: *find*, *die*, *kill*, etc., and also so-called performative ones such as *baptize*, *promise*, *forgive*, etc., belong to this category.

The denotata of eventive nuclei can be said to be characterized by a sudden burst of energy, figuratively speaking, which transforms one state of affairs into another. The verb *find*, for example, takes us from the 'state of (consciously or unconsciously) not having found something' to the 'state of having found that something'. The main verb *find* in itself normally denotes no duration at all, it is punctual, momentary in nature, merely indicating the switch from one state to another.

Consequently, the unmarked temporal location of eventives is in the past as they need completion in order to have taken place at all. The very nature of these nuclei, the fact that by definition their denotata have no duration whatsoever, entails that in order to speak of them at all, they must be over and done with.

Performatives make up a sub-group consisting of eventive nuclei which are capable of being used perfectly in the present, that is, they are viewed as simultaneous with the moment of utterance. For example:

40 I *promise* to drop him off at school in time.

This use is only possible in the first person; when the subject of situations centred around this class of nuclei is in the second or third person, they (the nuclei) function in the same way as normal eventives.

Two characteristics of performatives make the perfective aspect compatible with the present moment: (1) In a (present) performative situation, act and utterance are unified. (2) Since act and utterance are unified, these situations have no duration.

The result is that these situations do not have to be extended in order to include the present moment.

Telic nuclei

are multi-phasal and encode in their concepts both a process, which is contingent on its completion, **and** an implicit completion of that process. Verbs like *make*, *drown*, *learn*, etc., belong to this category.

That the goal of the telic nucleus is only implicit and the process contingent on that goal can be seen if we compare the nuclei *learn* and *kill*. In both cases we have a resultative goal whose fulfilment is closely connected to the dynamicity values of these nucleic concepts. However, it is quite obvious that should we apply Garey's (1957: 105) telicity test

This suggests that there might be two categories of verbs (or constructions) according to the answer you get to the following question: if one was *verbing*, but was interrupted while *verbing*, has one *verbed*? [...] Substitute the test verb where the formula has *verb*: [...]

to these two nuclei, the answer in both cases will be *no*; neither 'learning' nor 'killing' can have taken place unless the situations denoted by these expressions have been brought to their conclusions. But on closer examination we will find that, strictly speaking, Garey's test in fact does not make sense for *kill*, although it works perfectly for *learn*. The reason is that *kill* is not a telic nucleus but an eventive one, and for eventives there is no point in asking for an in-the-middle-of verbing phase. But telics have such a phase. This important difference between these two groups of verbal nuclei can be stated as follows: The process leading up to the implicit goal of *learn* is in fact encoded, as an inseparable defining feature, **into** this concept, whereas for *kill* we find no such concept-internal process. This is easily shown if we apply the imperfective aspect to these two expressions:

41 John *is learning* a new skill.

42 John *is killing* his sister.

Here we note that what we observe in (41) is ‘the learning of a new skill’, that is, we interrupt John right in the middle of ‘learning something new’, the act of which constitutes a process. This ‘process of learning’ is integral to *learn* and can be stopped at any arbitrarily chosen phase during the course of the development of this situation. The result is that the process is simply cancelled without having reached its conclusion.

We might want to claim that in (42) there is also a process present, leading up to its implicit goal, but as a matter of fact this process, as opposed to the process in (41), is **not** an integral element of the nucleic concept *kill*. Instead, it indicates some other action taken by John in order to put his sister to death, say, by holding her entire head under water for an extended period of time. It is possible to claim after having halted the process of ‘learning of a new skill’, say rock-carving, that **some** rock-carving has been learnt but not the skill in its entirety. The corresponding claim cannot be made in the case of *kill*. You cannot kill somebody just a little or to some extent since ‘killing’ is a question of either-or. Either you have killed someone or you have not. In comparison with telics, eventives and prototypical event situations contain no process to be cancelled.

In other words, the crucial difference between these two nucleic concepts is that, in a construction like (41), there is a direct conceptual relation between the nucleus, in this case *learn*, and its denotatum, whereas the implied reference in *kill* is to some other acts or actions.¹

As opposed to stative and processive nuclei, eventives and telics have the anterior as their unmarked temporal location, which is but a logical consequence of the completion (necessary and implicit, respectively) encoded in these verbal nuclei. The reason is that in order to be realized at all, eventives and telics must have reached their conclusions/end-points. Their scope cannot include the present moment since termination as such can only be said to take place before some chosen point of reference.

This lack of scope including the present moment might be one reason why eventives and telics require a fair amount of cont-

¹ Imperfective *kill* may be seen as an abbreviation including the act(s)/action(s) leading up to an implicit completion plus this implicit completion with the resulting death. No such abbreviated interpretation is necessary for *learn*.

extual information in order to be understood when inflected for the simple present tense. None of the utterances below makes very much sense unless some additional context is provided.

43 Sean *sneezes*.

44 Sean *dies*.

45 Sean *drowns*.

This context, and the necessary extension into the present moment, may be provided by different means. Thus, within the verbal constituency (see Ch.5) imperfective marking with the progressive form is enough to extend the scope of all three nuclei:

46 Sean *is sneezing*.

47 Sean *is dying*.

48 Sean *is drowning*.

The situational effects created by progressivizing are different. In (46) iteration is conveyed, in (47) a future (irrealis) 'resulting death', and in (48) the 'process of drowning'. The scope of the present moment is also possible to convey outside the VC by giving a suitable peripheral (see Ch.6) context such as

49 Sean *sneezes* when he's got a cold.

in which case the habituality of 'sneezing' is the resulting message. However, the common denominator for situations with eventive and telic nuclei is that they are located negatively in the present. That is, in contradistinction to statives and processives, the termination phase of eventives and telics must be cancelled in some way, either by marking the VC for the imperfective aspect (46, 47 and 48), or by peripherally modifying the situation in some way, here for habituality (49).

2.8.2 Coinciding and Conflicting Dynamicity Properties

Thus far we have dealt with the definitions of statives, processives, eventives and telics. In this respect it is worth noting that

these categories of verbal concepts also share some dynamicity properties in a rather interesting way.

FIRSTLY, stative, processive and telic nuclei share the property of having *duration*, although of different natures. For example the nuclei in the sentences

50 John *loves* his mother.

51 Every day, John *runs* 6 miles in the morning.

52 John *makes* chairs for a living.

all indicate some extension in time, they have duration, although example (50) contains a stative nucleus, *love*, (51) a processive one, *run*, and (52) a telic one, *make*. As far as their relation to time is concerned, the nuclei of these three situations are distinguished by comparing their phasal structures (see Section 2.5). This comparison yields the answer that in *love* we find only one phase (of internally infinite extension), in *run* we have an indefinite number of identical consecutive phases throughout its duration, and in *make* we find a process, just like in *run*, whose realization depends on an implicit termination point.¹

SECONDLY, processives, eventives and telics are *non-stative*, in the sense that they all involve some kind of change. They can be distinguished from each other in terms of *completion*: no completion (processives), necessary completion (eventives) or implicit completion (telics). This means that it is the necessary point of completion encoded into the concept of the eventive nucleus that distinguishes this concept from that of a processive one. It is this point of completion which constitutes the nucleic concept in question. In processives we find no such point of completion. In

53 John *drives* a taxi for a living.

there is no necessary point of completion coded into the dynamicity value of the nucleus *drive*—the ‘habit of driving’ may, for all

¹ Worth noting here is Drinka’s (1993) claim that the first aspectual distinction encoded into the Indo-European verb system was the durative/punctual one. This distinction would group statives and processives together in a durative group, in contrast to the punctual group which would consist of eventives and telics (see Ch.3).

we know, go on for any period of time. Thus *drive* is processive and as such it is distinguished from eventive *sell* in

54 John *sold* his taxi.

by the fact that the act of 'selling' involves a switch between the 'state of not having sold something' to the 'state of having done so'. Thus *sell* has the required **necessary** point of completion.¹

Telics are distinguished from eventives, on the one hand, by their processive duration, the realization of which depends on whether their **implicit** point of completion is reached or not, and from processives on the other hand by the dependence on this point of completion. In other words, telics need an implicit point of completion, processives do not; telics have duration, eventives do not.

THIRDLY, both statives and eventives have exactly one *phase* coded into their internal structures. The difference is that the stative phase has infinite duration, whereas the eventive one has no duration whatsoever. And so in

55 John *lives* in Copenhagen.

the 'state of living' has one phase, in which we have no development but which may obtain for any reasonable length of time. In

56 John *died* in Copenhagen.

the one phase encoded into *die* does not denote the 'act of dying' *per se* but the switch from the 'state of being alive' to the 'state of being dead'.

FOURTH, processives and telics share the property of having a *process* of some kind encoded. The difference is that for processives such as *search* this process is indefinite in the sense that it does not require an end-point to be realized. We may claim that telics are definite since a definite, potential end-point is required

¹ We may also note the difficulties, comparatively speaking, for unmarked (the simple present) eventive nuclei to take the present tense. The reason is that these nuclei have a strong propensity to have past time reference as they have the anterior as their unmarked temporal location.

for the realization of verbal nuclei such as *learn*. Compare the process in (57) with the telicity of (58):

57 John *is searching* for a new job in Copenhagen.

58 John *is learning* a new job in Copenhagen.

Here it is immediately apparent that in (57) the interpretation would normally be that the possible success of 'John's search for a job' has no bearing whatsoever on the realization of that search. Or, in other words, even if John does not find a job, he might still claim that he has searched for one. This situation is quite reversed in (58) since in order to be able to claim that he has learnt a new job, John is required to have managed such a task. Otherwise no 'learning of a new job' has taken place.

FIFTH, what eventive and telic nuclei have in common is the encoded *completion*. For eventives completion is a necessary requirement for their realization; unless the eventive is brought to a conclusion, it has not taken place. For telics it is enough that the completion point is implicit. That is, it would be the logical conclusion if the situation were brought to its natural end. Note the difference between eventive *find* in (59) and telic *learn* in (60).

59 John *has found* a new job in Copenhagen.

60 John *has learnt* a new job in Copenhagen.

In (59) we note that the point of 'finding a new job' is not preceded by any **process** of 'finding' (rather, by a process of 'looking for' or 'seeking'). This point of 'finding' is self-sufficient, *has found* does not entail *was finding*. The reason is that eventives change one state into another without reference to any internal process. In (60) we have precisely the kind of entailment which is lacking in (59); *has learnt* does indeed entail *was learning*.

Thus we may summarize the dynamicity properties of stative, processive, eventive and telic nuclei as in table 1 below. Note that the classification of telic duration as contingent is based on the fact that for telics completion is implied rather than necessary; thus the property of duration must be seen as dependent on the realization of the completion.

Property	<i>Duration</i>	<i>Completion</i>	<i>Phasal Characteristics</i>
Nucleus			
Stative	yes	no	mono
Processive	yes	no	multi
Eventive	no	yes	mono
Telic	contingent	(yes)	(multi)

Tab.1: Nucleic Dynamicity Properties

2.8.3 Nucleic Dynamicity: Summary

Concluding this section, we may state that only four kinds of verbal nuclei are factually possible. However, it is important here to note the use of *factually possible* verbal categories rather than *semantically possible* ones. The reason is that dynamicity values of nucleic verbal concepts are in a sense “pre-semantic” in that they reflect (psychological) laws of nature, which presumably exist independently of their encoding into the semantic systems of languages. Moreover, even in principle, these laws cannot be violated. Semantics is more a question of how we interpret these laws of nature and encode these interpretations into the concepts that make up languages. The four factually possible kinds of verbal nuclei are thus:

- Statives, indicating an obtaining state, e.g. *know*
- Processives, that is, those that develop, e.g. *run*
- Eventives, changing one state into another, e.g. *hit*
- Telics, nuclei that encode a process which is contingent on its own implicit completion, e.g. *make*.

In other words, since the dynamicity value of any arbitrarily chosen, isolated verbal nucleus is fixed, we must conclude that these values are **constants**. As a consequence of this constancy, these values can only be judged objectively.

2.9 Situational Dynamicity

One conclusion to be drawn from the above is that, although verbs and situations may be technically classified by the same dynamicity criteria, they differ in the sense that verbal concepts are judged objectively, in principle unaffected by contextual considerations. This is due to the fact that the dynamicity values of verbal nuclei are constants. This is not the case with situations, and our interpretation of these are indeed subject to contexts, both linguistic and extralinguistic ones. This points to the conclusion that we mainly judge, or rather, interpret situations subjectively.

We may very briefly view the dynamicity of a situation as describing the nature and/or characteristics of the action or the happening of the syntagm which makes up that situation, disregarding for the moment the fact that some situations do not indicate any action or happening *per se*.

In addition to this, there is one important thing to note which is relevant only to our dynamicity classification of situations and not to that of isolated nuclei: Situations always consist of smaller structures, building blocks like main verbs, adverbials, etc., and should be investigated as such. This also means that they may be modified by various modifiers such as noun phrases, auxiliary verbs, adverbs and adverbial phrases, etc. This is in sharp contrast to our very restricted, decontextualized definition of verbal *nucleus* (see Section 2.3), which rules out any externally based classification. But it also tells us that it may not always be profitable, or even possible, to investigate individual situations in isolation (see example 20, page 34). It will turn out that the interpretation of the entire structure of which the situation is part, overrules the interpretation(s) of any subordinate structures and/or situations.

Therefore we must recognize that a sentence like

61 John *is running towards* the door.

indicates a situation which is quite possibly open-ended. That is, here we interrupt John right in the middle of the ‘**process** of running towards a presupposed door’. In the future, relative to the time of this process, he may or may not reach the door. We simp-

ly cannot tell. All we are told is that ‘John is running in a particular direction’. The situational structure¹ of (61) has the form:

Fig. 3: Situational structure of *John is running towards the door*.

Here we see that the process value of the situational verbal constituency (VC) *is running* is not altered or changed in any way by its modifier, the prepositional phrase *towards the door*. But if we compare (61) with

62 John *is running to* the door.

we notice one important difference: *is running to* directly focuses on the possibility that John will actually reach the door at some point in the (unspecified) future, whereas in (61) the focus is on the actual process of running in a specified direction. Thus the situational structure of (62) turns out to adhere to the criteria for telicity² outlined in Section 2.7.2: a process with an implicit termination point without reference to which the process cannot be said to be realized. That is, *running to the door* does not imply ‘having run to the door’; but *running towards the door* does imply ‘having run towards the door’.

This leads to a situational structure of (62) which can be illustrated as in Figure (4):

¹ Note that the situational structures presented in this chapter are very much simplified, pointing to certain elements and relations which are only elements within the maximal, full structure.

² We will return to situational boundedness (situational telicity) as well as other situational properties later on in this study.

Fig. 4: Situational structure of *John is running to the door*.

So, what we have here are two similar verbal situations, both containing the same processive verb *run*, which have to be interpreted differently, in this case according to the meaning of the prepositional phrases.¹ One, *is running to*, focuses on, and implies that this situation will be brought to its logical conclusion: 'reaching the door'. The other, *is running towards*, focuses on the process that may or may not lead to 'reaching the door'. The point is that the interpretation and investigation of situations require all available contextual, extra- and paralinguistic information.

The reason for pointing out the above is that it hints at a striking methodological difference between how we investigate situations and how we investigate the nucleus. Situational values are **interpreted** according to **all** contextual information available, whereas verbal nucleic values are **determined** without contextual considerations. The latter investigation will yield one of four, unmodifiable, dynamicity value constants: stative, processive, eventive or telic. The former investigation only suggests the most likely interpretation.

Since the relation between the verbal nucleus and its situation is transitive, however, any situational interpretation must rely on a previous nucleic classification, as this classification provides, in the form of the above-mentioned constant, the default value of the situation. That is, default, or unmarked, interpretations of state, process, event or bounded situations may be contrasted with deviating, marked ones. For example, the sentence

¹ We may note that both these sentences are imperfective although one (61) is unbounded whereas the other (62) is bounded (see Ch.5).

63 John *lives* in Copenhagen.

which contains the stative nucleus *live* in a state situation, ‘being in the state of living somewhere’, may be regarded as the unmarked member of a contrasting pair which could, for example, contain the marked member

64 John *is living* in Copenhagen.

in which we find, again, the stative nucleus *live* but this time in a state situation of a temporary kind, the ‘state of **temporarily** living somewhere’.

2.9.1 Situational Dynamicity: Summary

To sum up this section: The nature of the situation is that:

- Its core is a verbal nucleus, the dynamicity value of which may be stative, processive, eventive or telic.
- Its dynamicity value is open to interpretation.
- Its phasal, or procedural, structure is basically multi-phasal, that is, it consists of more than one phase.
- It is composed of smaller linguistic or extralinguistic units.

2.10 Nucleus versus Situation

It should be clear from the discussion above that we cannot equate verbal nuclei in isolation with situations if we are to properly analyse the situational implications of tense/temporality, mood/modality and aspect/aspectuality. The need to distinguish nuclei from situations becomes obvious as soon as we realize that no necessary one-to-one relation exists between the dynamicity classification of *the equivalent of a main verb in isolation* and the corresponding classification of the *verbal situation* in which that

very nucleus occurs. To exemplify this a Krio sentence will be used:

- 65 I de *rɛdi*.
he [IMP [ready]]
He is getting ready.

In this case, a nucleus which by itself would be classified as stative, *rɛdi*, occurs in a clearly non-state situation, the 'process of getting ready' (preparing oneself for something) which may eventually lead up to the 'state of being ready'. In no way does this interpretation of the situation change the semantic status ascribed to the verb *rɛdi*—it remains a stative verb.

It should now be clear that the relations between verbal nuclei and their situations are, following Leech (1981: 104), *asymmetric* relations. This asymmetry is due to the fact that the relation between the verbal nucleus and its situation is not reciprocal, that is, working in both directions, but a mono-directional relation. That is, the dynamicity value of the verbal nucleus is part of what determines the value of the situation, not the other way around. The situation may be assigned a variety of values, but the possible choices are restricted by the value of the nucleus. This directionality in the relation between nucleus and situation gives the relation a certain amount of non-arbitrariness. The different dynamicity values of, say, *kill* and *make* will restrict the choices of possible situational interpretations of sentences in which these verbs occur as nuclei:

- 66 John *is killing* one of his black sheep.
67 John *is making* a nice new chair.

The prototypical inference from (66) is that the 'killing' will take place in the (near) future and that this situation is pointing towards that end. This inference is the sum of the imperfective aspect of the syntagm *be verb-ing* plus the *eventive* dynamicity of *kill*. Example (67), on the other hand, would in most cases be interpreted as indicating a situation which in itself is developing simultaneously with its point of reference, in this case the present moment of speech.

This interpretation is brought about by the imperfective syntagm, *be verb-ing*, plus the *telic* dynamicity of *make*. But, the difference between these situations, created by their different nucleic dynamicity values, is that in (67) we have a choice of focusing our interpretation on either the process of ‘making’ itself, or the result of this process; whereas in (66) only the result is possible as the interpretative focus.

However, as mentioned above, the relation between the nucleus and the situation is at the same time also somewhat arbitrary, since we cannot tell from the dynamicity value of the nucleus exactly in which kind of situation it will appear. This is very easily illustrated by adding the adverbial *tomorrow* to example (67), giving

68 John *is making* a nice new chair tomorrow.

in which case the possibility of co-extension with the present moment of speech is cancelled.

Moreover, the failure to recognize that the relation between nucleus and situation is indeed asymmetric and not reciprocal may in part explain why, as was indicated in Section 1.4.3, Quirk *et al.* (1985)—among others—do not give a satisfactory account of how time is encoded in the semantics of the English verb.

So we must conclude that the dynamicity values of verbal nuclei and the procedural development (the dynamicity) of situations cannot be of the same character. They are, for the reasons which have been outlined above, quite simply not comparable.

2.11 Structure of the Situation

In Section 2.4 above, the notion of *situation* is defined in such a way that its domain and general structure are accounted for.¹

¹ Note that the notions of centrality and periphery within the verbal situation are purely semantic and have very little to do with the “surface structure” or order of morphemes in an utterance; cf. the fact that the mood component of a modal auxiliary (English) and a mood marker (Krio) is conceived of as being obligatory and thus to be found within the VC of a situation, whereas the modal component, that is, the lexical content of these grams (see page 110, note 1, for more about *grams*) is to be found within the situational periphery.

This section will give a general introduction to the structural side of the situation and provide a preliminary understanding of the hierarchy within the situation and of the general principles which govern the interaction within the various situational elements.

The *situation* is understood in this study as consisting of two obligatory parts, the *nucleus* and the *verbal constituency*, and one optional part, the *periphery*.

The *nucleus* is the conceptual place-holder in the situation, since within it we find the equivalent of only one verbal or predicative concept (see Sections 2.3 and Ch.4). That is, the nucleus may consist of either one verbal concept like *hit*, *run*, *begin*, *know*, etc., or one predicate¹ like *(be) nice*, *(be) red*, etc.

Within the *verbal constituency* (VC) we find those parts of the verb phrase which are obligatory in the sense that without them the situation would not be complete. Here we find the nucleus as well as the TMA (Tense, Mood, Aspect), which, broadly speaking, contains the elements of the situation that are connected directly to the nucleus. Among these elements we find inflections, modal auxiliary verbs and verbal particles². Moreover, all elements in the verbal constituency have the capability of acting as carriers (see Section 5.5) of various parts of the TMA.

The third and final part of the situation is the *periphery*, which, strictly speaking, is not obligatory but which in the vast majority of situations will be present in one way or the other. Elements among the peripherals are all the modifiers of temporality, modality and aspectuality that occur, for example adverbials like *tomorrow* and *probably*, and NPs like *a mistake* and *mistakes*.

Keeping in mind the fact that linear accounts of non-linear relations are no more than typographical conventions, used for the sake of convenience, the basic situation can be said to have the following formulaic structure:

69 ([[NUCLEUS] TMA] (PERIPHERY))

¹ Pseudo-predicatives like *seem* and *become* in combination with an adjective, etc., are not viewed as making up the nucleus of a situation (see Ch.4).

² In this context the notion of verbal particles does not involve the particles that are part of so-called *phrasal verbs* in English. Rather, the particles referred to are, for example, the TMA markers of Krio. The phrasal verb particles of English are instead, when they supply additional meaning, seen as semantically integrated parts of the verbal nucleus itself (see Section 2.3 and Ch.4).

This formula is to be interpreted as follows: Within square brackets we find the obligatory elements, the nucleus and the TMA, and within the parentheses the optional periphery is located. The hierarchical order of modification is indicated by the number of bracket and parenthesis pairs. That is, it is the TMA element that modifies the nucleus rather than the other way around since, the more bracket pairs, the more central is the element. This can also be expressed (see also Section 2.9), as a tree diagram:

Fig. 5: Basic Situational Structure

2.12 Summary

In this chapter the basic concepts of the present study have been presented and defined. It has also been argued that the interpretation and investigation of verbal situations must be performed in three consecutive steps: (1) A dynamicity classification of the verbal nucleus in isolation as either stative, or non-stative (subsuming processive, eventive and telic nuclei); (2) a classification of the verbal constituency of the situation; (3) a full interpretation of the situation, taking into account all peripheral modifiers.

Moreover, it has also been pointed out that this analysis presupposes a clear and unambiguous distinction between on the one hand the verbal nucleic concept, and on the other hand the situation in which we find this concept.

3

The Supremacy of the State/Non-State Distinction

3.1 Introduction

In Section 2.7 it was stated that the covert state/non-state distinction is seen as a basic conceptual distinction within the present framework. That is, the most basic and important distinction to be made as regards conceptual dynamicity, verbal semantics and situational meaning is the state/non-state distinction. The reason for this supremacy over other, conceivably basic, distinctions such as the durative/punctual one, is however not touched upon in Section 2.7. This chapter will first speculate very briefly about the reasons for this state/non-state supremacy and then go on to show that this distinction is indeed the fundament upon which verbal marking of time in English and Krio is built.

3.2 A Speculative Background

In all languages, nucleic verbal concepts are of necessity¹ either *stative* or *non-stative*. Conceptually, the implicational difference between these two categories is basically a question of stability²; states and stative concepts are stable during the course of the period they obtain, but non-states and non-stative concepts are not. The crucial characteristic of this distinction is therefore conceptually relative stability versus instability. That is, non-change (state) versus change (non-state) over time.

¹ The use of *necessity* is of course grounded in the fact that as far as we are dealing with binary distinctions—and the state/non-state distinction is a binary distinction—all members of a class **must** be assigned to either class. That is, in this context all verbal concepts will have to be either states or non-states simply because there is no other class.

² As opposed to nominals, which are stable **in** space, verbals are stable **over** time (see Section 1.2).

In theory, however, we could conceive of other conceptual verbal distinctions as basic, as for example the durative/punctual distinction. This is the standpoint taken by Drinka (1993: 145), for example.

After having listed three hierarchically ordered aspectual distinctions, of which only the first¹ is of importance here: “(a) Verbal characters: the inherent aspectual value of a verb” as either durative or punctuative²; she goes on to write:

These three methods of marking aspectual distinctions in Indo-European—at the lexical, derivational, and inflectional level—actually reflect a kind of chronology, for they appear to have been incorporated into the verb system **in the above order**, each development building on the previous one. [emphasis mine]

In comparison with the state/non-state distinction, the durative/punctual distinction shows a related but quite distinct relation to time, since the durative/punctual distinction is in essence a question of completion (punctuality) versus incompletion (duration).

Therefore, a classification along the lines of this distinction would group states/stative nuclei together with processes/processive nuclei in one class, duratives. And bounded situations/telic nuclei together with events/eventive nuclei in another class, punctuals. What this boils down to is reference or non-reference to extension in time.

Thus it is possible to claim that both of these distinctions, the state/non-state and the durative/punctual, are verbal since, as is argued in Section 1.2 and Chapter 5, no other major conceptual categories other than the verbal ones have time as an integral feature of their defining criteria.

We may illustrate the basic difference between the state/non-state distinction on the one hand and the durative/punctual one on the other as in Figure 6:

¹ Distinction two, according to Drinka, is that of derivational Aktionsarten (iterative, inchoative, etc.) and the third and final distinction is that of inflectional aspect (perfective and imperfective).

² Note Drinka's use of *punctuative* instead of the more common term *punctual*.

Fig. 6: The state/non-state and durative/punctual distinctions.

But, if both distinctions are related to time—albeit in different ways, why should the state/non-state distinction be more basic than the durative/punctual one? Any discussion of this matter will of necessity be highly speculative since we will be drawing on theories on the evolution of language as a species specific ability, such as that proposed by Bickerton (1981, 1984a, 1990, 1996a), and on research into child language acquisition, Bloom (1984) and Clark (1987) for example. Neither of these research areas is capable of presenting any empirically based, hard evidence.

If we compare Drinka's above statement with Bickerton's (1981: 283–284) speculations that at the dawn of *homo sapiens*, the most important semantic (verbal) distinction to be made for the survival and evolutionary adjustment of our species, was the punctual/non-punctual one, we find that they seem to share the same point of view. Both authors regard the durative/punctual distinction as basic:

This capacity to make the punctual-nonpunctual distinction in real life, so to speak, must have been crucial to our ancestors, [...] It is hard to think of any distinction which could have been more important to them as they began to build up the store of communal experience that would become the traditional wisdom of human groups. The interrelation of punctual and nonpunctual, **foreground and background**, provided basic ways of analyzing and classifying the diverse experiences [...] [emphasis mine]

The implication in Bickerton's statement is (a) that punctuality is equated with (perceptual) foreground and nonpunctuality with (perceptual) background, and (b) that the identification of foreground features against background ones is the important factor. This in turn implies that we should see the state/non-state distinction as more basic than the durative/punctual one since foreground versus background is not in essence a question of temporal duration versus non-duration. It is rather a question of depicting a non-stable attention-grabbing foreground against a stable background (see Sections 1.2 and 1.3).

Thus, if we subscribe to the view that the state/non-state distinction is indeed a question of stability versus non-stability, we must conclude that this distinction is the more basic one because it has a greater semantic scope than has the durative/punctual distinction. That is, the state/non-state distinction is not restricted to verbals only but also to nominals. Only verbals fall within the scope of the durative/punctual distinction.

Language acquisition research in the 1980s and 1990s also points to the basic importance of having the ability to single out foreground happenings against a stable background, that is, non-states against states. Bloom (1984: 190), for example, reports:

For instance, in their early simple sentences the children learned action verb relations before state verb relations and locative action before locative state relations. The semantic typology of verbs presumably reflected conceptual distinctions in the children's underlying organization of the regularities in events in the world.

Note that what is reported by Bloom and singled out here are not punctual verbs opposed to durative ones but rather **all** attention-grabbing actions, regardless of their extension in time (non-state foregrounds, that is). This observation by Bloom is corroborated by Clark (1987) when, in a discussion of over-regularization of the weak, past tense dental-suffix to strong and irregular verbs, she notes that

[t]he initial basis for adding particular inflections and then for over-regularization appears to be semantic: verbs for

change of state like *break* or *drop* are inflected for past tense before verbs for activity or state like *run* or *sleep*.

The crucial point here is not that English-speaking children show a tendency to over-generalize the weak past tense morpheme, but that the verbs listed by Clark as especially prone to acquire a past tense marking are generally from one distinct group of nuclei, namely that of eventives. And again, as Bloom (1984) notes, we find that the verbs which denote the most attention-grabbing actions turn out to be precisely the verbs which acquire (tense) marking before other kinds of verbs.

However, since the above paragraphs are speculative, the rest of this chapter will be devoted to showing that at least for English and Krio the state/non-state distinction, rather than the durative/punctual one, is the basic conceptual distinction to be made in the present area of investigation.

3.3 The Case of Krio

In order to discuss the importance of the state/non-state distinction and also have a brief look at its manifestation in actual language use, we will use the Krio stative nucleus *no*, 'know', and contrast it with non-stative *lan*, 'learn'.

- 70 Dat na tru, bɔt yusef *no* se a lek yu, ɛn a de fɔ yu.
that BE truth but you self [(N-ANT) [know] CPZ I [(N-ANT) [like]] you and I [(N-ANT) [EXT]] for you
That's true, but you know that I like you, and I'm here for you.
Gɔd Pas Konsibul, act 4: scene 2: p.34.
- 71 Na fɔtru. Dɛn *de lan* ɔl dɛn tin de na skul naw.
FGR for+truth they [IMP [learn]] all [PL-DET [thing]] [(N-ANT) [EXT]] PREP school now
Yes indeed. They learn all those things in school now.
Bad Man Bete Pas Emti Os, scene 4: p.39.

Here we see that the stative nucleus *no* primarily indicates that this verbal situation takes place in the present. It denotes the 'obtaining state of knowing something'. The important question to

ask is why there is no overt marking for present time location (by the imperfective marker *de*¹, as in (71) above), of *no* in (70), although the situation quite clearly refers to the present moment. The answer to this question is quite simple: Since the denotata of statives are inherently infinite in nature and also devoid of starting and end points (see Section 2.8), they are also, by presuppositional extension, located in the present. In other words, there is no indication of any termination to be found in the dynamicity values of these verbal concepts, and therefore the scope of their existence incorporates the present moment of speech. Therefore, any present time marking would appear to be superfluous.

While an overt present time marking is lacking in (70), the pre-verbal imperfective marker *de* is found in (71), where it marks *lan*, indicating a present time location. So why are these two verbal nuclei marked differently for present time reference? Part of the answer is the need to mark *lan* for imperfectivity of some kind—in this case habituality—but it is also a consequence of how Krio handles temporal relations in combination with the semantic implications of the state/non-state distinction. This can be clarified by a quote from Bickerton (1975: 28):

The functions of the stem form in the Guyanese system depend on the stative–non-stative distinction. In its commonest function, with non-stative, it signifies ‘unmarked past’ — that is, a (usually) single action that happened at a moment in the past that may or may not be specific but should not predate any action simultaneously under discussion.

Here Bickerton refers to Guyanese Creole, but the phenomenon he describes exists commonly in the Atlantic creoles in general, and indeed also in Krio. However, this quote raises another important question implicit in the phrase “[...] should not predate any action simultaneously under discussion”: How do we then mark a non-stative verbal concept for past time reference, the ac-

¹ This marker *de*, in creolistics traditionally labelled non-punctual, is rather an imperfective marker than a marker of plain durativity. This can be seen in the fact that *de*-marked processive, eventive and telic nuclei imply different shades of imperfectiveness. Habituality, continuousness, iterativity, etc., of situations centred around non-stative nuclei are marked by *de*. The final meaning is the sum of the nucleic dynamicity and the imperfective meaning.

tion of which does predate a simultaneously discussed action? The answer is that it depends on the relation between the topic time of the situation under discussion and the present moment of speech. Or as Bickerton (1984: 182) defines the point of reference for creole tense marking:

The reference point for tense is never the “point present” or “moment of speech” familiar to speakers of European languages, but rather the time of the topic under discussion, which may or may not have present reference. Verbs relating to the topic time are unmarked; [...]

If topic time is simultaneous with the present moment of speech then no anterior marking of a predating non-stative is needed, but if topic time precedes that point then the tense (or rather anterior, see below) marker, which in Krio is *bin*, has to be used.

The important thing to note here is that *lan* in example (71) is non-stative and as such it must obligatorily take imperfective marking in order to convey present time reference. This task is carried out by the marker *de*, by means of which the scope of this particular situation is extended into the present. Or rather, its (implicit) termination is cancelled. What Bickerton does not address is the question *why* the non-stative verbal nucleus should need any marking at all, in order to refer to the present moment.

The answer to this is to be found in another peculiarity of Krio: Temporality of verbal situations is treated in terms of sequences of verbal situations (these sequences may be explicit or implicit) rather than as locations at some point in time, which appears to be the predominant principle in English.¹ Languages, in which this characteristic feature is predominant (the indication of the sequential order of situations) are commonly referred to as anterior-marking languages. In Krio and Guyanese (basically anterior-marking languages), a verbal situation with a non-stative verb as its nucleus is seen as completed, and therefore placed in the past, if it is not relevant (in Bickerton’s (1975: 28) words: “[it] should not predate any action simultaneously under discussion”) to, or rather *at*, the present discourse focus.

¹ The *perfect* and the *pluperfect* are examples of sequence marking features in English. The *perfect* will be discussed in Sections 4.3.1 and 6.2.2.2.

The consequence is that Krio non-statives must in some way take marking for present time reference, otherwise they will imply past time¹, that is, anteriority as regards the present discourse focus. So, removing the imperfective marker *de* from example (71) would yield the sentence

- 72 *Den lan ɔl den tin de na skul.*
 they [(ANT) [learn]] all [PL_{DET} [thing]] EXT PREP school
 They learnt all those things in school.

in which the reference is to a completed situation which is sequentially located previously to the present moment of speech. That is, anterior, and, as a consequence of this anteriority, in the past.

How does the above analysis relate to the claim in Section 2.8 that there are only four dynamicity types of nucleic concepts; statives, processives, eventives and telics? In other words, how do we reconcile this tetra-partite division of basic concepts with the binary opposition found in the state/non-state distinction? By doing this, we will be able to justify the postulated supremacy of the state/non-state distinction over the durative/punctual distinction. To show that the state/non-state distinction does not constitute an arbitrarily defined dividing line among these four types of verbal nuclei, we must find evidence suggesting the existence of systematic differences in grammatical treatment between statives on the one hand and non-statives on the other, rather than between duratives and punctuals.

Here we might start by identifying the nucleic dynamicity types of the Krio verbs *no* and *lan*, respectively. According to the definitions in Section 2.8, *no* would, as was also stated above, fit the characteristics of stative nuclei. On the other hand, *lan* is clearly telic, since it meets the defining characteristics of this type: a process, contingent on its own completion, leading up to an implied momentary switch from one state to another.

Then, to be able to claim that the state/non-state distinction is basic, we need to find examples of Krio processive and eventive nuclei which are formally treated in the same way as nuclei

¹ Note that in Krio, past time reference is only implied since it is a logical consequence of the anteriority of situations. That which occurs before something else is of necessity placed temporarily in the (relative) past (see also Section 5.4).

such as *lan*. Here we will use the processive nucleus *ple*, ‘play’, and the eventive one *gi*, ‘give’, in order to test this postulation. If these nuclei, processive *ple* and eventive *gi*, are marked in the same way as telic *lan* to convey a present time location, then this would force us to draw the above-mentioned conclusions about Krio treatment of nucleic dynamicity. Analysing the sentence

- 73 [...] *den ditɛktiv de go rawn go arɛst den wan we de ple gyambul.*
 [PL [detective]] [IMP [go]] round go arrest [PL [one]] REL [IMP [play]] gamble
 [...] *detectives are (secretly) going around arresting those who gamble/are gambling.*
Bad Man Betɛ Pas ɛmti Os, scene 3: p.29.

we find that *ple* takes the imperfective marker *de*, just as *lan* did, to imply present time reference of the situation, that is, to give it simultaneity with the current focus of discourse. The people who are going to be arrested are currently ‘occupied with gambling’, either as a habit or as an ongoing activity. Then, unmarking the sentence, giving it the shape

- 74 [...] *den ditɛktiv de go rawn go arɛst den wan we ple gyambul.*
 [PL [detective]] [IMP [go]] round go arrest [PL [one]] REL [(ANT) [play]] gamble
 [...] *detectives are (secretly) going around arresting those who gambled/were gambling.*

would yield a construction in which the temporal/sequential location of the gambling is shifted back to a point in time preceding the current focus. In other words, those who are about to be arrested are some people who ‘gambled’ or ‘were gambling’ at some unspecified moment which sequentially is located in the past.

Thus we see that the lack of the imperfective marker *de* has the same effect in (74) as the unmarking of *lan* in example (72). While the relocation of the situation to the relative past is the same it is worth noting that the cause is different. In (72) the situation is granted a past time/anterior status on the grounds that it has no relevance at the present discourse focus and thus it is completed by definition. In (74) however, the zero-marking for tense is due to the fact that, sequentially, the ‘gambling’ was completed before the current discourse focus (topic time); since this dis-

course focus and the moment of utterance co-extend, the unmarked stem is appropriate.

What remains is to show that eventive nuclei such as *gi* are also handled formally according to the same grammatical rules. That is, to show that the scope of an eventive-centred utterance marked for imperfectivity by *de* includes the moment of speech.

In (75) below the imperfective marker extends the scope of the eventive nucleus *gi* into the present moment, indicating that ‘the giving of children’ could be something that God does on a regular basis, a habit co-extensive with the current focus.

- 75 Yu nem nɔ go day as lɔŋ as Ɔɔd *de gi* ɔn pikin.
 [[you] (POSS)] name [NEG [IRR [die]]] as long as God [IMP [give]] them children
Your name won't die as long as God keeps giving them children.
Bad man Betɛ Pas Ɛmti Os, scene 2: p.25

However, as the example stands, it may also be interpreted as involving a condition, ‘as long as God keeps giving them children’, which must be fulfilled in order for the result, ‘the survival of the name’, to remain in effect. The removal of this conditional possibility by the deletion of the adverbial *as lɔŋ as* and switching the order of the clauses yielding a proper statement (76) shows that the basic present time implication of *de gi* does not change:

- 76 Ɔɔd *de gi* ɔn pikin so yu nem nɔ go day.
 God [IMP [give]] them children so [[[you] (SG) (POSS)] name] [NEG [IRR [die]]]
God keeps giving them children so your name will not die.

Unmarking *gi*, as in (77), will shift the situation back to some unspecified location in the past; the only information that we get is that ‘the giving of children’ is over and done with and that it preceded the discourse focus, which here is the moment of speech.

- 77 Ɔɔd *gi* ɔn pikin so yu nem nɔ go day.
 God [(ANT) [give]] them children so [[[you] (SG) (POSS)] name] [NEG [IRR [die]]]
God gave them children so your name will not die.

At this point it should be clear that there are no formal grammatical differences between telics, processives and eventives as re-

gards marking the opposition between relative present and relative past time reference. These three categories of verbal nuclei must take imperfective marking in order to explicitly indicate that the situation in question is co-extensive with the current discourse focus. And since in these cases current focus and moment of speech coincide, it follows that the presupposed temporal reference is to the present moment. All that is needed to shift these situations back to past time reference is to leave out the imperfective marker.

What we have established so far is that the unmarked *lan* (telic), unmarked *ple* (processive) and unmarked *gi* (eventive) basically indicate anterior/relative past reference, but for different, but related, reasons: *Lan* is anterior since the situation in which it occurs is seen as completed and not relevant at the current discourse focus; *ple* and *gi* are anterior since they precede the current focus sequentially and thus must be seen as having reached their completions.

The conclusion to be drawn from the above analysis is that processive and eventive nuclei are formally handled in exactly the same way as telics are. In turn, this leads to the conclusion that, at least for Krio, it is justifiable to postulate that the state/non-state distinction is more basic than the durative/punctual one, since it is the former distinction rather than the latter which is relevant to, and has an impact on, the shaping of the Krio TMA phrase.

However, even if we accept the supremacy of the state/non-state distinction we would still want to know why Krio processives should be grouped together with eventives and telics, and why this group, non-statives, should be treated as if all nuclei belonging to it are in a sense eventives¹.

The key to the understanding of this grammatical behaviour has been hinted at above but must be further considered in terms of the relation between the notions of completion and sequence on the one hand and background and foreground² on the other.

The argument goes as follows: The crucial features of any background are that it is stable and omnipresent. That is, it ob-

¹ About the default past time location of eventives; see Section 2.8.

² Background and foreground are (see Sections 1.2, 1.3 and 3.2) in a sense the essence of the state/non-state distinction.

tains as long as it is not positively terminated or changed. Termination and/or change, in turn, are not encoded into states. In other words, in order for a background to achieve termination this end has to be explicitly stated—termination and change are situated **outside** the state itself. This follows from our definition of state dynamicity proposed on page 44, Section 2.7.1, which says that states have “unlimited duration, the upholding of which excludes the possibility of positively defined input of energy”.

The crucial feature of foregrounds is the fact that they are unstable and that this instability must, in one way or the other, be defined in relation to their backgrounds. They are no more than attention-grabbing motifs against those backgrounds¹; without a background there cannot exist any foreground. This has the consequence that completion of foregrounds is brought about by **lack** of energy input. As soon as no more energy is supplied, the foreground just disappears. In this respect processives, eventives and telics are all the same: They “die” from lack of new energy.

Transferred into relevant terminology this would, figuratively speaking, mean that states/statives go on until something stops them, whereas non-states/non-statives go on as long as something keeps them going.

As we will see in Chapter 5, completion cannot be defined in any other terms than *beforeness*, that is, past reference. That which is seen as having reached its end must have done so at a point in time necessarily preceding its current point of reference.

Finally, sequences (of things, events, situations, etc.) are always linearly ordered. Thus, if a (linguistic) foregrounded phenomenon (referred to by a processive, an eventive or a telic verbal concept) takes place but its energy input is withdrawn; ‘somebody *stops* running’, ‘*succeeds* in killing somebody’ or ‘*finishes* making something’, then this foregrounded happening has reached its completion. And since completion is essentially beforeness this must have happened before something else in the sequence of situations did. Therefore, since lack of energy input is quite naturally

¹ In this respect it becomes quite easy to see why the progressive forms of non-stative verbs are sometimes said to express notions such as *grammaticalized stativity*, etc. Cf. Mufwene (1984a: 28), for example: “[...], I see virtually no harm in assuming that the progressive/durative is itself grammatically a ‘stativizing’ aspect, particular for non-statives.”.

the unmarked member of the contrasting pair—input of energy versus no input of energy—we find that what is explicitly marked by linguistic means is the marked member of the pair, which in this case is input of energy. Hence foreground (non-state) items are marked for past time reference by the lack of a marker, whereas background (state) items are marked for past time reference by an explicit marker. And vice versa, foregrounds obligatorily take an explicit marker for present time reference, whereas for backgrounds present time reference is conveyed without any marker. There are now only two important questions left requiring answers: What counts as past and present time reference, in the framework outlined above? And what is referred to?

Bickerton assumes (see quote on page 73) that creole temporal reference is to topic time rather than to the time of the utterance. If this assumption is correct, then creole temporal reference is **relative**, which means that reference to the past, or to the present, must be made, not necessarily from the point of view of the moment of utterance, but from whatever point in time the speaker chooses as topic time. Everything that took place before topic time is past/anterior and everything that takes place simultaneously with topic time is present/non-anterior.

To sum up the Krio state/non-state distinction:

- Stative nuclei need no present-time marking in Krio, since the extension into the present is already there in the meaning of these nuclei.
- Processive, eventive and telic nuclei are not formally distinguished in Krio and are grouped together as non-statives.
- Non-stative nuclei need marking for present-time location since the anteriority marking character of Krio presupposes a completive interpretation of non-statives without present relevance.
- Krio non-statives are placed in the relative past unless otherwise marked.

3.4 The Case of English

In the preceding paragraphs it has been shown that we are justified in postulating that the state/non-state distinction is an underlying categorial distinction in Krio, of a more basic kind than, say, the durative/punctual distinction. This section will aim at reminding the reader of the fact that the same relations which hold in Krio also hold in Standard English. That is, we will see that there is a systematically marked morphological difference in the way English treats statives as opposed to how all three groups, processives, eventives and telics, of non-statives are handled. We will not be able to find any systematic morphological difference between durative (stative and processive) concepts on the one hand and punctual (eventive and telic) on the other.

In some respects this might be a case of pushing against an open door since the state/non-state distinction is recognized to be of major importance for at least one other categorial distinction in English: the contrast between the simple (present/past) form and the progressive (present/past) form of the verb. However, it is important to the outline of the present study to show this explicitly.

So what are the consequences of the state/non-state distinction for English? And how does English compare with Krio in this respect? To begin with, this basic semantic distinction will, as we know, turn out to have at least one major effect on English aspectual marking. A comparison of, for example, the stative nucleus *hear* in the sentence

78 He *hears* a sound.

with the non-stative, telic nucleus *learn* in

79 The American people *are now learning* the hard way [...]
LOB, CD-ROM version.

will reveal that these two sentences stand in the same relation to each other as the Krio examples (70) and (71). The stative nucleus in (78), *hear*, does not take any marking for present time reference, apart from the highly redundant third person singular

-s, the task of which, in modern English, has very little to do with temporal location at all¹, whereas the non-stative nucleus in (79), *learn*, takes precisely this overt present time marking in the shape of the present progressive², in order to give this situation simultaneity with the current moment of speech.

This difference between English stative and non-stative nuclei is often pointed out in grammars of English, in which the non-normality and extremely low frequency of stative verbs (that is, stative nuclei) marked for the progressive are stressed. For example

80 Right now, he *is hearing* a sound.

would be seen as exceptional, bordering on the impossible, requiring a fair amount of additional context in order to be perceived as grammatical. In this case we would have to assume that there is something peculiar about this special act of hearing, something which deviates from the prototypical interpretation of situations centred around stative nuclei. Maybe the sound is only in the head of the hearer, maybe this is an actor, caught in the middle of perceiving a sound, etc. In short, the progressive form of an English stative nucleus is highly marked and draws attention to some unprototypical way of interpreting the situation into which that nucleus enters.

If we compare this to the situation in Krio, we will find that this way of marking exists in this language, too, only that the degree of markedness and/or unprototypicality is slightly lower. The difference is that when the progressive form of an English stative nucleus restricts the scope, in one way or the other, of the situation in which that nucleus is found, the imperfective aspect of a stative Krio nucleus often indicates a 'process that will eventually lead up to a change of state'. Thus we find *redi*, 'to be ready', 'to be prepared', marked for the imperfective aspect in

¹ At most it reinforces the present time implications already there in the situation, but even this may be questioned. This statement is corroborated by the fact that with the 1st and 2nd persons singular, and all plural persons, most English verbs do not have any overt present tense marking at all.

² This should really be *the present imperfective* but since we do not use this label when we talk about Standard English, *the present progressive* will have to do.

- 81 Wetin yu de pan?
 what+thing you LOCBE upon
What are you doing?

A *de rēdi*. Yu nɔ rēdi yet?
 I [IMP [ready]] you [NEG [ready]] yet
I'm getting ready. Aren't you ready yet?
God Pas Konsibul, act 2: scene 1

in which sentence the basic message is that somebody is right in the middle of a process (the 'process of gradually getting prepared for something') which in all probability will take this somebody from being in the 'state of not being prepared' to the 'state of being prepared'.

We must not be led astray by the different ways in which we interpret English and Krio stative nuclei marked for progressiveness and/or the imperfective, respectively. The important point to be made here is that the state/non-state distinction is equally important to both English and Krio. The mere fact that this distinction has different consequences for the surface structure and overall shape of these two languages, changes neither its general character nor its importance.

In the area of non-stative nuclei, however, the analogy between English and Krio shows some discrepancies. We know from the above that there is only one means of present-time marking of non-statives available to Krio, the imperfective marker *de*, irrespective of the dynamicity value of these nuclei as either processives, eventives or telics. Telic *lan*, processive *ple* and eventive *gi* take the same marking for present time reference, *de lan*, *de ple* and *de gi*, respectively. More importantly, without explicit present time marking of the non-stative Krio nucleus, any present time reference is excluded.

In the case of English the situation is slightly different. There is a morphologically marked contrast between the simple present and the present progressive as far as the marking of English non-stative nuclei for present time reference is concerned. Basically this is a contrast between different kinds of imperfectivity¹.

¹ In English the perfective aspect in the present tense is marginalized, and appears to be systematically realized in only three ways: (1) as the unmarked value for

This opposition would yield contrasting pairs like (82) and (83), processive *play*, and (84) and (85), eventive *nod*, below:

- 82 To his surprise he has discovered that although he *plays* tennis right-handed he plays golf left-handed.
LOB, CD-ROM version.
- 83 To his surprise he has discovered that although he *is playing* tennis right-handed he isn't winning.
- 84 He *nods* his head, instead of saying yes.
- 85 He *is nodding* his head, instead of saying yes.

The prototypical interpretations of these situations include, in principle, the present moment of speech. What is important to note here, however, is **not** the quite trivial fact that English non-states/non-statives take the present progressive to mark on-goingness/continuousness and the simple present to mark repetitiveness. The crucial point is that this possibility of contrast is formally realized in an identical fashion irrespective of the nucleic dynamicity value of non-states/non-stative nuclei. It does not matter if the nucleus is processive, *play*, eventive, *nod*, or telic, *learn*. What matters is that states/statives are normally not capable of positively contrasting, repetitiveness with continuousness by using the same morphological means as non-states. That is, just as is the case in Krio, English treats the state/non-state distinction as more basic than the durative/punctual one.

At this point it is enough to say that the dynamicity values of processive, eventive and telic concepts like *play*, *nod* and *learn*, force upon us certain possible, but slightly different, ranges of interpretation of situations containing these nuclei. And also that these ranges of interpretations will not exactly match each other.

3.5 Summary

In this chapter it has been argued that the basic distinction as regards verbal concepts is the state/non-state rather than the dura-

performatives (which make up a first person subclass of eventives); (2) as the instantaneous, or commentator's present; and (3) as the narrative historical present (see Sections 2.8 and 5.2).

tive/punctual distinction. A number of examples, both from Krio and from English, have been presented, all of which point to the conceptual primacy of the state/non-state distinction. In both languages stative verbal nuclei are systematically and formally distinguished from non-stative ones, although by different means and with different effects on the meaning of utterances.

No such systematicity and formal distinction can be shown to exist in the durative/punctual distinction. However, the reasons for this supremacy of the state/non-state distinction can only be discussed in a highly speculative fashion, as has been done by Bickerton (1981, 1984a, 1990, 1996a) who ascribes a high evolutionary survival potential to those humans or pre-humans who, at the dawn of *homo sapiens*, were able to master and manipulate this distinction. We also find support for this view in research on language acquisition, Bloom (1984) and Clark (1987), for example.

Suffice it to say that synchronic evidence taken from present-day language use indicates that the state/non-state distinction takes precedence over the durative/punctual one.

4

The Nucleus

4.1 Introduction

In Section 2.11 we briefly touched upon the nature of the nucleic content of the situation and noted that it consists of the equivalent of either one verbal or one predicative concept. But Section 2.11 did not explicitly address the question of exactly **what** counts as the verbal nucleus of situations, that is, what verbal and/or predicative elements have the potential to occupy the nucleic slot in the situation? And, what additional non-verbal elements should be seen as forming integrated, and inseparable parts of the nucleus? Obvious candidates could be prepositions and adverbs.

Moreover, in addition to the self-evident fact that if we find only one verbal concept in a situation this must be the nucleus, two questions emerge as immediately relevant in this respect:

- How do we treat multi-verbal constructions such as *begin to run*, *cease to function*, *have seen*, *be running*, or Krio *bin de kam*, *don it*, *ker go*, *bring kam*, etc.?
- Which verbal element in each of these various syntagma is to be identified as the verbal nucleus?

Answering these two questions involves drawing a line between those verbal elements which, on closer examination, turn out to be pure auxiliary verbs or TMA markers, and those elements (verbal or not) which in fact **do** carry the major bulk of the lexical content, or at least contribute their meaning to the total meaning of the verbal nucleus. The reason for drawing this line is that the former group, that of pure auxiliary verbs and markers, is

part of the TMA system of the verbal constituency and by definition cannot take on the role of nucleus, whereas the latter group, lexical content carriers, must be recognized as nuclei, or integrated parts of the nucleus. In total, the answers to these questions will give us a definition of the lexical content of the *nucleic verbal element*, as it is understood in the present framework, as well as a delimitation of its scope.

This chapter will first deal with the problems of defining the lexical content *per se* of the verbal nucleus. Secondly, it will be proposed that we may handle the problems attached to the identification of the verbal nucleus in multi-verbal constructions by the postulation and analysis of two major categories of multi-verbal constructions, namely *auxiliary verbal* (Section 4.3.1), and *serialized verbal* (Section 4.3.2) constructions.

4.2 The Conceptual Content of the Nucleus

As was mentioned in Section 2.11, the verbal nucleus of situations is seen as a conceptual place-holder. That is, the major bulk (in many cases all) of the lexical verbal meaning of situations is derived from the nucleus. This is also the only element within the situation which is subject to direct modification by TMA elements like aspect markers, etc. The nucleic constituent is a lexical category with conceptual content, instantiated by the *equivalent of a main verb*. Here, main verb equivalence is a key notion, as will become apparent below.

In Sections 2.11 and 4.1 it is claimed that in the present framework there is no difference in principle between verbal concepts, like *run*, and predicative concepts, like *be nice* (see Section 4.3). Members of both these groups are potentially subject to the same tense, mood and aspect marking. They differ with respect to the status of their TMA carriers (see Section 5.5). That the difference (which is morphological) between these two nucleic categories is irrelevant to the present theory can be illustrated by comparing English and Krio. For instance, in English one way of expressing the notion of ‘being in the state of being prepared (for something)’ can be a predicative construction with the copula, *be*, plus an adjective, *ready*, yielding:

86 *He is ready.*

In Krio, the equivalent of *he is ready* is expressed by what appears to be an adjective lacking a copula (see Section 2.10):

87 *I rēdi.*
 he ready
 He is ready.

The point illustrated by (87) is that it carries the same tense, mood and aspect implications as English *he is ready*, that is, non-anterior tense, realis mood and imperfective aspect. The immediate conclusion to be drawn from this Krio sentence might be that Krio just deletes the copula in constructions such as this, and that its TMA values are presupposed or even contextually supplied. This would not be consistent with the truth.

The fact is that *rēdi* is treated in the same way as non-adjectival stative nuclei such as *no* ‘know’ are treated. The same rules for TMA and NEG marking apply to both pure stative nuclei and adjectival ones. For example, Krio marks *rēdi* for present relevance (see Section 6.2.2.2) in the same way as it marks *no*, with the perfect marker *dɔn*:

88 *Wɛl, una dɔn rēdi fɔ put wɔd wan ples naw; ...*
 well [[you] (PL)] [PFCT [ready]] for put word one place now
 Well, you are ready to reach an agreement now; ...
 God Pas Konsibul, act 2: scene 1: p.14

89 *A dɔn no wetin wi fɔ du. Mek wi de kuk granatsup ɛn pepesup.*
 I [PFCT [know]] what+thing wi CZR do make we [IMP [cook]] ground nut soup and
 pepper soup
 *I (now) know what to do. Let’s cook peanut soup and pepper
 soup.*
 God Pas Konsibul, act 2: scene 1: p.9

In both sentences the perfect¹ marker carries the implication that the ‘result of something that happened in the past is still relevant for the on-going discourse at the present moment of speech’.

¹ For more about the *perfect*; see Sections 4.3.1 and 6.2.2.2.

These facts lead us to what is the proper conclusion about Krio adjectival verbal nuclei: They are in all respects handled according to exactly the same grammatical rules as other types of Krio nuclei. Thus, Krio adjectivals in predicative constructions lacking the copula are verbal nuclei rather than adjectives.

The point to be made, then, is that the same conceptual content, ‘to be ready (for something)’ in English (86) and Krio (87) is in fact presented in two different ways: English treats it as a predicative construction requiring an auxiliary verb to carry some of its TMA values while Krio does this within a purely verbal construction.

4.2.1 Complex Nucleic Constructions

In Section 2.9 we saw that elements such as prepositions and adverbs may affect our final situational interpretation of utterances. For example, there is a significant difference in focal meaning provided by the prepositions *towards* and *to* in the two sentences *John ran towards the door* and *John ran to the door*. The analyses of these two utterances made in that section indicate that prepositions are to be seen as forming a unit within the complement of the verb in the sense that they constitute a nucleus-**external** element in the situational periphery, and thus they cannot be part of the nucleus itself.

However, as was noted in Section 2.3, other elements such as the prepositional adverb in phrasal verbs like *turn down* and prefixes such as German *ver-* in *versprechen*, ‘promise’, must, in contradistinction to the above-mentioned prepositions, be seen as elements integrated within the nucleus. What this amounts to is that we must take into account the fact that there is a distinction to be drawn between linguistic elements which combine more than one meaning into the same lexical unit, and those that use more than one lexical unit to express only one meaning. This distinction was observed by, among others, Lamb (1966: 12) who formalized this distinction within the framework of his *Stratificational Grammar*. Thus the combination verb stem plus inflection/ablaut, for example *died* or *ran*, constitute what Lamb defines as a *portmanteau* realization. That is, one lower level lexi-

cal item, *died*, instantiates two higher level elements of meaning, 'die' plus 'past tense'.¹

In the case of phrasal and prefixed verbs the hierarchical relation between the elements is reversed and to Lamb (1966: 31) these combinations constitute *composite* realizations; two lower level elements, 'turn' plus 'down' (or 'ver-' plus 'sprechen'), combine to form one higher level meaning element, *turn down* (or *versprechen*). This means that, in Lamb's terminology, phrasal verbs such as *turn down* ('refuse to consider in a favourable way') in:

90 He *turned down* my application.

are composite realizations which must be distinguished from portmanteau ones such as *ran* in

91 He *ran* home after school.

They must also be distinguished from expressions made up of a verb plus a preposition. In

92 He *fell down* the stairs.

we would normally view *down* as the head of a prepositional phrase. The difference then, is that in (90) *down* and *turn* form a conceptually integrated unit, a composite realization, whereas this is not the case with *fall* and *down* in (92).

In the framework of the present theory then, this difference between (90) on the one hand and (91) and (92) on the other, would mean that the former construction is to be analysed as the verbal nucleus, whereas the latter two are not. Or in other words, in (90) the meaning of *down* is added to and integrated with the meaning of *turn* and thus directly constitutes part of this meaning. In (91) *ran* is a lexical merger of two meanings, only one of which is verbal, 'run', which is consequently seen as the verbal nucleus. In (92) the meaning of *down* is not semantically integrat-

¹ Note that one crucial element in Lamb's (1966) stratificational grammar is that language is conceived of as consisting of a number of levels, the extremes of which are the meaning (highest) level and the sound (lowest) level.

ed with *fall* and therefore only *fall* is seen as constituting the verbal nucleus of this situation.

The above analysis, then, accounts for the curious fact that although the past tense morpheme in English is **inalienably** attached to the verb stem, it must be seen to reside outside the verbal nucleus—it adds a portion of **additional** meaning to the situation. But the opposite is true about phrasal and prefixed verbs: despite the fact that these elements do not always occur as bound morphemes, they must be seen as properties of the nucleus—they combine with the original verbal element and this combination constitutes one single derived **merged** meaning. The conclusion is that, in the present theory, composite realizations are nuclei whereas portmanteau ones are not.

4.3 Multi-Verbal Constructions

As mentioned in the beginning of this chapter, one of the preliminary tasks for an analysis within the present framework is to single out the verbal nucleus. One problem attached to this identification process is that there are constructions which are not straightforward mono-verbal ones, but which instead consist of a series of verbal elements in which we find modal auxiliaries such as English *will*, *can* and *should*, or Krio *məs*, ‘must’; preverbal TMA markers such as Krio *bin*, *go* and *dən*; so-called serial verb constructions such as Krio *kɛr go*, ‘take from here’ and *bring kam*, ‘bring to this place’; catenative verbs (cf. Palmer 1994) like English *seem* and *appear*. In this group we also have constructions like *begin to read* and *begin reading* with a (pseudo-) auxiliary verb (*begin*).

Since the identification of the nucleic element in the situation is of crucial importance to the present theory we have to distinguish those situations in which the element in question is an auxiliary proper, for example *have* in a present perfect construction, from those situations in which this element in essence is the main carrier of lexical verbal content, for example the *have to* plus verb construction and the inceptive *begin reading*. Moreover, we also must distinguish serial verb constructions from ordinary paratactic conjunctions.

Note, however, that since the task of this chapter is to define and delimit the verbal nucleus in general terms, and not to propose exhaustive definitions of serial verbs, auxiliary phrases, etc., these latter phenomena will of necessity be sketched briefly rather than defined properly.

4.3.1 Auxiliary Verbal Constructions

The defining criterion which distinguishes pure auxiliary verbal constructions from other multi-verbal ones is the comparatively low degree of, or even lack of, lexical content in the auxiliary verb. That is, the main verb in such constructions always carries the major part of the lexical content, while the auxiliary verb is fully grammaticalized or on its way towards becoming fully grammaticalized. Historically speaking we have here, in the words of Bynon (1985: 106):

[...] a complex development incorporating a change in the lexical meaning of the first verb which goes hand in hand with a change in the syntactic relations between the constituent parts of the construction as a whole. What was at some stage a complex verb phrase is now simply **part of the paradigm** of the second verb. [emphasis mine]

In order to see that this statement of Bynon's has indeed some validity, we may take the case with *have* as the marker of the English present perfect¹:

93 They *have reached* a conclusion.

Here it is easy to see that *have* adds little lexical meaning to the utterance. Rather, it is *reach*, together with its complement *a conclusion*, that conveys the lexical message. Moreover, apart from this "purely" lexical message, the past participle *reached* also carries the basic TMA values of this situation, namely anterior tense, realis mood and perfective aspect. Auxiliary *have* in this case has two major purposes, neither of which is primarily lexical:

¹ See Section 6.2.2.2, for a more in-depth discussion of the nature of the perfect.

- To act as link or mediator between the two, seemingly incompatible, notions of anteriority and (intended) simultaneity with the point of reference, here the moment of speech, by cancelling the termination point of whatever is viewed as relevant in the situation while still maintaining its inception in the past.
- To be the carrier of finiteness in the situation, the reason having nothing to do with the (present) perfect *per se*, but with the fact that English requires a finite, and tensed, verb in all full sentences.

What is added to this construction by the auxiliary verb *have* is thus no more than the explicit relation obtaining between a certain state of affairs, ‘being in the state of having reached something’, and a certain temporal reference point, ‘the moment of utterance’.¹ This is exactly what is predicted in Bynon’s above statement: *have* has become part of the paradigm of the main verb, here *reach*.

This situation is paralleled in the category of modal auxiliary verbs. The difference between the *have*-periphrasis and the modal constructions is a matter of degree rather than nature. Thus any English situation containing a modal auxiliary verb will turn out to have placed the major portion of its lexical verbal content on the main verb. To the modal verb itself is left the primary task of conveying irrealis mood, (see Sections 5.1 and 5.3). This is easily illustrated by comparing some modal constructions:

- 94 They *may reach* a conclusion.
- 95 They *can reach* a conclusion.
- 96 They *will reach* a conclusion.
- 97 They *must reach* a conclusion.

In these examples the common denominator manifested in the auxiliary verbs is the fact that they all express the **unrealized** si-

¹ This of course ignores the fact that *They reached a conclusion* also conveys exactly the same basic TMA values, anterior, realis and perfective, but without what Bybee & Dahl (1989) refer to as relevance at the present moment, or Klein (1994) as, Topic Time is in the posttime of the Situation (see Section 6.2.2.2).

tuation of ‘reaching a conclusion’, that is, irrealis mood. Only as secondary layers of meaning are the different irrealis facets of these lexical contents indicated, the ‘possibility’ of (94), the ‘ability’ of (95), the ‘volition’ and/or ‘pure future’ of (96) and finally the ‘obligation’ of (97), all meanings¹ of which may only be remnants of the meaning these words had in Old English. That English modals carry a minimal load of lexical meaning may also be illustrated by comparing the ‘putative’ *should* in (98) with the present subjunctive in (99):

98 We demand that he *should leave*.

99 We demand that he *leave*.

Both subordinate clauses in these sentences would yield the same TMA analysis: non-anterior, irrealis and perfective. In the present theory, putative *should* is viewed as having only a stylistic effect contributing very little to the lexical content of the construction. The point is that the verbal nucleus in both subordinate clauses is *leave* and nothing else. From this follows that the English modals have been grammaticalized to such a degree that they too, as is the case with periphrastic *have*, have become parts of the paradigm of the main verb which they qualify, albeit in the majority of cases with a slightly heavier load of lexical content (see Sections 5.3 and 6.3).

To sum up: The auxiliary verbs in the periphrastic *have*-construction and those of the modal auxiliary construction:

- Cannot be seen as constituting the verbal nucleus by themselves, since they do not carry any substantial isolable load of lexical meaning as compared to their main verbs.
- Nor can they be seen as forming an integrated composite unit with the main verb, such as those manifested by phrasal verbs, etc., since they do not alter the basic meaning of the main verb (see Section 4.2.1).

¹ Admittedly the degree of lexical meaning is higher in the modals than it is in auxiliary *have*. The important point is that the modal secondary level of meaning of these auxiliary verbs does not constitute part of the TMA, and hence the VC, just as is the case with perfect *have* or progressive *be* (see Section 6.3).

The conclusion to be drawn is that the element to be identified as the nucleus in constructions such as those mentioned above, is that which traditionally has been labelled the main verb.

4.3.2 Serialized Verbal Constructions

In the framework of the present study the notion of *serialized verbal constructions* is to be taken to refer to sequences of verbs or verbal elements, seemingly unordered as regards any auxiliary versus main verb relation. Since the task is to identify properly the verbal nucleus in constructions such as these, the first step is to distinguish between two major subgroups of serialized verbal constructions:

- Sequences of serialized verbs proper, e.g. Krio *kɛr go*.
- Sequences of verb(s) (plus complementizer) plus verbal complement, e.g. English *have to go* or *begin running*, etc.

The former group is usually considered to be non-existent in English but in Krio quite a number of constructions made up of a series of verb stems can be found. The latter group, however, is very frequently manifested in English.

4.3.2.1 Serial Verbs Proper

A proper serial verb construction (SVC) is not to be understood as any string of verbs or verb stems that can occur in a language, for example the above-mentioned sequence of modal auxiliary verb plus main verb in English. Instead, with some qualifications sketched below, serialization of verbs, in the words of Winford (1993: 183) can briefly be described as a

[...] syntactic strategy [...], in which verbs sharing one or more common arguments are strung together with no overt marker of coordination, [...].

In typological terms, SVCs are found in many languages, none of which is Indo-European¹, however. Among the SVC languages of the world we find some West African, South-East Asian and East Asian languages (Winford 1993), and a number of Atlantic Creoles such as Krio. Thus, a typical Krio SVC is found in

- 100 Josia bin bɔn den pikin ya di tɛm we den *bin kɛr* di Izrɛl pipul
 den *go* Babilɔn go mek den slev.
 Josiah [ANT [born]] [PL_{DET} [child]] here the time REL they [ANT [carry_{V1}]] the [[Israel
 people] PL] [go_{V2}] Babylon] [CPZ] make them slave
 ; and Josiah was the father of Joconiah and his brothers at the
 time of the deportation to Babylon.
Gud Nyus Fɔ Olman, Matyu & NT Matthew 1:11

in which the sequence *kɛr* plus OBJECT plus *go* is not to be taken as denoting a coordinated sequence of independent actions in the sense ‘carry (something) and go’, but as having one single verbal lexical content, meaning something like ‘bring/take OBJECT to some (other) place’.

The question relevant to the present study, as far as SVCs are concerned, is how to determine which of the serialized verbs constitutes the nucleus. In order to do this we must first identify the semantic **function** of verb serialization and then describe, in general terms, the **structure** of such constructions.

If we examine example (100) from a semantic point of view this seems to indicate that the basic task of the serial verb(s), V_n , in an SVC is to express *case* relations, such as INSTRUMENT, DIRECTION, LOCATION, etc., by means of series of verbs or verb-like elements, holding between the main verb and its various arguments. Here the serial verb (V_2) is *go*, expressing ‘direction towards’.

This analysis is corroborated in (101) below, in which the case relation expressed by V_2 , *tek*, is that of instrument; Jesus was supposed to be caught (trapped) ‘by means of a question’ which would make him answer (*tok*) something which would compromise him, rather than ‘by taking something he says (his answer) **and then** trap him with it’.

¹ We could argue that many of the Atlantic creoles are Indo-European as regards their word stocks. For a discussion; cf. Romaine (1994).

101 Den sən səm Faresi den ən səm pan Ǝrəd in pati pipul den to
 Jizəs fə mek Jizəs tək səntin we den *go tek kech* am.
 they [(ANT) [send]] some [[pharisee] PL] and some PREP [[[Herod] POSS] [[party
 people] PL]] PREP Jesus CPZ make Jesus talk something REL they [IRR [take_{v2}
 catch_{v1}]] OBJ

*A number of pharisees and men of Herod's party were sent to
 trap him with a question.*

Gud Nyus Fə Olman Mak & NT Mark 12:13

In English the case relations expressed in (100) and (101) would usually be marked by means of prepositions: *with a knife*, *to the boy*, *in the room*.

Structurally then, an SVC consists of at least two juxtaposed verbs conjoined without any marking indicating either the relation between these verbs, or the relation between the nouns (nominal arguments) and the verbs (Bynon 1985: 107).¹ However, the fact that there must not be any overtly marked relation between the participating SVC verbs does not mean that they do not stand in a special relation to each other. There is a certain hierarchical, but unordered, relation holding between the main verb and its “side-kick” verb(s), or, using Winford’s (1993) terminology, the open slot *matrix* verb, V_1 , and the restricted slot *serial* verb(s), V_{n+1} .

Thus, it may be warranted to assume that this unordered hierarchy reflects the relative weight of the lexical contents of the matrix and serial verbs, but without reducing the semantics of V_{n+1} to such an extent that the major part of its lexical meaning is lost, as is the case with pure auxiliaries such as perfect/pluperfect *have* and progressive *be*.

This means that for serial verbs proper there is a formal hierarchical relation between the matrix verb and its serial verb(s) which involves the subordination of the serial verbs in relation to the matrix verb. The structure of this subordination, or rather argument structure, can thus be shown in the different ways which the matrix verb, V_1 , subcategorizes for its serial verb(s), V_{n+1} . If

¹ Bynon (1985: 107) also restricts her definition of SVCs to hold only for those series of verbs that “(1) share the same subject and (2) have all the verbs agreeing in tense, aspect, mood and positive/negative polarity, although only the first verb is overtly marked for these [...]”.

we analyse examples (100) and (101), their subcategorization frames will have the shapes found in (102) and (103):

102 *ker*, V_1 , _ NP V_2 AdvP

go, V_2

“I *ker* am *go* Babilon.” — ‘He took it to Babylon.’

103 *kech*, V_1 , V_2 NP _ NP

tek, V_2

“I *tek* am *kech* am.” — ‘He caught him with it.’

The crucial point for the present study is that the nucleus of a situation containing an SVC is a complex, that is, a composite realization which represents the semantic merger of the matrix verb and its serial arguments. These nuclei in a sense have two types of equivalents in English:

- Verbs with a simple lexical content into which a certain case relation¹ is encoded, e.g. *bring* vs. *take*, *come* vs. *leave*, etc.
- Phrasal verbs such as those mentioned above in Section 4.2.1, e.g. *turn down*, *come to grips*, etc.

4.3.2.2 Verbal Complement Constructions

There is a group of constructions which is more difficult to analyse as regards determining the verbal nucleus. The common denominator in this group is that there is a verb-like complement of some kind present in all these constructions. Among such constructions are ‘obligational’ *have to* ... ; and constructions such as *begin to* ..., *begin ...-ing*, etc. The difficulty regarding the analysis of these structures pertains to the fact that it is not notionally self-evident which of the verbal elements that occur together in these constructions is the one to be analysed as the nucleic verb. For example the syntagm *began running* (*began to run*) in

¹ The case relations encoded in these verbal concepts are for *bring* and *come*, usually direction towards the deictic centre; and for *take* and *leave*, usually direction away from the deictic centre.

104 Finally, he *began running/began to run*.

in which *begin* seemingly acts as some kind of inceptive marker of *run*. Notionally, *begin* in (104) might be viewed as an auxiliary verb on a par with perfect periphrastic *have*.¹ In accordance with this, *run* would be the nucleus of this situation.

The problem is, however, that even if it were possible to treat *begin* on a par with auxiliary *have*, the comparison would not hold for their complements, *running* and/or *to run* in (104) and *reached* in (93). In (104) these complements would be analysed as a gerund and a *to*-infinitive, respectively, whereas in (93) we have a past participle. These analyses, then, would indicate that there is an important difference between these two types of constructions.² But how do we capture this seemingly straight-forward distinction in terms relevant to the present theory? Or to rephrase the question: As far as the identification of the verbal nucleus is concerned, how can we distinguish between the constructions in (93) and (104)?

The answer is implicit in the different syntactic behaviour of these verbal elements, the gerund/*to*-infinitive, on the one hand, and the past participle, on the other. Gerunds and *to*-infinitives behave syntactically just as do nominal constituents in verb phrases such as the above, whereas participles never do this. Thus the paraphrase (105b) below makes sense but not (106b):

105 (a) He *began running*.

(b) What *is begun*?

Running is begun. = *It is begun.*

¹ This problem might seem trivial but there is in fact nothing that would logically prevent the grammaticalization of an inceptive marker in English in the same way as the original possessive *have* plus object plus complement construction in Old English evolved into the present day periphrastic *have*-construction.

² An alternative way of accounting for these facts is found in the implications of an observation by Duffley (1994: 235–236) who says that “*to* occurs with the infinitive whenever the latter’s event is conceived as being somehow subsequent to some other point of reference.” This point of reference should then be the happening depicted by the nucleic verb. The problem with this way of reasoning is that there is in fact no latter event since there can only be one event in each situation. However, from a pragmatic point of view Duffley’s comment is correct of course, since in an expression such as *He began to run.*, the ‘running’ can only be logically conceived of as taking place after its ‘beginning’. In the present study, however, the ‘running’ is only the nominal result of ‘beginning’.

- 106 (a) They *have reached* a conclusion.
 (b) What *is had*?
 *Reached a conclusion *is had*.

The obvious reason is that only nominal constituents are allowed to appear as the subjects of clauses, which is not the case with verbal constituents, and thus we must conclude that gerunds and *to*-infinitives, despite their close affinity to verbal concepts proper, have in effect lost their verbal distinguishing quality—the encoding of time—that is, their *dynamicity*, and as a consequence of this cannot take on the role as nucleus.

Therefore we are justified in assuming that *running*, in (104), is less “verb-like” than is *reached*, in (93), an assumption which is also borne out in (105) and (106).¹ The fact is that there is no difference in principle between *running* as a subject in (105b) and a proper noun, say *the run*, in the same position.²

One consequence of this lack of dynamicity in the gerund form of the verb is that the capability of being temporally affected is also lost. This can be shown by contrasting a gerund construction with a progressive one.

- 107 (a) He was *running*.
 (b) I’m sorry. What was he *doing*?
- 108 (a) He *began* running.
 (b) I’m sorry. What did he *do*?

Here we note that in (107b) the syntactic structure is kept intact although *run* is replaced by the pro-verb *do*. However, in (108b) the syntactic structure is altered in such a way that the *ing*-form has disappeared; an operator in the form of periphrastic *do* is in-

¹ That there are differences between gerunds/*to*-infinitives and participles as regards syntactic behaviour is of course a linguistic commonplace, but the important point is that we cannot just arbitrarily pick out any old verbal or verb-like element in a situation and state that it constitutes the verbal nucleus of this situation. We are compelled to define and identify this verbal nucleus in a scientifically sound fashion, and one way of doing this is to rule out those elements that **cannot** act as nuclei.

² Apart from the fact that *running* is generic and non-count, whereas *the run* is specific and count.

troduced, but most importantly, the *pro-do* does **not** replace *run* in this case but *begin*.

This means that in (107b) it is the participle which is temporally affected, but in (108b) this quality is granted *begin* and not the gerund *running*. Moreover, this lack of temporality in turn leads to, what we may call, the de-verbing of the gerund *running*.

So, the crucial point to be noted is that nominal elements are not, **and** cannot even in principle be, temporally modified. They might be located **in** time, but they cannot **express** or **encode** time since this is the essence of verbals. This means that there is a potential for temporal modification in participles but none in gerunds and *to*-infinitives. The above analysis indicates that there are structures in which we might find a verbal element which in a sense is the notional main verb, for example *running*, but which on closer examination will turn out to be the complement of another verb, *began*, which from the point of view of the present theory is to be seen as the verbal nucleus.

Finally, in this section, we must consider the obligational *have to* plus verb construction. This construction expresses 'obligation' in a fashion which may be paraphrased as 'must'.

- 109 (a) You *have to leave* now.
(b) You *must leave* now.

In the present framework the relevant question to ask regarding the contrast between (109a and b) is whether *have to* is to be considered as constituting an auxiliary verbal element within the verbal constituency, thus being unable to play the role of nucleus (this, as we saw in Section 4.3.1, is the case with *must*), or if this construction acts as a verbal nucleus in its own right?

To show that the latter alternative is indeed the most plausible one we will draw on structural evidence. One structural peculiarity of English is the use of a verb phrase operator (cf. Quirk *et al.* 1985: 80–86) whose only role is to be the carrier of finiteness in certain questions and negations. That is, in order to obey the construction rules of questions or negated statements, the speaker of English, must **obligatorily** use this operator. In those cases when an auxiliary verb is already there in the positive statement the role of operator is quite simply assumed by this auxiliary.

The only “operation” needed in order to arrive at a question (or a negation) with an auxiliary verb is to change the order of the subject and the first auxiliary which also becomes the verb of concord, and insert the pro-verb *do* in the main verb slot:

- 110 (a) What *must* I *do* now?
(b) You *must leave* (now).

Here, *must* acts as the operator while *do* anticipates the main verb in the answer, *leave*. However, with *have to*, example (111) below, it is possible to introduce a new auxiliary in the shape of *do*, acting as the operator, instead of changing the word order.

- 111 (a) What *do* I *have to do* now?
(b) You *have to leave* (now).

Moreover, *have to* is compatible with non-obligational modals such as *will*, example (112), *may* and *should*, etc:

- 112 (a) What *will* I *have to do* then?
(b) You *will have to leave*.

Neither of these operations is compatible with *must*:

- 113 (a) *What *do* I *must* do now?
(b) *What *will* I *must* do then?

Here it should be obvious that there is a striking difference in behaviour between *must* and *have to*. That is, while *must* may never act as a full, main verb, *have* in (111) and (112) appears to be syntactically and structurally equivalent to *have* in (114). In (114a) it is used as a main verb which is marked for irrealis by a modal auxiliary. In (114b) it takes a pro-*do* operator, and in (114c) it acts as the operator by itself:

- 114 (a) He *might have* fish ‘n’ chips for lunch.
(b) What *does* he *have* for lunch?
(c) *Has* he gone out for lunch yet?

This leads to the conclusion that in the present framework *have to* in the above obligational constructions should be classified as the verbal nucleus since it is the element in the utterance directly affected by TMA modification. This is in sharp contrast to the *must*-construction in which *must* turns out to be integrated **with-in** the TMA and thus cannot act as nucleus by definition.

We may paraphrase (110b) as ‘Your future leaving is your obligation.’, but (111b) as ‘You are in the state of having to leave’. Semantically and pragmatically, there is not much difference between these two examples but in the case of time and temporal structures this difference is significant.

4.4 The Impact of Nucleic Dynamicity

In Chapters 2 and 3 it was suggested that one of the determining factors in establishing the situational message of time encoding is the dynamicity values of the verbal nuclei themselves. In effect, it is the combination of dynamicity and TMA values that yields the basic message of time encoding, rather than the TMA itself which is only capable of conveying the binary distinctions between *perfective* (no internal structure) and *imperfective* (internal structure) aspects; between *realis* (asserted time) and *irrealis* (hypothetical time) moods; and between *non-anterior* (simultaneity) and *anterior* (beforeness) tenses. Values such as ‘habituality’, ‘continuousness’, etc., are the contingent results of the combination of the nucleic dynamicity and the TMA. This would help us to explain why we sense a difference in the characteristics of imperfectivity between

115 He *is dreaming*.

in which the nucleus *dream* is processive, and

116 He *is dying*.

which is centred around an eventive nucleus, *die*. In (115) the processive dynamicity of *dream* affects the interpretation of the imperfective marking in such a way that the general meaning is

that we interrupt somebody 'in the middle of the process of dreaming'. The picture in (116) is quite different, since here the eventive dynamicity of *die* has the effect of "with-holding", in a sense, the effectuation of the proposition in this situation. In short, we do not interrupt someone in the middle of 'dying' *per se*, but in the 'process which in the relative future will lead up to the durationless point of somebody's death'.

This connection between the nucleic dynamicity and the TMA value of a situation becomes even more important when we consider these facts in the light of markedness theory. From the basic dynamicity value of a verbal nucleus we can also, in a sense, extrapolate the default TMA value of the situation of which it is a part, regardless of the morphological means available for TMA marking. In other words, we are able to predict the most likely TMA value of a situation simply on the basis of the dynamicity of its verbal nucleus. In order to illustrate this phenomenon we may take the stative nucleus *know* and compare it to the clearly eventive one *kick*. The two sentences in (117) and (118),

117 He *knows* the truth.

118 He *kicks* the ball.

are not on an equal footing as regards immediate acceptability. This implies that these expressions differ in degrees of *markedness* (see Section 2.8). For some reason we feel that (117) is less marked than (118) in the sense that to understand (118) properly, we need a lot more contextual information than is needed for (117).

The consideration relevant to the present study, however, is not to point out the trivial fact that speakers of English are more comfortable with the simple present tense of stative nuclei than with eventive ones. What we want to know is **why** these differences come about, and what creates them.

In Section 2.8 definitions of stative and eventive nuclei are given; implicit in those definitions are the answers to the above questions.

The dynamicity of stative nuclei shares one important feature with the grammatical category of imperfective aspect; namely duration in time. The durative connection between stative dy-

namicity and imperfective aspect is that we cannot speak of any internal developmental structure at all (see Section 5.2) unless this is extended over time. This in turn makes it possible to extend, fairly effortlessly, the scope of the stative-centred situation to include the point of reference, here the moment of speech.

The dynamicity of eventive nuclei, on the other hand, inherently shares with the perfective aspect the feature of completeness. Completeness, in turn, has two important consequences:

- Anterior location (see Section 5.4).
- Lack of an explicit internal developmental structure.

This implies that the default interpretation of situations centred around eventive nuclei is perfective. That is, the scope of such situations prototypically **excludes** the moment of utterance.

In concrete terms we can thus explain the differences between (117) and (118) by the fact that as there is duration encoded into stative concepts but completeness into eventives, more marking is needed for eventives to be unambiguously located simultaneously with the moment of utterance. Without this marking we have to have recourse to other contextual means in order to make sense of sentences such as (118).¹

The above analysis points to the conclusion that the dynamicity values of nuclei have a direct and important role in determining two factors with respect to situational time encoding:

- The situational interpretation of the imperfective aspect as it occurs with different dynamicity values.
- The relative markedness of the time location attached to different dynamicity values.

This will be further elaborated on in Chapter 5, in which will be given very restrictive definitions of the grammatical categories of *tense*, *mood* and *aspect*.

¹ (118) could be an instance of what is sometimes referred to as the commentator's present and the contextual background may be an on-going soccer game.

4.5 Summary

This chapter has tried to demonstrate that nucleic potentiality is a quality which resides in the verbal elements which show main verb equivalence and which carry the main bulk of the lexical verbal content. We have also tried to show that these elements may be instantiated by either verbal or predicative concepts alike.

In addition to this it has been pointed out that in order to identify the verbal nucleus of situations it is necessary to distinguish between two major types of multi-verbal constructions:

- Those that are made up of an auxiliary phrase plus a main verb, in which the auxiliary phrase is the TMA carrier and as such does not constitute an element within the nucleus.
- Those that consist of (a) serialized or (b) complementized strings of verbal elements. The nuclei of group (a) are distinguished from those of group (b) by, most importantly, the fact that they always constitute composite realizations of V_1 plus V_n in the Lambian sense. This is not the case with group (b) in which we might find composite nuclei. However, these are never made up of more than one verbal element.

It is important to bear in mind that there is nothing which prevents the occurrence of a SVC nucleus which has a verbal complement and which in addition to this is TMA modified by an auxiliary phrase. Finally, the impact of nucleic dynamicity is briefly discussed and the claim is made that the different dynamicity values which we may ascribe to the verbal nucleus have different effects upon the over-all TMA interpretation of situations which are otherwise marked by identical morphological means.

5

The Verbal Constituency

5.1 Introduction

The second obligatory element of the situation was labelled the *verbal constituency* in Section 2.11. Within this constituency we find four obligatory constituents, the *tense*, the *mood*, the *aspect* and the *nucleic* constituents. Abstractly speaking, the first three units are semantic categories which may or may not be morphologically realized, forming a linguistic subsystem of their own, the TMA system. This label is the traditional one in creolistic writings. The nucleic constituent, however, is, as we saw in Chapter 4, a lexical category instantiated by the equivalent of a main verb. Thus, the *verbal constituency*, as it is understood in this study, is the sum of the TMA system and the nucleus.

One question to ask regarding the verbal constituency is in what way it differs from the traditional notion of *tense system*? Traditionally the label tense system has been used as a cover term for the verbal inflectional systems of languages. Among the categories we may find listed in a tense system are *the present subjunctive*, *the past progressive*, *the pluperfect*, *l'imparfait* (Fr), *le future antérieur* (Fr), etc. What is noticeable in this list of “tenses” is that not only temporality but also aspectuality and modality seem to constitute parts in the traditional notions of tenses and tense systems. At first sight this use of the term seems to imply a definition which would also fit the definition of *verbal constituency*. An example of a more refined definition of tense and tense system can be found in Bertinetto (1994b: 113):

[...] that the Tense systems of natural languages stem basically from the interplay (different from case to case) of the

three following factors: *Actionality* [...]. *Temporal reference* [...]. *Aspect* [...]

The notion *tense* specifically stems from the interaction of the last two factors: thus, it should not be confused with “temporal reference” proper.

There are two important reflections to be made about Bertinetto’s definition:

(1) Because of the fact that it does not include modality it misses the important point which is implicitly present in the traditional definition of tense system, that the verbal grammatical categories of *tense*, *mood* and *aspect* are related in that they all have a different and special relation to the notion of **time**.

We also find this notion in Bickerton (1984a: 187):

The basic creole distinctions listed in Section 3.4 are all concerned with deixis (fixing location) in time or conceptual space [...]

The “creole distinctions” Bickerton refers to here are precisely those that are included in the traditional conception of tense systems, namely *tense*, *mood* and *aspect* (Bickerton 1984a: 182). We will see below, though, that contrary to the Bickertonian view of tense, mood and aspect, only tense is able to directly locate situations¹ in time. But the point to be taken from Bickerton’s statement is that tense, mood and aspect are **equated** with each other as elements of the verbal subsystem.

(2) The way in which Bertinetto understands tense, as an interaction between temporal reference and aspect, deviates from the way tense is understood in Comrie who writes that tense, in its broadest sense, relates a situation to an *external* time scale, or in his own words (1976: 5):

As noted above, tense is a deictic category, i.e. locates situations in time, usually with reference to the present moment, though also with reference to other situations.

Interestingly, Comrie’s definition of tense is in fact in accord with

¹ There are of course contingent time locations attached to mood and aspect.

Bertinetto's (1994b: 113) definition of *Temporal reference*:

Temporal reference, which specifies the relation of the event referred to with respect to the "speech point" (deictic reference), or with respect to certain relevant "reference points" (anaphoric reference), which may in turn be understood with respect to the "speech point".

In this study, however, we will use Comrie's definition of tense in its *external deixis* sense (see Section 5.4).

External deixis is not the temporal essence of aspect though, since this category deals only with itself relating situations to their own *internal* time scale, or, again according to Comrie (1976: 5):

Aspect is not concerned with relating the time of the situation to any other time-point, but rather with the internal temporal constituency of the one situation; [...]

Moreover, *aspect* makes clear what may be seen as a complementary feature of what Comrie calls "the internal temporal constituency", how the speaker views that particular happening he is referring to, or as Bertinetto (1994b: 113) puts it:

Aspect, which indicates the particular perspective, or viewpoint, of the speaker with respect to the events referred to.

In short, the conclusion is that the category of aspect points us to how the speaker understands, or views, the happening referred to as regards situation internal time.

Finally, the category of *mood* relates situations to what in the present study will be labelled *factual* time, that is, the speaker judges the factuality of the event in such a way that it (the event) is found to take place in either asserted time—*realis* mood—or in hypothetical time—*irrealis* mood. What mood does, is, in the words of Bickerton (1981: 284) to

[...] contrast observed events with events that are unobservable, at least at the time of speech; [...]

These facts have some interesting consequences, since from them it follows:

- That aspect and mood do not relate one situation to another on a temporal scale. This is the task of *tense*.
- That aspect and tense do not state factuality. This is the task of *mood*.
- That mood and tense do not account for the phasal development of situations. This is the task of *aspect*.

The conclusion to be drawn from this is that, as far as the relation between time and the verbal constituency is concerned, we are faced with a three-dimensional entity (see also Sections 1.2 and 2.2) in which all units are obligatorily present, be they explicitly marked or not. This is basically a Jakobsonian standpoint which is taken up by Bybee & Dahl (1989: 64) in their discussion of “inflectional grams”¹ and how tense and aspect systems come about in the languages of the world:

One of the defining properties of inflectional grams is their membership in obligatory sets. Here obligatory means that the presence of one member of the set is required by the grammatical context. The absence of an overt marker in such a case is meaningful and constitutes zero expression.

What Bybee & Dahl are saying here is in effect that there is no such thing as a (verbal) situation which is neutral in relation to either aspect, (mood) or tense. All situations have, and must have, values set for all three categories, be this marking overt by a morpheme of some kind, for example the English past tense morpheme or the Krio anterior marker *bin*, or only implied, as is the case with English realis mood or Krio non-stative anteriority.

We will now go on and discuss these three categories in more detail, in Sections 5.2, 5.3 and 5.4. Then in Section 5.5, we will

¹ *Inflectional gram* is a term used by Bybee & Dahl (1989) to denote all morphemes which have a direct bearing on tense and aspect marking, irrespective of their status as *inflectional*, *derivational* or even *verbal auxiliary* morphemes.

deal with the question regarding what elements in the VC can be the carriers of the TMA.

5.2 Internal Time—Aspect

Above we learnt that aspect relates situations to their own time scale, explicitly referring to their internal temporal constituency. So instead of looking outwardly, as it were, the aspect constituent of the situation only looks to the situation of which it is part. However, what has to be borne in mind when we speak about internal situational constituency is that aspect, as it is understood here, does not refer directly to any particular characteristics of the situation in question. The reference is of a binary either-or-nature to the presence (*imperfective* aspect) or absence (*perfective* aspect) of internal constituency. Only indirectly are aspectual values such as ‘continuousness’, ‘iterativity’, and ‘habituality’ conveyed by the aspect constituent.¹ That this is only indirect seems also to be the implication of Bybee’s & Dahl’s (1989: 55) definitions of perfective and imperfective aspects, respectively:

- a. **perfective**, indicating that a situation is viewed as bounded;
- b. **imperfective**, indicating that the situation is viewed as not bounded;

That these definitions have some validity is corroborated by the fact that the English imperfective syntagm *be ...-ing* does not say anything at all conclusive about the nature of situational dynamism, it only implies that the aspect value of the situation in question is **not bounded**, imperfective. It is only when we encounter this syntagm in combination with a verbal nucleus that we are able to judge its dynamicity characteristics. For example the ‘continuousness’ of (119) and the ‘iterativity’ of (120)

¹ Here it must be noted that *punctuality*, which is sometimes listed as an aspectual category/value, in fact is best referred to as a phasal feature. This is due to the fact that punctuality is the situational equivalent of nucleic eventiveness. As such it can either indicate a perfective situation or one particular phase in the development of a situation, for example its inception or completion.

- 119 He *is walking* to school.
 120 He *is bouncing* the ball.

are not to be found, exclusively, in the imperfective syntagm *is ...-ing*. The same situation obtains in Krio, although the means of marking the imperfective is different. The Krio way of doing this (see Section 3.3), is to insert an auxiliary aspect marker, *de*¹, in a position immediately preceding the main verb. This could yield an imperfective continuous sentence like (121), in which the verbal nucleus, *rɔn*, ‘run’, is processive. Or an imperfective habitual one, (122), in which the nucleus, *fɔgɪv*, ‘forgive’, is eventive.

- 121 I *de rɔn*.
 he [IMP [run]]
 He is running.
- 122 Gɔd *de fɔgɪv* wi, so lɛ wɪsɛf fɔgɪv ɔda
 God [IMP [forgive]] we so let we+self forgive other
 God forgives us, so let's forgive other
 Bad Man Bete Pas Emti Os, scene 1: p.11

Here we note that the imperfective marker in question remains the same, although the imperfective values of these situations are different. What these examples tell us is that it is not the aspect marker *per se* that renders these sentences ‘continuous’, (119) and (121), ‘iterative’, (120) and ‘habitual’ (122). Instead these values are the results of the combination of the dynamicity value of the verbal nucleic concept in question and the presence of a marker of imperfective aspect.

In short, the task of aspect is to indicate whether there is any internal constituency (imperfective) or whether there is none (perfective). The task is not to make any explicit factuality claims about the situation or to relate it to any other situation.

In relation to the general linguistic concept of time it is possible to describe the aspect constituent of verbal constituencies as a discrete unit on the time line. Thus example (119) would graphically be described as:

¹ Krio *de* is probably derived from the English locative adverb *there*.

situation E: *He is walking.*

Fig. 7: The aspect of *He is walking* on time line.

This figure should be interpreted as follows: Co-extensive with both the present moment of speech, “S”, and the moment of reference, “R”, a situation “E”, takes place. The square brackets, “[]”, represent the non-deictic nature of aspect; the fact that aspect is non-relational. Within the brackets the imperfective aspect of the situation is represented by the arrows, “<” and “>”.

The presence (the imperfective) or absence (the perfective) of explicit internal temporal constituency also has important and far-reaching, consequences for the temporal location of situations. Normally all situations marked for the perfective aspect are also by default temporally located in the past, be it the absolute or the relative past. They are anterior to their points of reference. This follows from the implications to be extracted from the definitions of the perfective aspect in Comrie (1976: 18):

The perfective does indeed denote a complete situation, with beginning, middle, and end. The use of ‘completed’, however, puts too much emphasis on the termination of the situation, whereas the use of the perfective puts no more emphasis, necessarily, on the end of a situation than on any other part of the situation, rather all parts are presented as a single whole.

Or in Crystal (1991: 254):

[...]; in the **perfective** aspect, by contrast a situation is seen as a whole, regardless of the time contrasts which may be part of it. [...] In such languages as Russian and Polish, for example, a contrast between perfective and imperfective is fundamental to verb classification, and is formally marked MORPHOLOGICALLY. For example, the PREFIX ПРО- (‘pro-’) before the verb ‘read’ produces a ‘perfective verb’ where the meaning is that the action (of reading) is completed; [...]

In both these quotations we find that what seems to be part of the defining characteristics of the perfective are the notions of completeness and completion. However, Comrie seems to emphasize the completeness nature of the perfective, and quite correctly so, when he says that the perfective aspect does not put any more stress on the end of the situation than on the beginning or the middle. But he downplays what is implicit in his definitions of the perfective: If a situation is presented “as a single whole” (Comrie 1976: 18), this also presupposes that this situation is in fact completed. Or in other words, in order to be able to be viewed as a whole, the situation must have reached a termination point. Otherwise, there is no whole to grasp. And, this is the crucial point, termination points are by their internal logic located temporally in either the absolute or the relative past.

As a matter of fact, there is only one way in which a perfective situation can be viewed as located in the present. This is when the event is contained within, **and** contains the present moment of utterance (see page 50). This then would apply to (1) performatives, since in this case, act and utterance are unified:

123 I *sentence* you to prison for six months.

and (2) the instantaneous (or commentator’s) present,¹ because the event referred to is depicted as being durationless and co-existing with the moment of utterance:

124 Shearer *loses* the ball to the Dutch, *wins* it back again and *shoots* way wide.

That there is a connection between the perfective aspect and past time is also assumed by Bybee & Dahl (1989: 83) to be a universal tendency in the world’s languages. They claim that this tendency has, in most cases, resulted in systems which contrast the perfective (past) with everything else. However, no such temporal entailment exists for the imperfective aspect since we do find situ-

¹ In note 1, on page 82, the *narrative historical present* was also mentioned as an example of the perfective aspect in the present tense. However, an explanation of this use of the (morphological) simple present tense is beyond the scope of the present study.

ations marked for the imperfective which are also located in the past. In, for example,

125 He *was bouncing* the ball.

the ‘bouncing of the ball’ is clearly located in the past, anterior to and unambiguously disconnected from the present moment.

5.3 Factual Time—Mood

As was suggested above, the semantic function of the verbal category of *mood* is to state factuality. That is, to indicate whether situations are to be seen as asserted (realis mood) or hypothetical (irrealis mood).¹ Normally the default, and unmarked, value is realis and the marked one should then be irrealis. This view of mood deviates in some respects from the traditional one in which we find categories such as *the indicative*, *the imperative*, *the subjunctive*, *the optative*, etc., most categories of which, in the Indo-European language family at least, are marked by verbal inflection. In French, for example, *le subjonctif* of, say, the verb *venir*, uses a different pattern of inflection than does *l’indicatif*. This traditional view of mood is found in Bybee & Fleischman (1995b: 2):

[...], **mood** refers to a formally grammaticalized category of the verb which has a **modal** function. Moods are expressed inflectionally, generally in distinct sets of verbal paradigms, e.g. indicative, subjunctive, optative, imperative, conditional, etc., [...] .

The difference between the present view of mood and the traditional one is that the former sees the subjunctive, the optative, potentiality, ability, etc., not as different moods, but as different

¹ We will see later on in this section that the mood markers in both English and Krio carry more specific lexical meanings than do the markers of aspect and tense. Thus in Krio we have three markers with the ability to appear within the TMA, all of which carry a more specialized irrealis meaning: *kin*, ability, habituality, *go*, probable future, *fɔ*, improbable future, conditional, contradiction, etc. (see also Section 6.3.1).

shades of irrealis modality.¹ It might be that *the subjunctive*, as in English, is a pure irrealis mood, but it is nevertheless conceived of as an irrealis subcategory, as is also the case with, say, ‘potentiality’ and ‘volition’, etc. The important point to bear in mind is that in the present framework, mood is thought of as an obligatory category which is always expressed in one way or the other within the VC, whereas modality is an optional elaboration on the entire situation.

On most occasions the situations that are inflected for *the indicative* will also be marked for *realis*, but not infrequently this will not be the case. In example (127) on page 119, *He will be walking to school*, the future indicative is used but the situation is also marked for irrealis. As we will see below, there are two reasons for this apparent discrepancy:

- The central role played by **time**, as either asserted or hypothetical, in relation to the category of mood.
- The way the present theory handles sequences of situations and/or different points of reference.

One more thing which is important to note before we continue with our account of *mood* is that since this category is much less grammaticalized in languages such as English and Swedish,² than are the categories of *aspect* and *tense*, the mood markers in these languages will carry more specific meanings (see also Section 6.3) than do aspect and tense markers. The explanation of this imbalance, or semantic duality, as far as lexical meaning is concerned, might be found in the history of these languages.

Until very recently, both English and Swedish had almost fully developed modal inflectional systems in the shape of a distinction between the indicative, predominantly *realis*, and the subjunctive, *irrealis*, verb paradigms, cf. Wright & Wright (1908), Blakeley (1964) and Lass (1994), for Old English, and Wessén (1955) for Swedish. Thus Lass (1994: 153) writes:

¹ We will return to these shades of modality in Section 6.3, about modal modification of the situational periphery.

² Modern Icelandic and German on the other hand have kept this systemic distinction fairly intact.

Old English retains the indicative vs. subjunctive opposition, but with loss of person marking in the indicative plural, and only a sg/pl contrast (no person-marking) in the subjunctive.

The usual explanation is that English and Swedish then **lost** the major part of their grammaticalized irrealis systems when the co-existing indicative and subjunctive inflection paradigms of those verb systems collapsed. Instead, a system of modal auxiliary verbs is said to have developed,¹ verbs such as *can* from OE *cunnan*, *may* from OE *magan*, etc., a development the results of which are the modal systems we see in these languages today. Therefore, in a sense, today we witness these languages in the middle of **regaining** a fully grammaticalized modal system, the building blocks of which are full lexical verbs gradually being transformed into “meaningless” grammatical markers of mood. Or as Bynon (1985: 113) puts it:

[...] diachronically they have come from main verbs, so that their present status may perhaps best be seen as a stage in a continuous development from lexical verb to grammatical marker.

This development parallels that of the English weak past tense form which is assumed to have started off as a post-posed form of the verb *do*. This is that standpoint taken by Lass (1994: 164), who in a discussion about the origin of the Germanic weak preterite states that:

[...], the most likely primary source seems to be compounding of an original verbal noun of some sort with the verb */dhe:/ ‘put, place, do’ [...].

Eventually this post-posed form of *do* turned into an enclitic past tense morpheme. Another example is how the French pure future forms evolved from the post-posing, in relation to the main verb,

¹ De la Cruz (1994), on the other hand, would argue that there was no such development of modal auxiliaries. According to De la Cruz these particular verbs already had a modal lexical value in Old English. In Middle English there was a tendency to use these modals as full verbs, but in modern times the old system has been restored.

of the verb *avoir*, 'to have', into a fully inflected form of the main verb, for example *parlerai*, '(I) will speak/talk', from *parler*, 'speak' plus first person present singular of *avoir*, *ai*.¹ In both these cases we find a gradual grammaticalization of a full lexical item into a pure grammatical marker.

However, since the modal auxiliaries in English, and the mood particles of Krio, do contain a fair amount of lexical meaning, we must distinguish, on formal grounds, between the mood of a situation and its modality. That is, just like tense and aspect, mood is a binary distinction, but modality, with all its possible different shades of meaning, has as its scope the entire situation.

That there is indeed a distinction to be drawn between mood, on the one hand, and modality, on the other, is corroborated in the following observation made by Palmer (1986: 2):

The modal system of most familiar languages, whether it is mood in Latin and Greek or modal verbs in English, is formally associated, along with tense, aspect and voice, with the verbal system of the language [...]. But modality, as will be seen, does not relate semantically to the verb alone or primarily, but to the whole sentence.

Therefore, the distinction we will have to make regarding mood and modality is in essence a question of handling the mood values (*realis* versus *irrealis*) within the verbal constituency, but treating whatever shades of modal meaning that we are able to identify, as modifiers of modality which reside outside the obligatory verbal constituency (see Section 6.3).

In modern English the task of marking mood is normally performed by either inflecting the finite verb for the subjunctive mood (rare), or by the insertion of a modal auxiliary verb into the verbal constituency of the situation. In for example

126 He *may leave* now.

¹ About this development Chaurand (1969: 17) says:

Une nouvelle formation romane, périphrastique à l'origine, s'est dès l'époque des premiers textes constituée en temps simple: elle est à la base des formes *salvarai*, *prindrai* des *Serments de Strasbourg*. On y reconnaît l'infinitif (*salvar*) où se trouve exprimée la signification du verbe, et le présent du verbe *avoir* dont chaque forme correspond à une personne.

the modal auxiliary verb *may* points to the fact that ‘the leaving’ is granted or possible, but that the actual performance of this ‘leaving’ in the relevant future, may or may not be fulfilled. The situation as a whole, though, may be said to describe either ‘a state of permission to leave’ or ‘a state of possible leaving’, both of which are viewed as co-extensive with the moment of speech. Almost all English modal auxiliaries¹ create a ‘state of’, which is co-extensive with some reference point, either the present moment or some other contextually or sequentially chosen point.

The usual Krio way of marking irrealis is to use one of three mood markers, *kin*, *go* or *fɔ*, all of which convey different shades of situational hypotheticality (see Section 6.3.1.2 for a more thorough discussion on these Krio markers).²

In short, event time is **imagined** as being either an asserted fact of the past or the present (realis mood), or as being a temporally dislocated “guess” about a non-asserted situation (irrealis mood). On the time line a situation whose verbal constituency is marked for realis would be located upon the line, either before its present point of reference or simultaneous with it (see example (119) on page 112 and Figure 7 on page 113).

In order to distinguish irrealis situations from realis ones, the temporal dislocation will have to be represented in some way. So, taking (119) and shifting it forward in time will give the irrealis situation:

127 *He will be walking to school.*

situation E: *He will be walking to school.*

Fig. 8: Irrealis mood of *He will be walking to school.* on the time line.

The temporal location of example (119) has been shifted into the future and has thus become (127). This dislocated situation is

¹ The most notable exception is the future indicator *will* which has kept almost nothing of its older meaning of ‘volition’ (see Section 6.3.1.1).

² Krio also has a small set of modal auxiliary verbs, such as *mɔs*, ‘must’. These are used very infrequently, compared to the pre-verbal markers, *go*, *fɔ*, and *kin*.

then placed upon the irrealis time line which is represented here by a dotted line.

Thus in Figure 8, “E” represents a situation that is co-extensive with neither the present moment of speech, “S”, nor the moment of reference, “R”. “S” and “R”, however, coincide. The non-deictic nature of the situation is indicated by the square brackets, the imperfective aspect by the arrows within these square brackets, and finally, the irrealis mood of the situation is indicated by the dotted, rather than dashed, time line within the imperfective arrows.

The one important entailment to be found within the category of mood is that the unmarked realis mood always indicates a relative non-future temporal location. In other words, if a situation is depicted as having its inception, as example (127), at some point in time posterior to the moment of speech/moment of reference, this situation will by definition be an irrealis situation.

5.4 External Time—Tense

In the above sections it was pointed out that grammatical aspect and mood are concerned with internal time and time as it is imagined, respectively. What remains to be discussed is grammatical tense and the notion of *external time*.

In Section 5.1 *tense* was characterized as being a question of external time, since it relates situations on the time line to each other. Strictly speaking, this is not entirely correct. What are related to each other by tense are rather **points** on this time line. At these points situations may be located, but there is always at least one non-situational point involved, namely the temporal reference point in the guise of the present moment of speech, indicating absolute time reference, and/or the discourse focus, indicating relative time reference. To illustrate this let us imagine that somewhere on the time line a verbal situation takes place:

situation E: *He walked to school.*

----- [E] -----S----->
the past the present the future

Fig. 9: The absolute time reference of *He walked to school*.

By means of its tense marking this situation will be externally related to some other reference point on the line. This reference point can be *absolute*, the present moment of speech, “S”, as in Figure 9, or *relative*, some other point on the line, a point which is selected by the speaker as the point of reference. Thus Mufwene (1990: 99), discussing the Kikongo-Kituba system of time reference defines a relative tense system as follows:

[...] a relative tense system. That is, the axis of reference (in Reichenbach’s 1947 terms) or tense locus (according to Chung and Timberlake) keeps shifting in the discourse depending on the particular situation the speaker selects as the reference time (R).

Or in the words of Comrie (1985: 36):

We shall continue to use the traditional term absolute tense, although it should be borne in mind that this should be interpreted to mean a tense which includes the present moment as the deictic centre; whereas relative tense [...] refers to a tense which does not include as part of its meaning the present moment as deictic centre.

The fact is, though, that within the present theory the tense constituent of the TMA system is no more than a sequential locator of the situation as either anterior or non-anterior to some point of reference. This point might be the moment of utterance, in which case the tense (reference) would be absolute according to Mufwene and Comrie; or it might be some point other than the moment of speech, relative tense reference.

This suggests that in the present framework the question of whether languages have absolute or relative tense systems is in fact quite irrelevant. That is, the English and Krio tense systems are neither absolute nor relative as such, they only differ in their use of absolute and relative reference in conjunction with the rest of the verbal constituency.

We can illustrate the difference between absolute and relative reference by taking the Krio sentence

- 128 If yu *ple* wit faya yu go sɔri.
 if you [(ANT) [play]] with fire you [IRR [sorry]]
If you play with fire you're going to/will regret it.

in which the verbal nucleus in the conditional clause, *ple*, ‘play’, is unmarked, which normally would indicate anteriority by dint of its status as a non-stative nucleus (see Section 3.3). Then we compare it with its English translation in which the conditional clause takes the present tense.

The problem here is formal: Does the unmarked Krio non-stative verbal nucleus (1) carry two different tense implications, (a) anterior when it occurs in a non-conditional clause, and (b) non-anterior when in a conditional clause? Or does it (2) retain its anterior meaning, irrespective of clause type? The former alternative would mean that for Krio conditional constructions the temporal point of reference is—just as in English—the moment of utterance. The latter alternative, on the other hand, would imply a relative point of reference for conditional clauses. We will see below that alternative (2) is the most plausible one.

Returning to (128) we see that the formal differences of tense marking between the Krio and English versions of this example can be accounted for in terms of a difference in preferred temporal reference points. That is, Krio and English view complex “condition-plus-result” sequences differently as far as their temporal reference points are concerned.

English sees the condition as **co-extensive** with the present moment of speech for the simple reason that it expresses an eternal truth. The VC then, must reflect this co-extension by marking the nucleic verb for the non-anterior tense. No such co-extensive marking is found in the Krio sentence, which instead marks the fact that the condition is a sequential **pre-requisite** for the result, a fact which yields an unmarked verbal nucleus since this carries anterior meaning.¹

The important factor hinted at above is that tense is concerned with *external temporal constituency*. That is, tense marking says nothing about the situation itself, it only makes clear the

¹ These ways of marking do not, of course, exclude the fact that in English we have a sense of pre-requisiteness and in Krio of co-extension. It is just a question of precedence.

fact that the situation, as for example the condition of ‘playing with fire’ in (128), took/takes place at some point in time, E, relating that point to some other point of reference. In English the point in time of the condition is primarily related to the moment of speech, S, but in Krio the condition is related, not absolutely to the moment of speech, S, but relatively to the time of the contingent result, R, ‘the regretting of having played with fire’.

In short, tense directs our attention to the order of situations, indicating if one of the situations involved occurred before the other and making clear which one; or which situation is the condition and which is the result.

However, if only one situation is involved, tense makes clear the sequence of the situation and the moment of speech/discourse focus. All in all, the fact that tense is sequentially deictic enables us to conclude that one of the basic characteristics of the past tense is *anteriority*. The corresponding characteristic of the present tense would then be *co-extension* or simultaneity.

As mentioned above, the system of verbal situations in different languages may be organized differently as far as the emphasis on absolute or relative deixis is concerned. We saw that the Standard English tense system is characterized by its main emphasis on absolute time reference, but it also shows some features characteristic of relative tense systems. The time reference of the *perfect* and the *pluperfect*, categories which traditionally have been labelled tenses in English, is first and foremost relative. An example of *relative* time reference in English would be the effect of tense in a pluperfect construction, a construction type which normally indicates that a situation took place before some other situation, which may be either explicit or implicit.¹

129 He *had set out* for school, but he never *got* there.

In example (129), illustrated in Figure 10 below, we notice that the event of ‘setting out for school’, E1, took place in the past but

¹ Note that neither the *pluperfect* nor the *perfect* is necessary to establish a relatively ordered sequence of situations. This is possible to do syntactically just by ordering the situations in question. *He set out for school. He never got there.*, would express the same sequentiality as example (129). What the perfect and pluperfect constructions add is a sense of relevance at whatever moment in time is chosen as the point of reference. For more on the perfect; see Section 6.2.2.2.

also that this ‘setting out’ became relevant in some way, at some other (reference) point in time, R, which is identical with the event of ‘never getting to school’, E2, but which precedes the moment of speech, “S”.

situation E1: *He had set out for school but*

situation E2: *he never got there.*

Fig. 10: The relative time reference of *He had set out for school ...*

As far as the implications of tense are concerned, the unmarked past tense implies realis mood. This is because all events that can be located on a temporal scale at some point previous to a relevant reference point are of course also referentially asserted with regard to that very same reference point. In example (129) the past tense of the pluperfect construction, *had set out ...*, implies that the ‘setting out’ actually took place (realis mood) prior to the point of reference ‘never got there’.

But if the unmarked past tense implies realis mood, how are we then to handle sequences of situations such as (130) below, in which an *if*-clause expresses a condition for something else? Or, is not the mood of the *if*-clause irrealis, since it denotes a hypothetical condition which was never fulfilled?

130 If I *had seen* the doctor, I *would not have been* this ill today.

The answer is quite simply no, the reference is to a situation which we know never occurred. And that which we **know** did not occur cannot be said to be hypothetical. Thus, past tense implies realis mood. That is, the mood assessment of the conditional situation is quite naturally made in reference to its own particular point of reference. In both (128) and (130), this point is the subsequent result of the condition.

However, it is important to bear in mind that in Section 5.1 it was claimed that only tense relates situations to each other on a temporal scale. The relations between different situations as far as mood is concerned, are of a different nature due to the fact that mood, as was pointed out in Sections 1.2, 1.3 and 5.3, is a

question of *factuality*, that is, the asserted (realis) or hypothetical (irrealis) **existence** in time of situations, not a question of where these situations are **located** in time. It follows from this that mood might be said to be a question of logical entailment in the sense that the factuality of, say, a conditional situation can always be judged by the factuality of its main situation.

5.5 The TMA Carrier

Because of the fact that all VCs obligatorily express values of tense, mood and aspect, VCs must also have some kind of means for conveying these TMA values. This task is performed by what in the present framework is labelled the TMA carrier. In most cases the identification of the TMA carrier poses no difficulties since as a rule of thumb the finite verb in the situation also conveys these values. However, the identification of the TMA carrier will be problematic in three cases:

- When we encounter an English auxiliary non-modal verb, that is, *have* or *be* as perfect/pluperfect and progressive auxiliaries, respectively.
- When we find an English pure copula *be*.
- For Krio constructions containing at least one of the three TMA markers.

The problems attached to the identification of the TMA carrier are different in all three cases mentioned above. In the case of the English perfect/pluperfect and progressive constructions the difficulty is that the TMA carrier is realised as a bimorphemic construction in which the tense constituent is separated from that of aspect. (see Section 5.5.1). As regards the pure copula, the problem is that the carrier is devoid of lexical meaning while still carrying TMA values (see Section 5.5.2). Finally, in the case of the Krio TMA phrase, we note that the tense, mood and aspect values, when marked, are conveyed by one morpheme each (see Section 5.5.3).

5.5.1 English “Compound Tenses”

One problem with identifying the TMA carrier in a perfect/pluperfect or progressive construction is that the tense and aspect constituents are discontinuously realised. The tense constituent resides in auxiliary *have* or *be*, but the aspect constituent is realised as a bound inflectional morpheme, participial *-en* (perfective) or *-ing* (imperfective) on the main verb.

Fig. 11: Split Progressive TMA Carrier

A basic, split TMA carrier structure as in *He is running* would have the diagrammatic shape as in Figure 11, above. It is important to note that branch endings indicate that the item in question is “neutralized” or unmarked in one way or the other.¹ In Figure 11, *be* is only motivated by its structural role as the carrier of the tense, non-anterior, value. Its existential, and for that matter locative, meanings are neutralized. The result is that the only role played by *be* in an English progressive construction is to provide (carry) the obligatory tense (non-anterior) value.

¹ An interesting point about this diagram is that despite its containing branching similar to the convention used in TG tree diagrams, the branching extends both downwards and upwards. The reason is that we cannot expect to capture all relations in language linearly. Linguistic items are capable of carrying multiple meanings and therefore we must seek to describe the relations holding between these meanings and their lexical items in as flexible a fashion as possible.

The aspect (imperfective) and mood (realis) values are carried by the *-ing* morpheme attached to the nucleic verb, *run*.

If we then compare Figure 11 with Figure 12 below, we see that the main difference is two-fold: The first is that unlike Figure 11, the TMA carrier is not distributed to more than one morpheme in Figure 12. The second is that there is no morpheme carrying explicit aspect and mood values in Figure 12.

Fig. 12: Simple TMA Carrier

From this, three observations may be made:

FIRST, the imperfective aspect value of *he runs* is not overtly marked since this is the default, unmarked aspect value of processive nuclei such as *run*.

SECOND, since the aspect value of *He is running* (Fig.11), is likewise imperfective, the difference between these two situations cannot be one of aspect. Rather, it is a difference in mood since *He runs* may be said to denote an irrealis situation since none of the individual occurrences of 'running' is asserted. Instead these individual occurrences are viewed as hypothetical. *He is running*, on the other hand, is realis because the situation is viewed as going on at the moment of speech, that is, 'running' is asserted.

THIRD, the simple form of a processive nucleus has a larger semantic scope than the progressive form from a markedness point of view. Thus, VCs with a processive nucleus marked for

the simple present are seen as unmarked in relation to the same nuclei taking the progressive. In order to mark this difference in semantic scope, English makes use of a more complex, hence more marked, morphological construction, the progressive.

5.5.2 The Copula

In a sense the copula can be defined as an *equator* (or negative equator in applicable cases) of the subject of the clause with whatever is predicated of it. There are, of course, other copula-like ways of using *be*, for example in locative constructions such as *He is at home*, etc. In these cases, however, *be* is not an equator but a *locator*, the status of which, strictly speaking, cannot be said to depict a copular relation anyway. Here instead, *be* takes on the role of an ordinary stative nucleus on a par with *have*, *exist*, *contain*, etc. The “equator” role of the copula *be* leads to the reasonable assumption that the pure copula is devoid of any lexical verbal meaning. Be this as it may, in the present theory the primary task of the English pure copula is to be the structural carrier of tense, mood and aspect values. Or to put it differently, the sole verbal purpose of the English copula *be* is to act as the situational TMA carrier. Thus copular *be* in

- 131 (a) John *is* nice.
(b) John *was* nice.
(c) John *is being* nice.
(d) [...] that John *be* nice.

has no other task than providing the means by which the TMA values in these sentences are conveyed. Bearing in mind that the lexical contents of predicatives such as *nice* are always stative, the TMA value of (131a) is non-anterior, realis and imperfective; of (131b), anterior, realis, imperfective; of (131c), non-anterior, realis and imperfective; and finally of (131d), non-anterior, irrealis, imperfective. Note that the difference between (131a) and (131c) is not primarily a question of different TMA values but of markedness contrasts. The description of (131a) would therefore have the shape:

Fig. 13: Simple Copula TMA Carrier

Two things worth pointing out in Figure 13 are: (1) the upwards split branching from *is* which indicates that the lexical content of *be* is contained in the predicate ‘be nice’, and (2) the “neutralized” aspect and mood constituents indicating that the aspect and mood values in (131a) (imperfective and realis, respectively) are the default consequences of the nucleic dynamicity of ‘be nice’.

Fig. 14: Split Progressive Copula TMA Carrier

In example (131c), illustrated in Figure 14 above, on the other hand, we would not find a neutralized aspect constituent since the imperfective aspect is overtly marked by the progressive *-ing* morpheme. The effect is that the use of the progressive form together with a stative nucleus restricts the scope of the predication in time.

As has already been pointed out in Section 4.2, Krio adjectivals in predicative constructions are verbal nuclei rather than adjectives and therefore constructions corresponding to those in (131a) and (131b) are realized without such a copular verb. Thus the corresponding Krio sentences would be:

- 132 (a) *Jɔn nays.*
 (b) *Jɔn bin nays.*

Diagrammatically, (132a) and (132b) can be illustrated as in Figures 15 and 16 below.

Fig. 15: Krio Pred. TMA Carrier

Fig. 16: Krio Anterior TMA Carrier

Unlike its English equivalent, (132a) has no overt TMA carrier at all. Rather, all TMA values are those that can be inferred from the dynamicity value of the nucleus itself, that is, non-anterior tense, realis mood and imperfective aspect, all values being consequences of the stative status of the verbal nucleus, *nays*, 'be nice'. In (132b) the tense marker *bin* is inserted in order to "shift back" the situation, to give it anteriority. The mood and aspect values of (132b) are, however, still dependent on the dynamicity of the nucleus.

The conclusion to be drawn is that within the present framework the English copula has but a structural function—that of serving as the carrier of the required TMA values. Whatever is left of any lexical content of the copula is to be seen as integrated into the verbal nucleus of the situation in which it occurs.

5.5.3 The Krio TMA Phrase

In Krio the basic TMA values are expressed by a set of preverbal markers: the tense marker, T, which marks anteriority; the mood marker, M, which conveys one of three major shades of irrealis; and finally the aspect marker¹, A, with an imperfective meaning.

A Krio situation may be marked for anteriority (see Sections 3.3 and 5.4) by inserting the marker *bin* before the nucleic verb:

- 133 *A bin no aw fɔ dil wit dem.*
 I [ANT [know]] how for deal with them
I knew how to deal with them.
Petikot Kɔna, p.1

Irrealis is marked by one of the mood markers *go*, *kin* or *fɔ*, which express three basic shades of the irrealis: ‘future probability’, *go*; ‘potentiality’, ‘habituality’, *kin*; and ‘future improbability’, ‘counter-factuality’, ‘conditions’, etc., *fɔ* (see Sections 5.3 and 6.3.1.2). For a pure future meaning we would have:

- 134 *Wi go put wan pɔsin na domɔt we go de wach.*
 we [IRR [put]] one person LOCBE doormouth REL [IRR IMP [watch]]
We’ll put somebody at the door who will be our lookout.
Bad Man Betɛ Pas ɛmti Os, scene 3: p.29

Finally we have *de* which is the marker of imperfective aspect (see Section 5.2):

¹ There is also an “aspect-like” marker, *dɔn*, which has a meaning which is approximately that of the English perfect. As is the case with the English perfect this marker combines an external temporal relation (tense) with a reference to a completion phase (aspect). However, an elaboration of this will have to wait until Section 6.2.2.2, which considers the perfect.

135 Luk we fayn fayn myuzik *de ple*.
 look REL fine fine music [IMP [play]]
Listen, they are playing such nice music!
Gød Pas Konsibul, act 3: scene 2: p.28

These markers may occur together in various combinations, some more common than others, but their order of occurrence is almost never violated. Moreover, quite naturally, two markers of the same type cannot occur together.

Closest to the nucleic verb we find the aspect marker, then the mood marker and finally the tense marker. The point here is that these markers indicate the **marked** members in relation to the default value of the nucleus, in the tense, mood and aspect contrastive pairs. Therefore, the **absence** of a marker indicates the unmarked values of these contrasts.

Fig. 17: Krio Anterior Stative Nucleus.

We may represent the VC of (133) as in Figure 17 above. This diagram should be interpreted as follows: the stative nucleus *no* retains its default aspectual (imperfective) and mood (realis) values, but it is marked for anteriority by the tense marker *bin*.

5.6 Summary

This chapter has outlined the basic shape of what in the present framework is referred to as the verbal constituency. Within the

VC we find the obligatory verbal elements of the situation: the nucleus (see Ch.4) and the TMA, the carrier(s) of tense, mood and aspect values. Moreover, all these elements are obligatory in the sense that the absence of an explicit marker for, say, aspect indicates an unmarked aspect value, rather than no aspect value at all. Thus all VCs are conceived of as carrying a full set of TMA values, be they explicit or not.

Furthermore, it is shown that the TMA values may be distributed in different ways, the most basic distribution being the nucleic verb form itself carrying all three values merged into one word—the finite simple verb in English, for example *runs* and *knew*, or the base form of the Krio verb, for example *ɾn* and *no*. The TMA may also be split in two, as is the case with the English progressive, or three (rare), that is, the full Krio TMA phrase.

6

Peripheral Situational Modification

6.1 Introduction

A three-dimensional conception of linguistic time is assumed in the present study (see Sections 1.2 and 2.2). Moreover, as we saw in the previous chapter, this 3D structure is realized on the level of the verbal constituency as the obligatory marking of the binary distinctions: tense/external time, mood/factual time, and aspect/internal time (see Section 5.1). These categories are conceived as being interdependent of each other and contingent on the dynamicity of the verbal nucleus.

On the optional, peripheral level of utterances (see Section 2.11), the same three-dimensional nature of linguistic time marking is manifested. However, if linguistic time on the VC level might be said to refer to, and directly modify, nucleic verbal concepts such as stative *know*, processive *run*, eventive *kill* and telic *make*, linguistic time encoding on the peripheral level refers to, and modifies, the whole situation in which it occurs.

In the context of the present study, this means that we can identify three basic classes of peripheral modifiers, PMs, for linguistic time: Aspectual modifiers, examples (136a, 136b and 136c), modal modifiers, (137a and 137b), and temporal modifiers, (138). We may illustrate these three classes of PMs with the six examples below, all of which have a VC consisting of a TMA plus a verbal nucleus, *play*. This VC is then peripherally modified in different ways.

In (136a) the frequency adverbial *often* modifies the aspectual habituality of a VC with the processive nucleus *play*. That is, it characterizes the internal procedural development (situational dynamicity) of the entire situation as a complete unit (see Section 6.2.1).

- 136 (a) He *often* plays football.
(b) He is playing *chess/a game of chess*.
(c) He *has played* a game of chess.

In (136b) the nominal complements ‘chess’ and ‘a game of chess’ give the situation an *unbounded* or *bounded* interpretation by modifying the terminating phase in certain ways (Section 6.2.2.1). The perfect¹ in (136c) introduces an explicit **lack** of completion into the terminating phase (Section 6.2.2.2).

In (137a) below, the picture is quite different. Here, the effect of the PM in the shape of the sentence adverbial *perhaps* is that it throws **doubt** on the basic assertion about the situation. Thus, it characterizes the situation in terms of modality, here hypothetical doubt.

- 137 (a) *Perhaps* he plays football.
(b) He *may* be playing football right now.

As regards (137b), which contains the modal auxiliary verb *may*, a certain amount of semantic duality is manifested as far as the mood/modality distinction is concerned. English modal auxiliaries—as well as the corresponding Krio category of modal markers—instantiate both the obligatory TMA mood constituent (here irrealis) and an optional peripheral modal (here, ‘possibility’) elaboration on the entire situation (see Section 6.3.1).

Finally, in our third example:

- 138 He plays football *today*.

the VC is modified by the time adverbial *today*. In this case we might want to claim that *today* in a sense locates the situation temporally in one way or the other. Therefore the PM for temporal modification more precisely characterizes the situation regarding location in time. Note, however, that it is not self-evident which adverbials are to be considered aspectual, modal or temporal. In the case of *tomorrow*, for example, which is normally thought of as a temporal adverb, we might also have a case for

¹ We will return to the status of the perfect as an aspectual peripheral modifier in Section 6.2.2.2.

arguing that this adverb is a modal PM, modifying the situation for some kind of irreality.

In all of the above examples we see that an **additional** modification is made of the TMA meaning already there in the VC, non-anterior tense, irrealis (in 136a, 137a, 137b and 138) and realis (in 136b and 136c), mood and imperfective aspect, without necessarily changing or altering these basic TMA values in themselves. Rather, what is modified is the situation **as a whole**.

This implies that the scope of these peripheral modifiers of time is **over and above** the VC, and thus they either modify the VC directly as in (136c and 137b) or the situation as a whole as in (136a, 136b, 137a and 138).

The aim of the present chapter is to give a general account of some peripheral means and mechanisms for indirect situational encoding of linguistic time, and also to discuss the factors which justify the distinctions, postulated in the present work, between the TMA of the verbal constituency and peripheral aspectuality and modality. This in turn means that we will concentrate on precisely those factors in the situational periphery which are particularly interesting as regards time encoding: aspectual modification, both by means of adverbials and by some kind of modification of the situationally terminating phase; and modal modification by modal auxiliary verbs and markers.

Temporal modification by peripheral means will not be touched upon any further since the distinction between tense marking of the VC and temporal modification of the full situation appears not to present any methodologically interesting problems. We usually have no problems in distinguishing what is a tense-marking feature from what is to be considered a temporal PM.

One important distinguishing factor between TMA marking of the VC and aspectual, modal and temporal modification of the situation is that time encoding by PMs is only indirect, elaborating values already there in the VC, whereas time encoding of the VC is directly incorporated within the VC, constituting an integrated part of the paradigm of the verb. Thus, we can illustrate the prototypical structure of a situation containing a peripheral modifier as in (69), on page 64, repeated here as (139):

139 ([[NUCLEUS] TMA] (PERIPHERY))

A word of caution is needed, however, regarding peripheral modification of verbal situations: It is impossible, even in principle, to give a full account of the vast range of means for peripheral time-related modification available to language. Therefore the following sections will only provide a very brief and somewhat sketchy outline of the most interesting groups of aspectual (Section 6.2) and modal (Section 6.3) modifiers.

6.2 Aspectual Modification

Aspectual modification is, as has been shown in the previous chapters, a matter of situation-internal, procedural development, that is, how the situation develops over time. This section will deal with how situations are modified peripherally for internal situational time in general, and with how this modification makes clear the developmental nature of these situations in particular.

In Section 5.2 it is shown that the verbal grammatical category of aspect has but one function: to state whether there **is** an internal, developmental structure depicted in the situation **or not**. This is stated in terms of the imperfective and perfective aspects, respectively. One consequence of this is that we cannot account for different shades of imperfectivity such as ‘habituality’, ‘continuousness’, ‘iterativity’, etc., merely by having recourse to the aspect value indicated within the VC.

In order to arrive at the aspectual **situational** message of an utterance there must be some other factors present which are aimed at specifying this message. One such factor is (see Sections 2.8 and 4.4) the dynamicity value of the verbal nucleus itself. Another is to be found in the situational periphery in the form of complements of various kinds, adverbials, etc. All these factors are potentially able to contribute indirectly to the encoding of time in the message. As regards peripheral aspectual time encoding, it is possible to identify two major groups of contributors:

- Those focusing on and characterizing the entire procedural development of the situation. Frequency adverbials such as *often*, *repeatedly*, *frequently*, etc.

- Those focusing on and characterizing one particular phase of the procedural development of the situation:
 - (1) Nominal or prepositional complements such as *a chair* and *grass*, or *to the window* and *towards the door*, but also adverbials such as *home*. PMs whose meanings are either specific or non-specific.
 - (2) The (plu)perfect, which explicitly **cancels** the situational termination point to the degree that these situations are still relevant at their points of reference.¹

We shall see in the following sections that the range of aspectual modification which it is possible to create by specific and/or non-specific complements is more restricted than that of adverbials.

6.2.1 Aspectual Modification Focusing on the Entire Situation

As previously mentioned, PMs in this group generally characterize the procedural development of the entire situation. This may be illustrated by comparing sentences (140) and (141):

140 John *plays* tennis.

141 John *often plays* tennis.

In (140) all time encoding is found in the VC *plays*, that is, the combination of the TMA (imperfective aspect, irrealis mood and non-anterior tense) plus the processive nucleus *play*. Normally (140) would indicate that John's habit of playing tennis is of a more permanent character. He could be a professional tennis player or he might play the game as a regular hobby, etc. In the present framework, *play (tennis)* is an unrestricted irrealis process,² developing simultaneously with its point of reference.

¹ We shall see in Section 6.2.2.2 that this is a somewhat complicated matter, which involves the identification of the exact nature of what is seen as "relevant".

² The irrealis status of the simple present process habit is established, (a) in reference to the fact that there is no direct assertion of any of the specific subevents

When (140) is altered by the PM adverbial *often* to yield (141), we note that the TMA values of the VC remain the same as in (140) but that it is the process in **its entirety** which is modified by *often*. The message in (141) is that the development over time of John's habit of playing tennis is characterized internally (rather than **questioned** by a modal modifier, or **located** in time by a temporal modifier) in some way, so that what is in fact **not** implied is that *John is a tennis player*. Maybe he sometimes plays table tennis or volleyball, instead of tennis, etc. We may say that in contradistinction to (140), which depict the habit of tennis playing as a general characteristic of John himself, (141) points to the fact that John's tennis playing is more a part of the life he leads. What it boils down to is that the PM *often* aspectually modifies the process of (140), since it is the nature of the internal development of this process which is the object of modification.

6.2.2 Aspectual Modification Focusing on the Completion Phase

When discussing the fact that situations may be peripherally modified in order to specify their aspectual nature, it is important to realize that even though it is conceivable that any arbitrarily chosen phase of the situation could be picked out for focusing and characterization, the most likely contenders for such marking turn out to be the beginnings and endings of the situations, not for example the last-but-one phase, etc.

However, English has chosen almost exclusively to assign the notions of beginning or inception to certain verbs which by themselves function as the verbal nuclei of situations, for example *begin* and *start*, etc. Therefore, in the present framework, these constructions are to be analysed as situations consisting of a nucleus, say, *begin* and a complement (see Section 4.3.2.2) *to run* or *running*, rather than as *to run* or *running* marked for inceptive aspectuality.

As regards the termination or completion phase, English has a wider range of means at its disposal. One corresponds to that mentioned in the above paragraph, with termination lexicalized

of tennis playing of which this habit consists, and (b) in contrast with the realis nature of the present process progressive.

in some nucleic verb of its own, say, *stop* in *stop running*, etc. But completion may also be indicated by some kind of aspectual **marking** of the verbal constituency or the situation as a whole. That is, some element other than the nucleus provides the completion. This is the case with both *bounded* (see Section 6.2.2.1) and *perfect* (and *pluperfect*) (see Section 6.2.2.2) constructions.

In order to discuss the aspectual character of the situational completion phase we must first identify **what** in the situation does or does not terminate. Consider the sentences below:

142 John *is making* a chair.

143 John *is making* chairs.

144 John *has made* a chair.

145 John *made* a chair.

What is immediately obvious here is that in examples (142) and (143) we interrupt John right in the middle of the ‘**process** of making ...’ but in (144) and (145) no such process is to be found. Rather, in the latter two examples we meet John in the ‘**state** of having made ...’. This means that any situationally introduced termination, or lack of termination, applies differently to (142) and (143) than to (144) and (145). In the former pair the ‘process of making ...’ receives an implicit termination point in (142)—it is bounded—but in (143) there is no such termination implied, it being unbounded (see Section 6.2.2.1). However, in the latter pair, we notice that termination or lack of termination is not applied to the ‘process of making ...’, but to the state which is the result of the process. What the perfect does then in (144) is to cancel explicitly any termination of this resultant state, whereas in (145) the implication is that any termination of this resultant state might in fact be irrelevant to the continued line of discourse (see Section 6.2.2.2).

Therefore, we may summarize the analysis as follows: the bounded/unbounded distinction is concerned with the characterization of the termination phase of process situations, whereas the perfect/non-perfect distinction is concerned with (resulting) state situations.

6.2.2.1 The Bounded/Unbounded Distinction

PMs pertaining to the bounded/unbounded distinction focus on and characterize the termination phase of situations; they do this either by introducing an **implicit** point of completion of the internal procedural development, which may or may not be reached, or by **explicitly** denying the existence of such a termination point. In the first group of PMs we find expressions which contain a specific noun phrase such as *a chair*, certain prepositional phrases such as *to the window* and adverbial phrases such as *home* (in a sentence like *He is going home*). In the second group of PMs we have non-specific noun phrases such as *grass* and prepositional phrases such as *towards the door*, etc. Basically this is a binary distinction which, by focusing on the final phase of situations, indicates whether these are by implication bounded/telic or unbounded/atelic. That is, boundedness is situational telicity.¹

In order to discuss the bounded/unbounded distinction we will first have to define **what** it is that is bounded or unbounded. That is, to what type of situations are these terms applicable? As mentioned above in Section 6.2.2, the simple answer to this question is *process* situations. This follows from the definition of telic and telicity given in Sections 2.7.2, 2.8 and 2.9, in which it is stated that for a verbal nucleus and/or a situation to be telic and bounded respectively, two criteria will have to be fulfilled: (a) the nucleus/situation must be a process with a point of termination, the reaching of which is included in its semantics, and (b) this process must also be contingent on its own termination.

These criteria rule out the possibility of bounded state and event situations, but for different reasons. State situations have neither a process nor an implicitly reachable termination point in their semantic specification. Compare (146) with (147).

146 John *owns* a nice car.

147 John *is building* a nice car.

¹ As regards terminology in the present framework, *telic* and *atelic* refer to dynamicity values of verbal nuclei, whereas *bounded* and *unbounded* refer to situational dynamicity (procedural development). However, it turns out that we have very little use for the term *atelic* since we already have corresponding terms for those nuclei that are not telic: *stative*, *processive* and *eventive*.

In both sentences we find a specific noun phrase as the complement of the VC. However, if we apply the telicity test to these situations we see that only (147) would pass the test: *If you are interrupted in the middle of building a car, have you then built a car?* The answer is of course no. The implication is that no car was built. Therefore, (147) is a bounded situation. For (146) the answer to the question *if you are interrupted in the middle of owning a car, have you then owned a car*, is yes.

The reason might be that since state situations are monophasal, and thus internally have infinite duration of variable length (see Sections 2.7.1 and 2.8), no termination point can be reached **within** their procedural development; stopping these situations will only shorten their internal duration without affecting the nature of the state in question itself.

The procedural development of process situations, such as that in (147), on the other hand, is made up of a **series** of consecutive phases (see Sections 2.7.2 and 2.9), one of which might (bounded situations) or might not (unbounded) explicitly refer to a point of completion.

In the case of event situations, these **are** their own terminations and therefore it makes no sense to talk of any implicit point of termination. Event situations such as (148) and (149), below,

148 John *caught* a rabbit.

149 Pierce *passes* the ball to Anderton.

contain no processes. The ‘catching of the rabbit’ and the ‘passing of the ball’ are both perfective (see Section 5.2) and are thus by definition devoid of internal procedural development; they constitute their own completions.

6.2.2.2 The Perfect

In order to discuss the *perfect*, a prerequisite is to bear in mind that in the present framework this category, like the tenses, moods and aspects, is conceived of as being a semantico-grammatical, rather than a morphological category. Thus we should not confuse the perfect in the present framework with the way

some languages use perfect morphology to indicate the preterite, for example, the French *passé composé* (cf. Comrie 1976: 53).

Then, any discussion regarding the perfect will also have to establish the difference between the categories *the perfect*—a verbal situation with cancelled termination¹—and *the perfective*—the verbal constituency viewed as depicting an indivisible unit. The fact that such a difference is possible to identify means that we cannot regard the perfect as taking the perfective aspect by definition. On the contrary, sentences indicating the perfect of imperfective situations are very common in English for example

150 He *has been doing* this for hours.

in which we have a non-anterior, realis imperfective situation which is marked for present time relevance (cf. Bybee & Dahl 1989). Note in this respect that all TMA values are already present in this syntagm before *have* is added: *been* (anterior, realis), *doing* (non-anterior, realis, imperfective). *Have* explicitly cancels the point of termination encoded in *been* but leaves the rest of its anteriority unchanged. That is, the situation began in the past, but its non-termination and hence its simultaneity with its reference time is explicitly asserted. The above analysis points to the fact that any equation of the perfect and the perfective is incorrect even in principle. To see why, we must pin down what it is in *have* that gives present relevance/cancelled termination to the perfect/pluperfect as opposed to the ‘indifference to the point of reference’ which we find in the perfective/completive. This can be illustrated as in (151):

151 He *has done* it.

Here, just as in (150) above, all TMA values are present in the past participle (the nucleus *do* plus anterior tense, realis mood and perfective aspect). What is provided by the auxiliary is in effect the **link** or mediation (see Section 4.3.1) in the shape of an indicator of a ‘state of possession’: ‘to be in the state of having

¹ Comrie (1976: 5ff) labels this *present relevance*. According to him the present relevance may be either absolute—related to the moment of speech—or relative—related to some **other point** of reference.

something (done)',¹ between the two incompatible tense values anterior (the beforeness of *done*) and non-anterior (the simultaneity with the moment of speech).

The point here is that states are internally infinite (see Sections 2.7.1 and 2.8) and therefore always extend to the point when their termination is imposed (rather than reached). That is, since states do not need input of energy to go on, they do so until they are stopped in one way or the other. There are no points of termination encoded **in** the states themselves.

Therefore, through the "stativizing" of the situation by periphrastic *have* its duration is depicted as **explicitly** devoid of termination at one particular point in time: the chosen temporal point of reference. The internal procedural development of a perfect situation can thus be described as a first punctual phase of entry-into-a-state, followed by a second, stative phase.

The important feature of the perfect situation is then that it is focused on a special kind of relation holding between the VC, with its TMA and nucleic values, and some other point of reference. Therefore we may define the semantico-grammatical category of *perfect* as:

*A relation holding between the **relevance of the existence** of the result of the event or the process, referred to by a VC, and a chosen temporal reference point, in the sense that this relevance is explicitly said **not** to have expired at the chosen temporal reference point.*

We must also take into consideration the fact that the nature of this result may stand in different relations to its entry-into-a-state event, according to the nucleic dynamicity of the situation. That is, if we compare (151), containing a processive nucleus *do* with (152), which is centered around a stative nucleus *know*, we notice that in (151) the resultant state, 'the state of having done it', is still operative and in effect, whereas in (152) the most likely interpretation of the resultant state, 'the state of having known it', is not that the 'knowing' is still in effect. Rather, the implica-

¹ This is also borne out by the history of the English periphrastic *have*-perfect which is said to have started off as a possessive *have* plus object complement construction (cf. for example Visser 1973: 2189-2192).

tion is that this knowledge is lost or at least restricted in one way or the other.

152 He *has known* it.

This difference in relation between the *perfect processive* and the *perfect stative*¹ in turn constitutes one further piece of evidence for the validity of the statement in Chapter 3 that the basic conceptual dividing line in the verbal systems of English and Krio runs between stative nuclei on the one hand and non-stative (processive, eventive and telic) ones on the other. Consider the following sentence pairs, in which all eight sentences have the present moment of speech as their chosen temporal point of reference. Here we see that in order to refer to a relevant, resultant state, perfect marking by means of periphrastic *have* is required for (154a), telic nucleus, (155a), processive nucleus, and (156a), eventive nucleus. No such marking is needed for (153a) which has a stative nucleus.

153 (a) He *knows* the truth.

(b) He *has known* the truth.

154 (a) He *has made* a new chair.

(b) He *has been making* a new chair.

155 (a) He *has run* his own business.

(b) He *has been running* his own business.

156 (a) He *has killed* his black sheep.

(b) He *has been killing* his black sheep.

As indicated above, the *a*-sentences have one important feature in common which is lacking in the *b*-ones: they all refer, definitely and unambiguously, to the direct, un-terminated, existence of whatever state is indicated by these situations. That is, (153a) asserts the existence of 'knowledge of the truth'; (154a) asserts the existence of 'a new chair', which is the state resulting from 'com-

¹ *Perfect processive* and *perfect stative* are only meant to be short-hand abbreviations for VCs with processive and stative nuclei, respectively.

pleting the making of a chair'; (155a) asserts the existence of 'having run a business', which is the state resulting from 'terminating to run a business',¹ and finally (156a) asserts the existence of '(all) black sheep being dead', which is the state resulting from 'completing the killing of the black sheep'.

The important point is that in all of the above *a*-sentences the non-termination assertions concern the *existence* of some kind of relevance of these states, at their respective temporal points of reference, rather than about the states themselves.² The fact that the existence of a state in many cases coincides with the period of time during which this existence is relevant for the current discourse focus, has no bearing upon the definition of the perfect. In order to be relevant at a certain point of reference, the state in question does not necessarily have to be in existence.

If we examine the *b*-sentences we see that the VCs of (154b), (155b) and (156b) turn out not to be states but **processes**, and only (153b) retains its stativity. The fact that the former three VCs are processes would contradict the assumption made above that the perfect is a stativizer and instead indicate that here the perfect is employed to mark these situations for some kind of additional imperfectivity. However, again it is not the processes themselves which are non-terminated and thus stand in a relevance relation to the moment of speech. The assertions are made, as indicated in the paragraphs above, about the non-terminated *existence* of the processes in (154b), (155b) and (156b). It is the **existence** of this process, which is a state, that stands in a relevance relation to the reference point, not the processes themselves. This then would lend support to the above assumption that the perfect is a stativizer rather than an imperfectivizer.

It must be pointed out that perfect marking of sentences

¹ However, the insertion of the adverbial *since* in a perfect sentence like this would normally give the situation a direct, on-going relevance. There is no termination implied in *He has run his own business since*

² That the perfect is a question of relevance (at some chosen point of reference) of the *existence* of a particular state or (process), rather than the relevance of this state (or process) itself, is also implicit in Comrie's discussion (1976: 56–61) of the four major types of the perfect he identifies: "the perfect of result", "the experiential perfect", "the perfect of persistent situation" and "the perfect of recent past". Also Schwenter's (1994) account of the "hot news perfect" lends itself to such an interpretation.

such as those found in the *b*-examples above, in addition to its basic stativizing effect, also has a tendency to impose the need for further qualification in the shape of additional linguistic or extra-linguistic context.

As for (153b), the most likely interpretation is that the state created by the perfect is not the 'state of knowledge of the truth', but rather the opposite, the 'state of **non-knowledge/lost knowledge of the truth**'. This can easily be reversed by, for example, an adverbial phrase such as *for ages*, etc., giving

157 He *has known* the truth *for ages*.

in which 'knowledge of the truth' is asserted.¹ Because of this need for further qualification, we might say that in a sense the meaning of 'has known the truth' is open to interpretation or even elaboration in a way which is not possible for its non-perfect version in (153a). That is, unless the speaker provides an unambiguous framework for sentences like (153b), the hearer will have to disambiguate them in some way in order to understand the intentions of the speaker.

That the hearer participates actively in the creation of the message (by way of supplying himself with additional information) has been pointed out by Jakobson. In his terms this process was one of *elliptical perception*, the goal of which would be to facilitate the understanding of vague or ambiguous utterances. Or in his own words (Jakobson & Pomorska 1990b: 172):

A technique which today receives even less consideration is that of elliptical perception, by which the listener fills in (again on all linguistic levels) whatever has been omitted by him as listener. We have also failed to appreciate properly the subjectivism of the hearer, who fills in the elliptic gaps creatively. Here lies the heart of the issue of disambiguation.

This active participation in the "creation" of the meaning is not required for the understanding of (153a).

¹ It is possible to negate, yet again, the assertion of 'knowledge of the truth' in (157) by adding *but now he doesn't anymore*. The point is that perfect marking of imperfective VCs gives these situations a certain amount of open-endedness.

In the case of (154b), the assertion is made about the ‘**existence** of the process of making a new chair’, rather than of the ‘process of making a new chair’. What the perfect does is assert that the existence of the process (rather than the process itself) is relevant at the chosen point of reference. We might say that this on-going (that is, non-terminated) **relevance** is co-extensive with the moment of speech in both extensions of (154b), (158a) and (158b) below, with the difference that in the former our understanding is that the process itself is also depicted as co-extensive with the moment of speech, whereas in the latter the interpretation is that the process did terminate at some point in time, prior to the present moment of speech.

- 158 (a) He *has been making* a new chair, but it is not finished yet.
 (b) He *has been making* a new chair, but he is not at it any more.

It is worth noting that in (158a) the co-ordinated *but*-clause is focused on the resultant state, or rather the absence of such a state, whereas in (158b) the focus of the co-ordinated clause is on the (absence of the) process itself. That is, in (158a) it is the ‘existence of a new chair’ that is negated, whereas in (158b) the negation is of the ‘chair-making process’. In neither case, however, is the **relevance** of the ‘existence of a new chair’ or of ‘the process of making a new chair’ for the current line of discourse negated.

When it comes to (155) and (156) the same relation described above as holding between (153a) and (153b), and (154a) and (154b), respectively, can be said to hold between the (a) and (b) variants of these examples.

The difference between (156a) and (156b) is that in the former the assertion is about a state: ‘(all) his black sheep are killed’¹, but in the latter the assertion is about a process: the ‘killing of his sheep’². Note that for (156b) we cannot tell whether the process itself (‘killing sheep’) is terminated or not.

The only thing we can infer is that the existence of such a

¹ In line with the reasoning above in the discussion of examples (153) and (154), the assertion is about the on-going relevance of the existence of a state such as ‘(all) his sheep are killed/are dead’.

² Or rather, the assertion is about the on-going relevance of the existence of a process such that ‘sheep are being killed’.

process is relevant to the continuing line of discourse. Thus (159) below shows that perfect marking of imperfective VCs with eventive nuclei is neutral, in the absence of further qualification, to ongoing relevance at the present moment of speech in Comrie's (1976) sense. In (159a) no process of 'killing sheep' is going on any more, but the very existence of such a process is felt to be relevant anyway. As for (159b) this process is still in progress. This again points to the conclusion that it is not the propositional content itself of the VC marked for the perfect which is affected, but the existence of such a proposition.

- 159 (a) He *has been killing* his black sheep and now they're all dead.
 (b) He *has been killing* his black sheep and he's still at it.

The same state/process distinction manifested in the difference between (156a) and (156b) is also found between (155a) and (155b). In (155a) the existence of the state resulting from 'having run a business' is at stake, but in (155b) the existence of the process of 'business-running' itself is indicated as being relevant.

As can be inferred from the discussions on the *b*-examples, and their possible expansions, the common denominator is their greater degree of indeterminacy; in order to understand the intentions of the speaker properly, the hearer needs some additional clarifying context to avoid having to resort to mere guess-work.

In short, imperfective situations marked with the perfect show a greater degree of markedness than do the correspondingly marked perfective ones. The reason for this might be that in a sense the perfect, since it is a stativizer, in some way imposes stativity on a VC which is already imperfective, which in turn forces the hearer to look for more information in order to be able to understand such a construction. Analogous to this would be the disinclination of English speakers to accept the progressive form together with stative nuclei, for example, *He is hearing church bells*¹. This too, would be to stativize an already imperfective VC.

¹ Some speakers of English would accept this sentence, others would not. Most speakers of English, however, would acknowledge the contrast between *He is nice* and *He is being nice*. Therefore one would assume that readiness to accept the progressive together with statives is a matter of degree rather than an absolute either-or judgment.

Therefore the only conclusion to be drawn here is that the perfect is neither a tense nor an aspect, nor is it a combination of these. It is a discourse marker which has

- the aspectual quality of affecting the procedural development of situations.
- the quality of being able to sequence situations in relation to each other.

This discourse marker operates upon the entire verbal constituency in order to focus or highlight the existence, in relation to the chosen point of reference, of some propositional content indicated by that VC. This analysis is also borne out by examining the Krio marker *dən*, which usually translates as an English perfect construction:

- 160 *Dən dən put wəd wan ples.*
they [PFCT [put]] word one place
They have reached an agreement.

The argument hinges on the theory that Krio (and many other Atlantic creoles) does not allow two markers of the same kind in the TMA phrase of a VC. That is, we will not find two co-occurring aspect markers, etc. within the same VC. Thus, in order to show that the perfect marker in Krio is similar to that of English with respect to its “neither tense nor aspect” status we must find instances of co-occurring *bin* and *dən*; and *dən* and *de*, respectively. This is precisely what we do find. In (161) below, the anterior marker *bin* co-occurs with the perfect marker *dən* conveying a past-before-past sense, that is, a pluperfect construction.

- 161 *A bin dən tɛl yu se dis bɔɪ luk rɛkləs.*
I [ANT PFCT [tell]] [you (SG)] CPZ this boy look reckless
I told/had told you that this boy looks reckless.
Bad Man Bete Pas Emti Os, scene 1: p.3

The important thing to note here is that the ‘telling of the boy’s recklessness’ is located prior to some other situation under discus-

sion, rather than in the absolute past. That is, something went wrong and now the speaker says 'I told you so'. The *bin* plus *ɗɒn* combination makes clear this sequence of situations.

In example (162) the perfect marker, *ɗɒn*, combines with the imperfective one, *de*, in order to convey the fact that for this person, 'his growing problems have finally reached the point where they are/will be too much for him to handle by himself'.

- 162 Bɒt i luk lɛk wata *ɗɒn de pas* flawa naw, so wi wan kɔl fambul fɔ
 gɛda ...
 but it look like water [PFCT IMP [pass]] flour now so we want call family for gather
But it looks as if his problems have grown/(?)have been becoming
too much (for him), so we should call for a family meeting, . . .
Bad Man Bete Pas Emti Os, scene 1: p.8

Or rather, the existence of such a situation is given a relevance relation in reference to the on-going line of discourse. Therefore, as the above examples indicate, we can assume that the Krio perfect marker, *ɗɒn*, is neither a tense (anterior), nor an aspect (perfective) marker, since it is perfectly able to combine with both the anterior (tense) and the imperfective (aspect) markers.

However, there are other reasons, purely contingent on the definitions of tense and aspect given in Chapter 5, for the analysis of the perfect as a discourse marker. Since the perfect indicates a situation which can be said to stand in a relevance relation to another situation/point in time, it follows from this that it (the perfect) relates two situations temporarily to each other. And as we argued in Chapter 5, this is precisely what aspect **does not** do but rather is the task of tense. Thus the perfect cannot be an aspect, even though it indicates the presence of an internal procedural structure.

Turning the argument around, it might be tempting to analyse the perfect as a tense since, as mentioned above, it relates situations to each other and thus cannot be an aspect. But this analysis will fail as well because tense has nothing to do with the internal temporal constituency of a situation, whereas this is precisely part of the meaning of the perfect.

The only possible conclusion must be that the perfect is neither tense nor aspect although it exhibits some, but not all, cha-

racteristic features of both tense (it relates situations to each other) and aspect (characterization of the internal procedural development), respectively.

In the present framework there is thus no room for the perfect within the verbal constituency; it must constitute part of the situational periphery, being a modifier on a par with other PMs. It is, however, given a place within the range of *aspectual peripheral modifiers* since it is focused on one single phase of the situational procedural development, namely the final, terminating one.

6.2.3 Aspectual Modification: Summary

This section has discussed some important ways of aspectually modifying entire situations, that is, over and above the verbal constituency. In the present framework aspectual modification—as opposed to aspect marking of the VC—is viewed as an elaboration on whatever TMA values we find in the VC, clarifying the developmental procedure of situations.

Two major categories of aspectual PMs (peripheral aspectual modifiers) are identified:

- Those PMs which focus on the situation in its entirety and thus do not favour any particular situational phase.
- Those PMs which single out and focus on the termination phase of situations.

The most important of the PMs in the first category are found to be adverbials of frequency such as *often*, *repeatedly*, etc., which primarily give aspectual modification to verbal situations viewed in full. In the latter category two sub-groups are identified: (a) Those which modify process situations in such a way that they are perceived as either *unbounded*—in general non-specific nominals and prepositionals such as *cars*, *towards the wall*, etc., or *bounded*—specific nominals and prepositional such as *a car*, *to the wall*, etc.; (b) The *perfect* (and *pluperfect*) which explicitly cancels the termination phase of state, (and/or process) situations, marking that the existence of these situations in some way

is relevant at the current point of (discourse) reference, either directly or indirectly.

6.3 **Modal Modification**

Basically, modal PMs peripherally characterize the nature of factual situational time. That is, various shades of hypotheticality and assertion are brought to the attention of the hearer, or in the words of Bybee & Fleischman (1995: 2):

Modality, [...], is the semantic domain pertaining to elements of meaning that languages express. It covers a broad range of semantic nuances—jussive, desiderative, intentive, hypothetical, potential, obligative, dubitative, hortatory, exclamative, etc.—whose common denominator is the addition of a supplement or overlay of meaning to the most neutral semantic value of the proposition of an utterance, namely factual and declarative.

This definition of modality is given in contrast to their definition of mood (page 115, Section 5.3), as a “formally grammaticalized category”, (Bybee & Fleischman 1995: 2), which means that these authors draw a distinction between *mood*¹ as a verbal category and *modality* as a semantic domain which has the entire situation within its scope.

In Section 5.3 it is claimed that the basic binary distinction of mood between realis and irrealis time is encoded **within** the TMA of the verbal constituency. However, we also noted that, apart from the (English) subjunctive proper, English modal auxiliaries and Krio mood markers carry a considerable portion of additional lexical modal meaning which is said to constitute part of the situational periphery rather than the VC.

Therefore, modal auxiliaries such as *can*, *may* and *must* and the Krio irrealis markers *go*, *kin* and *fo*, are conceived of as showing semantic duality since they contribute both an (obligatory)

¹ Thus mood is a category which is realized, explicitly—as with most irrealis VCs—or implicitly—as with most realis VCs—within the VC of the situation. It is part of the verb’s paradigm as Bynon (1985) would say.

mood value, irrealis, to the VC, and an (optional) additional modal meaning, such as potentiality or conditionality, etc., having the situation as a whole in its scope. *May*, for example, contributes both the irrealis mood to the VC and some kind of potentiality, etc., to the situation as a whole (example (163) below). The same is also true for the Krio mood markers: *kin* marks the VC for irrealis and the situation for potentiality or ability (sometimes habituality¹), example (164).

163 John *may play* tennis.

164 Na dis den wetman *kin* *kɔl* ‘slip of tongue’ ...
 [FGR] this [PL [white man]] [IRR_{POT/ABIL/HAB} [call]] slip of tongue
This is what white people sometimes call a ‘slip of the tongue’...
Gɔd Pas Kɔnsibul, act 2: scene 3: p.21

In Section 6.3.1 below we will discuss this semantic duality in greater detail.

The nature of situational modality can also be characterized by non-obligatory modal adverbials such as *perhaps* in

165 *Perhaps* John plays tennis.

doubting ‘John’s status as a tennis player’. *Tomorrow*² in

166 *Tomorrow* the train for Copenhagen leaves at 12:35.

implies non-simultaneity with the temporal reference point by explicitly locating the ‘train departure’ on the following day³. And *certainly* in

¹ See Section 6.3.1.2, for more on the ability versus habituality in Krio *kin*.

² Normally *tomorrow* is considered a temporal adverb. Here, however, it functions as a PM for irrealis time on a par with *maybe*, etc., since it indicates a non-asserted, hypothetical existence in time of a proposition; ‘the leaving of the train’.

³ This non-simultaneity is only implied because the train for Copenhagen might be scheduled to leave **every** day at 12:35. However, the use of *tomorrow* in this context tells us that the speaker does not want to commit himself to this general “time table” truth. All he wants to claim is that he knows that ‘tomorrow at 12:35 the train for Copenhagen leaves’. It might be scheduled to do so today or in three weeks from his point of reference, but this is none of his concern.

167 John most *certainly* does play tennis. He's a tennis player, isn't he?

stresses the truth of 'John's status as a tennis player', which for some reason has been doubted, etc.

The common denominator of these adverbials is that they do not encode time within the VC directly but extend their scope to reach over the entire situation; and thus these PMs differ from the class of modal auxiliary verbs in that they show no semantic duality as regards the way in which they are related to time.

6.3.1 Modality and Modal Auxiliary Verbs

Under this heading we subsume irrealis markers in both English and Krio exhibiting the semantic duality mentioned in Section 6.3, that is, modal auxiliaries in English as well as the irrealis markers of Krio. All these markers and auxiliaries have in common the fact that they mark the VC for irrealis mood, and modify the full situation, in its periphery, for some additional shade of modal meaning.

6.3.1.1 The English Modal Auxiliaries

In the case of the English modal auxiliary verbs it is a fact that none of them indicate a realis VC or situation. That is, modals such as *can*, *will*, *should*, *may*, etc., all elaborate the basic irrealis meaning already present in the VC rather than add any completely new meaning to the situation.¹ Thus *may* in a sentence like example (163), *John may play tennis*, is normally taken to contribute a certain amount of 'possibility' or 'permission' to the original simple sentence *John plays tennis*.

In what way are we then justified in claiming that the mood portion (irrealis meaning) of the modals is an obligatory part of the VC, whereas the rest of their lexical content, 'volition', 'per-

¹ Of course this is fairly self-evident, since it is hard to imagine a linguistic item, such as *can* for example, which carries a contradiction within its own semantic specification, that is, indicates both realis and irrealis.

mission', 'ability', etc., constitutes an optional (albeit very prominent) modal element of the situational periphery? We could say that, just as the case is with the modal adverbs, the modal verbs extend their scope to reach over the full situation only and thus do not contribute any mood value to the VC. One important piece of evidence pointing towards the existence of semantic duality in the modals is that as a future marker, *will* has normally lost all its former sense of 'volition'. A sentence like

168 John *will go* home.

seems to carry no additional modal meaning apart from that of future, which is the purest form of irrealis. This means that pure future *will* has irrealis mood as its **only** meaning, and this corresponds to the fact that the English past tense morpheme *-ed* and the progressive morpheme *-ing* have no other meanings than that of anteriority and imperfectiveness, respectively.¹

In short, in sentences like (168), *will* has become an integrated part of the paradigm, and thus an element in the VC of the nucleic verb in question, here *go* (see Section 4.3.1, and cf. Bynon 1985: 106). In other words, *will* is nothing but a marker of mood here, not a modifier for modality. It is not possible, however, to reverse the analysis and ascribe only peripheral modality and no mood to any modal auxiliary verb in English.

Thus we have identified and isolated the one component of meaning which is found to be the basic and most general one for **all** modals, irrealis. And since all VCs are obligatorily marked for either realis or irrealis mood, the conclusion is that the irrealis component of the modals is to be seen as constituting one of the two possible options for filling the mood slot in the TMA of the verbal constituency. The fact that the modals generally have additional overlays of meaning does not alter this fact.

Moreover, we have a parallel to this analysis of the modals in our analysis of the imperfective aspect (see Sections 5.2 and 6.2) as the basic and most general meaning component of the

¹ Note that it is the past tense and progressive morphemes which carry the meanings anteriority and imperfectiveness, not their phonetic representations, which in other environments may represent other morphemes, namely those of the past participle and the gerund, respectively.

progressive morpheme *-ing* (in English) and the imperfective marker *de* (in Krio). The general meaning component of the imperfective co-operates with the dynamicity value of the nucleus in the situation in order to convey various shades of aspectuality, for example, ‘iterativity’ and ‘continuousness’, etc., precisely in the same way as the irrealis component of the English modal auxiliaries co-operates with the lexical content of these verbs to create different additional shades of modality such as ‘ability’ and ‘obligation’, etc.

This parallel also supports the above conclusion that the irrealis component of the modals is to be considered part of the TMA of the verbal constituency rather than an optional peripherally added semantic element, and that whatever semantic overlay is left will be part of the situational periphery.

6.3.1.2 The Krio Irrealis Markers

In Section 5.5.3, it was mentioned that Krio has three distinct markers of mood: *go*, *fɔ* and *kin*, whose basic purpose is to mark the Krio VC for irrealis.¹ The lexical contents of these markers also carry additional overlays of meaning which correspond to those of the English modal auxiliaries. That is, future probability for *go*, example (169); (future) improbability, counter-factuality, obligation, etc., for *fɔ*, (170); and ability, etc., for *kin*, (171).

The most neutral, or “*will-like*”, of these Krio irrealis markers is *go*, which is also by far the most frequent one:

169 God bləs yu. Gɔd go dɔbul am fɔ yu.

God bless [you] (SG) God [IRR_{FUT} [double]] OBJ for [you] (SG)

God bless you. God will double it (a sum of money) for you.

Gɔd Pəs Kɔnsibul, act 2: scene 3: p.23

Normally, marking a situation with irrealis *go* will render the VC hypothetical, which will be interpreted as a prediction of a future

¹ As for the Krio irrealis markers *go*, *fɔ* and *kin*, the former two are homophonic with the full verb *go* and the complementizer and/or infinitive marker (if there is any such thing as a Krio infinitive) *fɔ*. *Kin*, on the other hand, only exists as a pre-verbal marker.

happening, etc., the realization of which is regarded (by the speaker) as probable. If any other shade of meaning remains in *go* (the irrealis marker), it is not one of volition but rather what we may expect from its etymon, ‘direction towards’, but in most cases even this is doubtful.

As regards *fɔ*, the situation is quite different from that of *go* as it appears to be used very infrequently in sentences where it can be unambiguously analysed as a pre-verbal irrealis marker.¹ Most clear cases of pre-verbal marker *fɔ* are found mid-TMA, that is, after the anterior marker but before the verbal nucleus, as in *A bin fɔ tel am se ...*, ‘I would/should have told him that ...’. There are, however, examples of *fɔ* as the only marker in the TMA, for example (170)², below, in which *fɔ*, apart from its basic irrealis value, also indicates an additional modality of obligation. In (170), we see that the ‘beam removal’ is logically subsequent to its temporal reference point, the ‘telling’, thereby maintaining its basic meaning of irrealis mood.

170 A de tel yu se yu *fɔ pul* di bim we de na yu yay fɔs so yu go si *fɔ pul* di mot we de na yu brɔda im yay.

I [IMP [tell]] you CPZ you [IRR_{OBL} [pull]] the beam REL EXT PREP [you (POSS)] eye first so you [IRR_{FUT} [see]] [for (CPZ)] pull the mote REL EXT PREP [you (POSS)] brother his eye.

I'm telling you that you should remove the beam in your own eye first so you'll (be able to) see how to remove the mote in your brother's eye.

Petikot Kɔna, p.28

¹ Often *fɔ* serves the same purpose as English *to* (+ infinitive) does. It marks a verbal complement of the nucleic verb: *I go tel am fɔ go* = ‘He will tell him to leave’.

² This example is an adaptation of St. Matthew 7:5. The version found in *Gud Nyus Fɔ Olman*, however, reads: “Yu pul da big tik we de insay yu yon yay fɔs, da tɛm de yu go si klia wan *fɔ pul* di smɔl tik we de insay yu brɔda in yay.”. In the *King James* version it is: “[...], first cast out the beam out of thine own eye; and then shalt thou see clearly to cast out the mote out of thy brother's eye.”. Finally, in *The English Bible* we find: “First take the plank out of your own eye, and then you will see clearly to take the speck out of your brother's.”.

The common semantic denominator of these three versions of the same Bible passage is the fact that they all are in the imperative, which is one shade of irreality as it is understood in this study. The quote in *Petikot Kɔna* however, is not directly in the imperative but given more indirectly in the form of the Krio equivalent of an English *should*-construction, expressing obligation.

The obligation to remove the beam might however be said to obtain as a kind of state (see Section 5.3), simultaneously with its point of reference, although its fulfilment in the relative future can only be hypothesized. Note also the fact that the two instances of future happenings in (170), the ‘beam removal’ and the ‘seeing how to remove the mote’, are given different modalities. The former (*yu ʃ pul di bim*), the fulfilment of which is somewhat uncertain, is presented as being a prerequisite condition for the latter. The latter (*yu go si ʃ pul di mɔt*), on the other hand, is presented in such a way as to indicate that if its condition is fulfilled the realization of ‘seeing’ is regarded as a prediction of pure future, almost without any additional shade of modality.

The third Krio irrealis marker, *kin*, usually indicates an irrealis situation of ability, such as in:

- 171 *Yu kin go bak tumara mɔnin.*
 [you (SG)] [IRR_{ABIL} [go]] back tomorrow morning
Tomorrow morning, you can/could go back (there).
Petikot Kɔna, p.34

Here the fact that somebody ‘will be able’/‘have the opportunity’ to return the next day is conveyed by *kin*. As in (170) above, we notice the close affinity between state situations and irrealis marked VCs; the ‘ability/opportunity to go back’ is seen as simultaneous with its point of reference whereas the realization of the verbal nucleus is in the future, relatively seen, of that ability.

Interestingly, the Krio irrealis marker *kin* can be used to indicate habituality, which is often considered an aspectual value. At first sight this might indicate that *kin* in fact is not a marker of mood but an aspect marker. One consideration which speaks against this analysis is the fact that *kin* is perfectly able to combine with *de*, the imperfective marker, yielding:

- 172 ... *dis wi mami ɛn wi grani den kin de se.* ‘Gɔd sɛntɛns, no apil’...
 this [[we mummy and we granny] PL] [IRR_{HAB} IMP [say]] God sentence no appeal
This is what our mother and grandmother usually say/are saying/keep on saying: There is no appeal against God’s sentence.
Gɔd Pas Kɔnsibul, act 4: scene 4: p.38

If both *kin* and *de* were aspect markers, this combination would violate the grammatical rule in Krio which says that two markers of the same kind cannot combine in the same TMA phrase (see Section 5.5.3). Consequently one of these markers cannot be a marker of aspect.

We have also pointed out that the order of markers within the Krio TMA phrase is fixed, with the aspect marker having its position closest to the nucleus. This leads us to the conclusion that it is *de* rather than *kin* which is the aspect marker. Thus *kin*, although it sometimes carries habitual meaning, must be something else, here a marker of mood. This would seem to be an anomaly but there is a possible explanation. It has been noted by a number of scholars, Givón (1995), for example, that there seems to be a strong affinity between the notions of irrealis and habituality as it is possible to view habits, not as re-occurring events asserted in time—realis—but as predictions of future occurrences based on knowledge of the past—irrealis (see Section 1.4.4).

The general conclusion, however, about the Krio modal (irrealis) markers is the same as for the English modal auxiliary verbs: Marking the VC for irrealis mood by either of the three mood markers, *go*, *fɔ* or *kin*, not only renders this VC irrealis but may also convey some additional modal value to the situation. Moreover, these peripheral modal values can often be analysed as states on the situational level providing a background for whatever occurrence is indicated by the nucleic verb.

6.3.2 Modal Modification: Summary

In this section we have seen that in English and Krio there are two ways of modifying peripherally the verbal situation for modality. The first and most interesting way is by a modal auxiliary verb in English and by one of the three irrealis markers, *go*, *fɔ* and *kin*, in Krio. The second way, which has only been very briefly touched upon, is by a modal adverbial of some sort, for example, *perhaps*, *certainly*, etc. The common denominator of all these auxiliaries and markers, etc., is identified as a reference to non-factual, hypothetical time, either to the pure future or as a judgement or assessment made by the speaker.

The one major difference we find between these two categories of modal PMs is that the first group, auxiliary verbs and irrealis markers, in addition to whatever modal lexical content they carry, can also be said to enter semantically into the TMA of the VC itself. That is, one part of the meaning of these linguistic elements is their irrealis mood value, whose scope only extends over the VC; another part of their meaning is some other shade of lexicalized modality whose scope includes the full situation.

No such semantic duality can be found in the second group, the adverbials. Their scope only comprises the situation as a whole.

6.4 Summary

This chapter has discussed the fact that the basic three-dimensional structure of time which we find to be encoded into the verbal constituency of situations can also be said to be indirectly reflected at the level of peripheral modification. Thus we find that time-related PMs can be classified as either aspectual, characterizing internal time of situations, modal, characterizing the factuality of situations, or temporal, locating situations in time.

One important aspectual distinction identified on the situational level is that of bounded/unbounded procedural development (see Section 6.2.2.1). In essence this distinction is a matter of the effect specific nominals/prepositionals, etc., as opposed to non-specific ones, have on the termination phase of situations. Specific nominals/prepositionals, etc., impose a bounded nature on the situation, non-specific ones do not.

We also find that the perfect (see Section 6.2.2.2) constitutes a structural borderline case between aspect and tense in that it can be shown to have certain defining features of either category, that is, the perfect does relate different situations to each other (a tense feature), but it also characterizes the internal developmental structures of situations (an aspect feature).

Regarding modal PMs, the semantic duality of English modal auxiliaries and Krio mood markers is discussed and the conclusion drawn that these linguistic elements contribute both an obligatory mood value (irrealis) to the verbal constituency and an

additional, optional, semantic modal elaboration to the situation as a whole.

Moreover, it is pointed out that the scope of these PMs ranges over the VC and the entire situation, quite in contrast to the TMA markers which are shown in Chapter 5 to have a limited scope including only the verbal nucleus.

Conclusion

In this study an attempt has been made to analyse time encoding in the verb systems of English and the West African creole language Krio, along similar lines of reasoning.

Two major factors are said to work together in the creation of linguistic time encoding. The first one is what is labelled the (verbal) nucleic dynamicity, that is, the various ways in which time is encoded within the verbal concepts themselves: the (verbal) *nucleus*.

The second factor is the existence of an obligatory three-dimensional arrangement of time, which surfaces as the TMA of the situation, that is, its Tense, Mood and Aspect marking. These three dimensions of linguistic time encoding have their cognitive foundation in three more general distinctions, namely the foreground versus background distinction (aspect: imperfective/perfective), the reality versus hypotheticality distinction (mood: realis/irrealis) and finally the beforeness versus simultaneity distinction (tense: anterior/non-anterior).

The nucleus and the TMA together form the situationally obligatory *verbal constituency*, the VC, in which the nucleic dynamicity co-operates with the TMA in order to create various types of linguistic time-related messages.

Finally, the *situation* is defined as the superordinate structural unit within the scope of which the total, or full, message of linguistic time is conveyed.

In Chapter 1, **Introduction**, the theoretical and philosophical foundations of this study are presented. First, the notion of time is discussed and a distinction between space and time is assumed to be encoded in language in such a way that nominals encode substance, be it concrete or abstract, and verbals encode ab-

stract substance with time. Then four conceptually basic distinctions are discussed, namely the state/non-state, background/foreground, reality/imagination and beforeness/simultaneity distinctions. These distinctions are then related to Bickerton's (1984a) "Language Bioprogram Hypothesis".

In addition to this, some previous related studies are briefly examined; Vendler (1967), Comrie (1976), Quirk *et al.* (1985 & 1990), Fleischman (1995) and Givón (1995).

In Chapter 2, **Basic Concepts**, the basic notions and structure of the present framework and its terminology are accounted for. Here such concepts as *verbal nucleus*, *situation*, *phase*, *dynamcity* and *linguistic time* are discussed and defined. The general nature of *stative*, *processive*, *eventive* and *telic* nuclei; and *state*, *process*, *event* and *bounded* situations is also discussed, along with definitions of these terms. A brief outline of the structure of verbal situations is also given; the basic structural categories *nucleus*, *verbal constituency*, *TMA* and *situational periphery* are introduced and their internal relations are made clear.

In Chapter 3, **The Supremacy of the State/Non-State Distinction**, it is shown that the covert state/non-state distinction, as opposed to, say, the durative/punctual distinction is conceptually basic to the treatment of verbal expressions. Thus, we see that in both English and Krio this distinction constitutes a binary dividing-line in the systems of morphological marking. States/statives are from a morphological point of view, systematically treated in a different way than non-states/non-statives in both English and in Krio. No such systematicity can be found to proceed from the durative/punctual distinction.

In Chapter 4, **The Nucleus**, the *nucleus*, which is the semantic core of the verbal situation, is discussed in such a way as to make clear what may, and what may not, constitute the nucleus of a situation. Thus the conceptual content of the nucleus is defined; in order to be able to identify the nucleus we examine: (a) *complex nucleic* constructions in which two or more elements combine to form the nucleus; (b) different types of *multi-verbal* constructions; *serialized* and *auxiliary* ones, in which the nucleus will have to be picked out and identified within a structure consisting of more than one "verbal" element.

In Chapter 5, **The Verbal Constituency**, the elements that,

together with the nucleus, make up the *verbal constituency*, VC, are presented and defined. This involves definitions which, in a sense, are more restricted than the traditional ones of the grammatical categories of *aspect*, *mood* and *tense*. These categories are shown to incorporate one binary distinction each: imperfective versus perfective aspect; realis versus irrealis mood; and anterior versus non-anterior tense. Moreover, together with the nucleus these categories turn out to be obligatorily present, although not always marked, in the TMA constituent of the VC.

In Chapter 6, **Peripheral Situational Modification**, some interesting optional elements of the situation are discussed. Modification of the entire situation is mentioned, and again we see that the same tripartite, three-dimensional division of verbal time is manifested, albeit in a rather different way. In addition, this chapter briefly deals with non-verbal peripheral modification through the use of adverbials, etc., concentrating on some interesting areas of peripherally induced situational modification of time: (a) *aspectual modification*, by means of nominal and prepositional complements, that is, the bounded versus unbounded distinction; by means of the periphrastic *have*-construction, that is, the perfect versus non-perfect distinction; (b) *modal modification*, by means of adverbs, auxiliary modal verbs and particles.

The major findings of the present study may be said to be two-fold:

- The identification and definitions of four different classes of verbal nuclei, statives, processives, eventives and telics, whose differing relations to time play a major role in determining the time semantics of situations.
- The realization that it is possible to give an alternative description and explanation of the vast and varying range of situationally encoded procedural developments, if the starting-point for such an investigation is the dynamicity values of the verbal nuclei.

Finally, it is hoped that this study will provide linguists with some useful tools and definitions for the study of the way time is encoded into language.

Bibliography

Reference Books and Articles

- AITCHISON, J. (1987) *Words in the Mind*. Oxford: Basil Blackwell.
- (1995) "Chimps, Children and Creoles: the Need for Caution". In Puppel, S. (ed) (1995), pp.1–17.
- ALLERTON, D.J. (1982) *Valency and the English Verb*. London: Academic Press.
- (1995) "Valency Grammar". In Koerner, E.F.K. & R.E. Asher (eds) (1995), pp.280–289.
- ALLWOOD, J., B. RALPH, P. ANDERSSON, D. KÓS-DIENES, & Å. WENGELIN (eds) (1994) *Proceedings of the XIVth Scandinavian Conference of Linguistics and the VIIIth Conference of Nordic and General Linguistics, August 16–21 1993*. Göteborg: Gothenburg Papers in Theoretical Linguistics.
- ANDERSEN, H. (ed) (1993) *Historical Linguistics 1993*. Amsterdam/Philadelphia: John Benjamins.
- ANDERSEN, R.W. (1990) "Papiamentu Tense-Aspect, with Special Attention to Discourse". In Singler, J.V. (ed) (1990), pp.59–96.
- ARENDS, J., P. MUYSKEN, & N. SMITH (eds) (1995) *Pidgins and Creoles. An Introduction*. Amsterdam/Philadelphia: John Benjamins.
- ARMSTRONG, D. (1981) "The Ancient Greek Aorist as the Aspect of Countable Action". In Tedeschi, P.J. & Zaenen, A. (eds) (1981), pp.1–12.
- BACHE, C. (1985) *Verbal Aspect*. Odense: Odense University Press.
- (1994) "Verbal Categories, Form-Meaning Relationships and the English Perfect". In Bache, C., H. Basbøll, & C-E. Lindberg, (eds) (1994), pp.43–60.
- BACHE, C., H. BASBØLL & C-E. LINDBERG (eds) (1994) *Tense, Aspect and Action. Empirical and Theoretical Contributions to Language Typology*. Berlin & New York: Mouton de Gruyter.
- BAKER, P. & A. SYEA (eds) (1996) *Changing Meanings, Changing Functions. Papers Relating to Grammaticalization in Contact Languages*. London: University of Westminster Press.

- BATES, E. (1984) "Bioprograms and the Innateness Hypothesis. (Open Peer Commentry on Bickerton's "The Language Bioprogram Hypothesis"). In *The Behavioral and Brain Sciences* 7:2 1984, pp. 188-190.
- BAUGH, A.C. & T. CABLE (1978) *A History of the English Language*. London: Prentice-Hall.
- BENNET, M. (1981) "Of Tense and Aspect: One Analysis". In Tedeschi, P.J. & A. Zaenen (eds) (1981), pp.13-29.
- BERTINETTO, P.M. (1987) "Structure and Origin of the 'Narrative' Imperfect". In Ramat, A.G., O. Carruba & G. Bernini (eds) (1987), pp.71-85.
- (1994a) "Statives, progressives, and habituais: analogies and differences". In *Linguistics 1994 volume* 32-3, pp.391-423.
- (1994b) "Temporal reference, aspect and actionality: Their neutralization and interactions, mostly exemplified in Italian". In Bache, C., H. Basbøll & C-E. Lindberg (eds) (1994), pp. 113-137.
- BERWICK, R.C. (1986) "Grammar Growth and Parameter Setting: Computation and Creoles". (Continuing Commentary on Bickerton's "The Language Bioprogram Hypothesis"). In *The Behavioral and Brain Sciences* 9:3 1986, pp.562-563.
- BICKERTON, D. (1975) *Dynamics of a Creole System*. New York: Cambridge University Press.
- (1979) "Beginnings". In Hill, K.C. (ed) (1979), pp.1-22.
- (1980) "Creolization, Linguistic Universals, Natural Semantax and the Brain". In Day, R.R. (ed) (1980), pp.1-18.
- (1981) *Roots of Language*., Ann Arbor: Karoma.
- (1983) "The Last of the Clever Hans?" (Open Peer Commentry on Premack's "The Codes of Man and Beasts"). In *The Behavioral and Brain Sciences* 6, 1983, p.141-142.
- (1984a) "The Language Bioprogram Hypothesis". In *The Behavioral and Brain Sciences* 7:2 1984, pp.173-188.
- (1984b) "Creole is Still King". (Answer to Open Peer Commentry on Bickerton's "The Language Bioprogram Hypothesis"). In *The Behavioral and Brain Sciences* 7:2 1984, pp.212- 218.
- (1986a) "Creoles and West African Languages: a Case of Mistaken Identity?". In Muysken, P. & N. Smith (eds) (1986), pp.25-40.
- (1986b) "'Grammar Growth' — What Does it Really Mean?". (Author's Response to Continuing Commentary on Bickerton's "The Language Bioprogram Hypothesis"). In *The Behavioral and Brain Sciences* 9:3 1986, pp.564-565.
- (1988) "Creole Languages and the Bioprogram". In Newmeyer, F.J. (ed) (1988), pp.268-284.

- (1990) *Language and Species*. Chicago: University of Chicago Press.
- (1992a) "On the Thomason-Kaufman Critique of the Bioprogram". In *Journal of Pidgin and Creole Languages* 7:1, pp.101– 105.
- (1992b) "The Sociohistorical Matrix of Creolization". In *Journal of Pidgin and Creole Languages* 7:2, pp.307–318.
- (1996a) *Language and Human Behaviour*. London: UCL Press Limited.
- (1996b) "Creoles and the Bankruptcy of Current Acquisition Theory". In Wekker, H. (ed) (1996), pp.33–43.
- BICKERTON, D. & MUYSKEN, P. (1988) "A Dialog Concerning the Linguistic Status of Creole Languages". In Newmeyer, F.J. (ed) (1988), pp.302–306.
- BINNICK, R.I. (1991), *Time and the Verb*. Oxford: Oxford University Press.
- BLAKELEY, L. (1964) *Teach Yourself Old English*. London: Hodder and Stoughton.
- BLOOM, L. (1984) "A Bioprogram for Language: Not Whether but How?" (Open Peer Commentry on Bickerton's "The Language Bioprogram Hypothesis"). In *The Behavioral and Brain Sciences* 7:2 1984, pp.190–191.
- BROCH, I. & E.H. JAHR (1980) *Russenorsk – et Pidginspråk i Norge*. Oslo: Novus.
- (1990) "Russenorsk: The Russo-Norwegian pidgin. New findings". In Jahr, E.H. & O. Lorentz (eds) (1990), pp. 62–68.
- BROGYANYI, B. & R. LIPP (eds) (1993) *Comparative-Historical Linguistics. Indo-European and Finno-Ugric*. Amsterdam/Philadelphia: John Benjamins.
- BYBEE, J.L. (1995) "The Semantic Development of Past Tense Modals in English". In Bybee, J.L. & S. Fleischman, S.(eds) (1995), pp. 503–517.
- BYBEE, J.L. & Ö. DAHL (1989) "The Creation of Tense and Aspect Systems in the Languages of the World". In *Studies in Language Volume 13. No 1*, pp. 51–103.
- BYBEE, J.L. & S. FLEISCHMAN (eds) (1995a) *Modality in Grammar and Discourse*. Amsterdam/Philadelphia: John Benjamins.
- (1995b) "Modality in Grammar and Discourse. An Introductory Essay". In Bybee, J.L. & S. Fleischman (eds) (1995a), pp.1–14.
- BYBEE, J.L. & W. PAGLIUCA (1987) "The Evolution of Future Meaning". In Ramat, A.G., O. Carruba & G. Bernini (eds) (1987), pp. 109–122.
- BYRNE, F. & J. HOLM (eds) (1993) *Atlantic Meets Pacific. A Global View of Pidginization and Creolization*. Amsterdam/Philadelphia: John Benjamins.
- BYRNE, F & T. HUEBNER (eds) (1991) *Development and Structures of Creole Languages*. Amsterdam/Philadelphia: John Benjamins.
- BYNON, T. (1985) "Serial Verbs and Grammaticalisation". In Pieper, U. & G. Stickel (eds) (1985), pp.105–121.
- CAMPBELL, A. (1959) *Old English Grammar*. London: Oxford University Press.

- CARRINGTON, L.D. (1992) "Images of Creole Space". In *Journal of Pidgin and Creole Languages* 7:1, pp.93–99.
- CARTMILL, M. (1984) "Innate Grammars and the Evolutionary Presumption" (Open Peer Commentary on Bickerton's "The Language Bioprogram Hypothesis"). In *The Behavioral and Brain Sciences* 7:2 1984, p.191.
- CASSIDY, F.G. & R. N. RINGLER (1971) *Bright's Old English Grammar & Reader*. New York: Holt, Rinehart and Winston.
- CHAFE, W. (1995) "The Realis-Irrealis Distinction in Caddo, the Northern Iroquoian Languages, and English". In Bybee, J.L. & S. Fleischman (eds) (1995), pp.349– 365.
- CHAURAND, J. (1969) *Histoire de la Langue Française*. Paris: Presses Universitaires de France.
- CHESTERMAN, A. (1991) *On Definiteness. A Study with Special Reference to English and Finnish*. Cambridge: Cambridge University Press.
- CHOMSKY, N. (1965) *Aspects of the Theory of Syntax*. Cambridge, Massachusetts: The M.I.T. Press.
- (1981) *Lectures on Government and Binding*. Dordrecht: Foris Publications.
- CHRISTIE, P. (ed) (1996) *Caribbean Language Issues. Old & New*. Barbados, Jamaica, Trinidad and Tobago: The Press University of the West Indies.
- CLARK, E.V. (1987) "The Principle of Contrast: A Constraint on Language Acquisition". In MacWhinney, B. (ed) (1987), pp.1–33.
- COMRIE, B. (1976) *Aspect. An Introduction to the Study of Verbal Aspect and Related Problems*. Cambridge: Cambridge University Press.
- (1981) "Aspect and Voice: Some Reflections on Perfect and Passive". In Tedeschi, P.J. & A. Zaenen (eds) (1981), pp. 65–78.
- (1985) *Tense*. Cambridge: Cambridge University Press.
- CORNE, C. (1984) "On the Transmission of Substratal Features in Creolism" (Open Peer Commentary on Bickerton's "The Language Bioprogram Hypothesis"). In *The Behavioral and Brain Sciences* 7:2 1984, pp.191–192.
- COSTELLO, J.R. (1993) "Modal Auxiliaries in Proto-Indo-European". In Brogyanyi, B. & R. Lipp (eds) (1993), pp.73–90.
- CROMER, R.F. (1984) "Language Acquisition: Genetically Encoded Instructions or a Set of Processing Mechanisms?" (Open Peer Commentary on Bickerton's "The Language Bioprogram Hypothesis"). In *The Behavioral and Brain Sciences* 7:2 1984, pp.192–193.
- CRUSE, A.D. (1995) "Between Polysemy and Monosemy: Senses Facets and Qualia Roles". In Kardela, H. & G. Persson, G. (eds) (1995), pp.25–34.
- CRYSTAL, D. (1987) *The Cambridge Encyclopedia of Language*. Cambridge: Cambridge University Press.

- (1991) *A Dictionary of Linguistics and Phonetics: 3rd Edition*. Oxford: Blackwell.
- CULLER, J. (1976) *Saussure*. London: Fontana.
- DAHL, Ö. (1981) "On the Definition of the Telic-Atelic (Bounded-Nonbounded) Distinction". In Tedeschi, P.J. & A. Zaenen (eds) (1981), pp.79–90.
- DAY, R.R. (ed) (1980) *Issues in English Creoles Papers from the 1975 Hawaii Conference*. Heidelberg: Julius Groos.
- DE LA CRUZ, J.M. (1994) "The Modals again in the Light of Historical and Cross-Linguistic Evidence". In Fernández, F., M. Fuster & J.J. Calvo (eds) (1994), pp.145–156.
- DECLERCK, R. (1979) "On the Progressive and the 'Imperfective Paradox'". In *Linguistics and Philosophy* 3 - 1979, pp. 267–272.
- (1995) "Is There a Relative Past Tense in English?". In *Lingua* 97 1995, pp.1–36.
- DOWTY, D. (1977) "Toward a Semantic Analysis of Verb Aspect and the English 'Imperfective' Paradox". In *Linguistics and Philosophy. Volume 1. No. 1. January 1977*, pp.45–77.
- DRINKA, B. (1993) "Areal Linguistics in Prehistory: Evidence from Indo-European Aspect". In Andersen, H. (ed) (1993), pp.143–158.
- DUFFLEY, P.J. (1994) "Need and dare: The Black Sheep of the Modal Family". In *Lingua* 94 1994, pp. 213–243.
- EDLUND, L-E. & G. PERSSON (eds) (1992) *Language—The Time Machine*. Stockholm: Almqvist & Wiksell International.
- FERNÁNDEZ, F., M. FUSTER & J.J. CALVO (eds) (1994) *English Historical Linguistics 1992. Papers from the 7th International Conference on English Historical Linguistics*. Amsterdam/Philadelphia: John Benjamins.
- FLEISCHMAN, S. (1995) "Imperfective and Irrealis". In Bybee, J.L. & Fleischman, S. (eds) (1995a) pp. 519–551.
- FORSYTH, J. (1970) *A Grammar of Aspect. Usage and Meaning in the Russian Verb*. Cambridge: Cambridge University Press.
- GAREY, H.B. (1957) "Verbal Aspect in French". In *Language* 33:2, pp. 91–110.
- GIVÓN, T. (1973) "The Time-Axis Phenomenon". In *Language* 49:4, pp.890–925.
- (1979) *On Understanding Grammar*. Orlando, Florida: Academic Press.
- (1991) "Some Substantive Issues Concerning Verb Serialization: Grammatical vs. Cognitive Packaging". In Lefebvre, C. (ed) (1991).
- (1995) *Functionalism and Grammar*. Amsterdam/Philadelphia: John Benjamins.
- GOLDSMITH, J. & E. WOISETSCHLAEGER (1976) *The Logic of the Progressive Aspect*. Bloomington, Indiana: I.U. Linguistics Club.

- GOODMAN, M. (1984) "Are Creole Structures Innate?" (Open Peer Commentry on Bickerton's "The Language Bioprogram Hypothesis"). In *The Behavioral and Brain Sciences* 7:2 1984, pp.193– 194.
- GOPNIK, M. (1984) "From Pidgins to Pigeons" (Open Peer Commentry on Bickerton's "The Language Bioprogram Hypothesis"). In *The Behavioral and Brain Sciences* 7:2 1984, pp.194–195.
- GREENBAUM, S. & R. QUIRK (1990) *A Students Grammar of the English Language*. London: Longman.
- GUNDERSON, K. (ed) (1975) *Minnesota Studies in Philosophy Volume VII: Language, Mind and Knowledge*. Minneapolis: University of Minnesota Press.
- HAIJČOVÁ, E. (1995) "Prague School Syntax and Semantics". In Koerner, E.F.K. R. E. & Asher (eds) (1995), pp.253–262.
- HARDER, P. (1994) "Verbal Time Reference in English: Structure and Functions". In Bache, C., H. Basbøll & C-E. Lindberg (eds) (1994), pp.61–79.
- HATAV, G. (1993) "The Aspect System in English: An Attempt at a Unified Analysis". In *Linguistics 1993 volume 31–2*, pp.209– 237.
- HATCHER, A.G. (1951) "The Use of The Progressive Form in English. A New Approach". In *Language* 27, pp. 254–280.
- HEIDEGGER, M. (1992) *The Concept of Time*. Translated to English by McNeill, W. Oxford: Blackwell.
- HEWSON, J. (1976) "Langue and Parole Since Saussure". In *Historiographia Linguistica* III:3, pp.315–348.
- (1995) "Guillaumean Linguistics". In Koerner, E.F.K. & R.E. Asher (eds) (1995), pp.277–280.
- HILL, K. C. (ed) (1979) *The Genesis of Language*. Ann Arbor: Karoma.
- HJELMSLEV, L. (1970) *Language. An Introduction*. Milwaukee & London: The University of Wisconsin Press.
- HORNSTEIN, N. (1984) "Grades of Nativism" (Open Peer Commentry on Bickerton's "The Language Bioprogram Hypothesis"). In *The Behavioral and Brain Sciences* 7:2 1984. pp.195–196.
- IOUP, G. (1977) "Specificity and the Interpretation of Quantifiers". In *Linguistics and Philosophy 1977 volume 1*. pp.233–245.
- ITKONEN, E. (1974) *Linguistics and Metascience*. Kokemäki: Risten kirjapaino.
- (1991) *Universal History of Linguistics. India, China, Arabia, Europe*. Amsterdam/Philadelphia: John Benjamins.
- JAHR, E.H. & O. LORENTZ (eds) (1990) *Tromsø Linguistics in the Eighties*. Oslo: Novus.
- JAKOBSON, R.O. (1990a) "Boas' View of Grammatical Meaning". In Waugh, L.R. & M. Monville-Burston (eds) (1990a), pp.324–331.

- (1990b) "Brain and Language". In Waugh, L.R. & M. Monville-Burston (eds) (1990a), pp.498–513.
- (1990c) "Langue and Parole: Code and Message". In Waugh, L.R. & M. Monville-Burston (eds) (1990a), pp.80–109.
- (1990d) "Shifters and Verbal Categories". In Waugh, L.R. & M. Monville-Burston (eds) (1990a), pp.386–392.
- JAKOBSON, R.O. & K. POMORSKA (1990a) "The Concept of Mark". In Waugh, L.R. & M. Monville-Burston (eds) (1990a), pp.134–140.
- (1990b) "The Time Factor in Language". In Waugh, L.R. & M. Monville-Burston (eds) (1990a), pp.164–175.
- JENKINS, L. (1984) "Pidgins, Creoles, and Universal" (Open Peer Commentry on Bickerton's "The Language Bioprogram Hypothesis"). In *The Behavioral and Brain Sciences* 7:2 1984. pp.196–197.
- JONES, E. (1971) "Krio: An English-based Language of Sierra Leone". In Spencer, J. (ed) (1971), pp.66–94.
- JOSEPH, J.E. (1995a) "Trends in Twentieth-Century Linguistics: An Overview". In Koerner, E.F.K. & R.E. Asher (eds) (1995), pp. 221–233.
- (1995b) "Saussurean Tradition in Linguistics". In Koerner, E.F.K. & R.E. Asher (eds) (1995), pp.233–239.
- KARDELA, H. & G. PERSSON (eds) (1995) *New Trends in Semantics and Lexicography*. Uppsala: Swedish Science Press.
- KEESING, R.M. (1994) "Radical cultural Difference: Anthropology's Myth?". In Pütz, M. (ed) (1994), pp.3–23.
- KEIL, F.C. (1984) "Of Pidgins and Pigeons" (Open Peer Commentry on Bickerton's "The Language Bioprogram Hypothesis"). In *The Behavioral and Brain Sciences* 7:2 1984. pp.197–198.
- KLEIN, W. (1994) *Time in Language*. London and New York: Routledge.
- (1995) "A Time-Relational Analysis of Russian Aspect". In *Language* 71:4, pp.669–695.
- KOERNER, E.F.K. (ed) (1976) *Historiographia Linguistica III:3*. Amsterdam: John Benjamins.
- KOERNER, E.F.K. & R.E. ASHER (eds) (1995) *Consise History of the Language Sciences. From the Sumerians to the Cognitivists*. Cambridge: Pergamon.
- KUČERA, H. (1981) "Aspect, Markedness, and t_0 ". In Tedeschi, P.J. & A. Zaenen (eds) (1981), pp.177–189.
- KÖNIC, E. & J. VAN DER AUWERE (eds) (1994) *The Germanic Languages*. London and New York: Routledge.

- LABOV, W. (1971, 1990) "On the Adequacy of Natural Languages: I. The Development of Tense". In Singler, J.V. (ed) (1990a), pp.1–58.
- LABOV, W. (ed) (1980) *Locating Language in Time and Space*. New York: Academic Press.
- LAKOFF, G. & M. JOHNSON (1980) *Metaphors We Live By*. Chicago and London: The University of Chicago Press.
- LAMB, S. (1966) *Outline of Stratificational Grammar*. Washington: Georgetown University Press.
- LANGACKER, R.W. (1990) *Concept, Image and Symbol. The Cognitive Basis of Grammar*. Berlin/New York: Mouton de Guyter.
- (1994) "Culture, Cognition, and Grammar". In Pütz, M. (ed) (1994), pp.25–53.
- (1995a) "Cognitive Grammar". In Koerner, E.F.K. & R.E. Asher (eds) (1995), pp.364–368.
- (1995b) "The Symbolic Alternative". In Kardela, H. & G. Persson (eds) (1995), pp.89–118.
- LASS, R. (1994) *Old English. A Historical Linguistic Companion*. Cambridge: Cambridge University Press.
- LEECH, G. (1981) *Semantics. The Study of Meaning*. Harmondsworth: Penguin.
- LEFEBVRE, C. (ed) (1991) *Serial Verbs: Grammatical, Comparative and Cognitive Approaches*. Amsterdam/Philadelphia: John Benjamins.
- LEHMAN, W.P. (1987) "Time". In Ramat, A.G., O. Carruba & G. Bernini (eds) (1987), pp.339–348.
- LEVINSON, S.C. (1983) *Pragmatics*. Cambridge: Cambridge University Press.
- LIGHTFOOT, D.W. (1984) "The Relative Richness of Triggers and the Bioprogram" (Open Peer Commentary on Bickerton's "The Language Bioprogram Hypothesis"). In *The Behavioral and Brain Sciences* 7:2 1984, pp.198–199.
- LINELL, P. (1982) *Människans Språk*. Lund: Liber.
- LJUNG, M. & S. OHLANDER (1982) *Allmän Grammatic*. Lund: Liber.
- LURAGHI, S. (1993) "Prototypicality and Agenthood in Indo-European". In Andersen, H. (ed) (1993), pp.259–268.
- LYONS, J. (1991) *Chomsky. Third Edition*. London: Fontana.
- MACLAURY, R.E. (1995) "Preface: Linguistic and Anthropological Approaches to Cognition". In Taylor, J.R. & R.E. MacLaury (eds) (1995), pp.vii–xiii.
- MACWHINNEY, B. (ed) (1987) *Mechanisms of Language Acquisition*. Hillsdale, New Jersey & London: Lawrence Erlbaum.

- MAGNUSSON, U. & G. PERSSON (1986) *Facets, Phases and Foci*. Stockholm: Almqvist & Wiksell International.
- MARANTZ, A. (1984) "Creolization: Special Evidence for Innateness?" (Open Peer Commentary on Bickerton's "The Language Bioprogram Hypothesis"). In *The Behavioral and Brain Sciences* 7:2 1984, pp.199–200.
- MARATSOS, M. (1984) "How Degenerate is the Input to Creoles and where do its Biases Come from?" (Open Peer Commentary on Bickerton's "The Language Bioprogram Hypothesis"). In *The Behavioral and Brain Sciences* 7:2 1984, pp.200–201.
- MARCHAND, H. (1955) "On a Question of Aspect: A Comparison between the Progressive Form in English and that of Italian and Spanish". *Studia Linguistica* 9, pp.45–52.
- MARSHALL, J.C. (1984) "Pidgins are Everywhere" (Open Peer Commentary on Bickerton's "The Language Bioprogram Hypothesis"). In *The Behavioral and Brain Sciences* 7:2 1984, p.201.
- MATTHEWS, P.H. (1993) *Grammatical Theory in the United States from Bloomfield to Chomsky*. Cambridge: Cambridge University Press.
- MCCARTHY, J.J. (1986) "Bickerton's Creole Cooking: Where's the Beef?" (Continuing Commentary on Bickerton's "The Language Bioprogram Hypothesis"). In *The Behavioral and Brain Sciences* 9:3 1986, p.563.
- MCNEILL, D. (1971) "The Capacity for the Ontogenesis of Grammar". In Slobin, D.I. (ed) (1971), pp.17–40.
- MCWHORTER, J.H. (1992) "Substratal Influence in Saramaccan Serial Verb Constructions". In *Journal of Pidgin and Creole Languages* 7:1, pp.1–53.
- MEIER, R.P. (1984) "Sign as Creole" (Open Peer Commentary on Bickerton's "The Language Bioprogram Hypothesis"). In *The Behavioral and Brain Sciences* 7:2 1984, pp.201–202.
- MITHUN, M. (1995) "On the Reality of Irreality". In Bybee, J.L. & S. Fleischman (eds) (1995a), pp.367–388.
- MOURELATOS, A.P.D. (1981) "Event, Processes, and States". In Tedeschi, P.J. & A. Zaenen (eds) (1981), pp.191–211.
- MUFWENE, S.S. (1984a) *Stativity and the Progressive*. Bloomington, Indiana: Indiana University Linguistic Club.
- (1984b) "The Language Bioprogram Hypothesis, Creole Studies and Linguistic Theory" (Open Peer Commentary on Bickerton's "The Language Bioprogram Hypothesis"). In *The Behavioral and Brain Sciences* 7:2 1984, pp.202–203.

- (1986) "The Universalist and Substrate Hypotheses Complement One Another". In Muysken, P. & N. Smith (eds) (1986), pp.129–162.
- (1990) "Time Reference in Kikongo-Kituba". In Singler, J.V. (ed) (1990a), pp.97–117.
- (1991) "Pidgins, Creoles, Typology, and Markedness". In Byrne, F. & T. Huebner (eds) (1991), pp.123–143.
- (1996a) "Creole Genesis. A Population Genetics Perspective". In Christie, P. (ed) (1996), pp.196–216.
- (1996b) "Creolization and Grammaticization: What Creolistics Could Contribute to Research on Grammaticization". In Baker, P. & A. Sycia (eds) (1996), pp.5–28.
- MUYSKEN, P. (1984) "Do Creoles Give Insight into the Human Language Faculty?" (Open Peer Commentary on Bickerton's "The Language Bioprogram Hypothesis"). In *The Behavioral and Brain Sciences* 7:2 1984, pp.203–204.
- (1988) "Are Creoles a Special Type of Language?". In Newmeyer (ed) (1988), pp.285–301.
- MUYSKEN, P. & N. SMITH (eds) (1986) *Substrata versus Universals in Creole Genesis*. Amsterdam/Philadelphia: John Benjamins.
- MÜHLHÄUSLER, P. (1986) *Pidgin & Creole Linguistics*. Oxford: Basil Blackwell.
- NEWMAYER, F.J. (ed) (1988) *Linguistics: The Cambridge Survey, Volume II, Linguistic Theory: Extensions and Implications*. Cambridge: Cambridge University Press.
- NISHIDA, C. (1994) "The Spanish reflexive clitic *se* as an aspectual class marker". In *Linguistics 1994 volume 32–3*, pp.425–458.
- NORDLANDER, J. (1992) "Who Imitates What? Some Thoughts about Onomatopoeic and Sound Symbolic Words". In Edlund, L-E. & G. Persson (eds) (1992), pp. 97–101.
- NYLANDER, D.K. (1996) "Minimality Condition Effects in Krio". In Baker, P. & A. Sycia (eds) (1996), pp.269–278.
- OKAMURA, Y. (1996) "The Grammatical Status of 'Will' and the Category of Future form". In *Studia Linguistica Volume 50:1*, pp.35–49.
- PALMER, F.R. (1981) *Semantics. Second Edition*. Cambridge: Cambridge University Press.
- (1984) *Grammar. New Edition*. Harmondsworth: Penguin Books.
- (1986) *Mood and Modality*. Cambridge: Cambridge University Press.

- (1994) *The English Verb. Second Edition*. London and New York: Longman.
- PERSSON, G. (1990) *Meanings, Models and Metaphors*. Stockholm: Almqvist & Wiksell International.
- (1991) “Think in a Panchronic Perspective”. In *Studia Neophilologica* 65: 1993.
- (1994a) “A Cognitive Analysis of Converse Sentences in English”. In Allwood, J., B. Ralph, P. Andersson, D. Kós-Dienes & Å. Wengelin (eds) (1994), pp.335–345.
- (1994b) “Social Change, Prototypes and Word Meaning”. In Todtenhaupt, M. & I. Valfridsson (eds) (1994), pp.169–177.
- PIEPER, U. & G. STICKEL (eds) (1985) *Studia Linguistica Diachronica et Synchronica. Werner Winter. Sexagenario Anno MCMLXXXIII*. Berlin. New York. Amsterdam: Mouton de Gruyter.
- POSNER, R. (1984) “Creolization or Linguistic Change”. (Open Peer Commentary on Bickerton’s “The Language Bioprogram Hypothesis”). In *The Behavioral and Brain Sciences* 7:2 1984, pp.204–205.
- PREMACK, D. (1983) “The Codes of Man and Beast”. In *The Behavioral and Brain Sciences* 6 1983, p.125–137.
- PUPPEL, S. (ed) (1995) *The Biology of Language*. Amsterdam/Philadelphia: John Benjamins.
- PUTNAM, H. (1975) “The Meaning of ‘Meaning’”. In Gunderson, K. (ed) (1975), pp.131–193.
- (1995) *Pragmatism. An Open Question*. Oxford UK & Cambridge USA: Blackwell.
- PÜTZ, M. (ed) (1994) *Language Contact and Language Conflict*. Amsterdam/Philadelphia: John Benjamins.
- QUIRK, R., S. GREENBAUM, G. LEECH & J. SVARTVIK (1972) *A Grammar of Contemporary English*. London: Longman.
- (1985) *A Comprehensive Grammar of the English Language*. London: Longman.
- RADFORD, A. (1988) *Transformational Grammar: A First Course*. Cambridge: Cambridge Textbook in Linguistics.
- RAMAT, A.G., O. CARRUBA & G. BERNINI (eds) (1987) *Papers from the 7th International Conference on Historical Linguistics*. Amsterdam/Philadelphia: John Benjamins.
- ROBERTS, P.A. (1984) “Problems with Similarities across Creoles and the Development of Creole” (Open Peer Commentary on Bickerton’s “The Language Bioprogram Hypothesis”). In *The Behavioral and Brain Sciences* 7:2 1984, pp.205–206.

- ROEPER, T. (1996) "Comment on Bickerton's Paper". In Wekker, H. (ed) (1996a), pp.45–49.
- ROMAINE, S. (1988) *Pidgin & Creole Languages*. London and New York: Longman.
- (1994) "Germanic Creoles". In Köning, E. & J. van der Auwera (eds) (1994), pp.566–603.
- (1995) "The Grammaticalization of Irrealis in Tok Pisin". In Bybee, J.L. & S. Fleischman (eds) (1995a), pp.389–427.
- ROSCH, E. (1977) "Human Categorization". In Warren, N. (ed) (1977), pp.1–49.
- (1978) "Principles of Categorization". In Rosch, E. & B.B. Lloyd (eds) (1978), pp.27–48.
- (1983) "Prototype Classification and Logical Classification: The Two Systems". In Scholnick, E.K. (ed) (1983), pp.73–86.
- ROSCH, E. & B.B. LLOYD (eds) (1978) *Cognition and Categorization*. Hillsdale, New Jersey: Lawrence Erlbaum.
- RUMELHART, D.E. & J.L. MCCLELLAND (1987) "Learning the Past Tenses of English Verbs: Implicit Rules or Parallel Distributed Processing?". In MacWhinney, B. (ed) (1987), pp.195–248.
- SAMARIN, W.J. (1984) "Socioprogrammed Linguistics" (Open Peer Commentary on Bickerton's "The Language Bioprogram Hypothesis"). In *The Behavioral and Brain Sciences* 7:2 1984, pp.206–207.
- SAMPSON, G. (1979) "A Non-Nativist Account of Language Universals". In *Linguistics and Philosophy* 3 - 1979, pp.99–104.
- (1980) *Schools of Linguistics. Competition and Evolution*. London: Hutchison.
- (1984) "Do Creoles Prove what "Ordinary" Languages Don't?" (Open Peer Commentary on Bickerton's "The Language Bioprogram Hypothesis"). In *The Behavioral and Brain Sciences* 7:2 1984, pp.207–208.
- SANKOFF, G. (1979) "The Genesis of a Language". In Hill, K.C. (ed) (1979), pp.23–47.
- SAPIR, E. (1921) *Language. An Introduction to the Study of Speech*. New York: Harvest Books.
- SAUSSURE, F.DE (1959) *Course in General Linguistics*. New York: McGraw-Hill.
- SCHIFFRIN, D. (1981) "Tense Variation in Narrative". In *Language* 57:1, pp.45–62.

- SCHILLER, E. (1993) "Why Serial Verb Constructions? Neither Bioprogram nor Substrate!". In Byrne, F. & J. Holm (eds) (1993), pp.175–182.
- SCHOLNICK, E.K. (ed) (1983) *New Trends in Conceptual Representation: Challenges to Piaget's Theory?* Hillsdale, NJ & London: Erlbaum.
- SCHWENTER, S. (1994) "'Hot News' and the Grammaticalization of Perfects". In *Linguistics 1994 volume 32–6*, pp.995–1028.
- SELLS, P. (1985) *Lectures on Contemporary Syntactic Theories*. Stanford: CSLI.
- SEUREN, P.A.M. (1984) "The Bioprogram Hypothesis: Fact and Fancy" (Open Peer Commentry on Bickerton's "The Language Bioprogram Hypothesis"). In *The Behavioral and Brain Sciences 7:2 1984*, pp.208–209.
- (1991) "The Definition of Serial Verbs". In Byrne, F. & T. Huebner (eds) (1991), pp.193–205.
- SIMPSON, J.M.Y. (1995) "Prague School Phonology". In Koerner, E. F.K. & R.E. Asher (eds) (1995), pp.247–253.
- SINGLER, J.V. (ed) (1990a) *Pidgins and Creoles and Tense-Mood-Aspect Systems*. Amsterdam/Philadelphia: John Benjamins.
- (1990b) "Introduction: Pidgins and Creoles and Tense-Mood-Aspect". In Singler, J.V. (ed) (1990a), pp. vii–xvi.
- SLOBIN, D.I. (ed) (1971) *The Ontogenesis of Grammar. A Theoretical Symposium*. New York & London: Academic Press.
- (1984) "Child Language and the Bioprogram". (Open Peer Commentry on Bickerton's "The Language Bioprogram Hypothesis"). In *The Behavioral and Brain Sciences 7:2 1984*, pp.209–210.
- SMERKEN, M.J. (1992) "Bickerton and the Sociobiologists". In *Journal of Pidgin and Creole Languages 7:1*, pp.111–114.
- SMITH, C.S. (1981) "Semantic and Syntactic Constraints on Temporal Interpretation". In Tedeschi, P.J. & A. Zaenen (eds) (1981), pp. 213–237.
- SPEARS, A.K. (1990) "Tense, Mood, and Aspect in the Haitian Creole Pre-verbal Marker System". In Singler, J.V.(ed) (1990a), pp.119–142.
- SPENCER, J. (ed) (1971) *The English Language in West Africa*. London: Longman.
- STRANG, B.M.H. (1970) *A History of English*. London and New York: Methuen.
- STREITBERG, W. (1963) *Urgermanische Grammatik*. Heidelberg: Carl Winter.

- SVARTVIK, J. & O. SAGER (1977) *Engelsk universitetsgrammatik*. Solna: Almqvist & Wiksell.
- TARVAINEN, K. (1983) "Two Papers on Dependency Grammar". Umeå: Umeå Papers in English.
- TAYLOR, J.R. & R.E. MACLAURY (eds) (1995) *Language and the Cognitive Construal of the World*. Berlin & New York: Mouton de Gruyter.
- TEDESCHI, P.J. & A. ZAENEN (eds) (1981) *Syntax and Semantics Volume 14. Tense and Aspect*. New York: Academic Press.
- TETEL ANDRESEN, J. (1990) *Linguistics in America 1769 – 1924. A Critical History*. London & New York: Routledge.
- THOMASON, S. (1992) "Response to Bickerton". In *Journal of Pidgin and Creole Languages* 7:1, pp.106–111.
- TOBIN, Y. (1993) *Aspect in the English Verb*. London & New York: Longman.
- TODD, L. (1974) *Pidgins and Creoles*. London: Routledge & Kegan Paul.
- (1984) *Modern Englishes: Pidgins and Creoles*. London: Blackwell.
- TODTENHAUPT, M. & I. VALFRIDSSON (eds) (1994) *Sprache als lebendiger Kulturspiegel*. Stockholm: Almqvist & Wiksell International.
- TRASK, R.L. (1995) *Language: The Basics*. London and New York: Routledge.
- TRUDGILL, P. (1974) *Sociolinguistics. An Introduction to Language and Society*. Harmondsworth: Penguin Books.
- (1983) *On Dialect. Social and Geographical Perspectives*. Oxford: Blackwell.
- VENDLER, Z. (1967) "Verbs and Times". Chapter four in *Linguistics in Philosophy*. New York: Cornell University Press, pp.97–121.
- VISSER, F.TH. (1973) *An Historical Syntax of the English Language*. Leiden: E.J. Brill.
- VLACH, F. (1981) "The Semantics of the Progressive". In Tedeschi, P.J. & A. Zaenen (eds) (1981), pp.271–292.
- WANG, W.S-Y. (1984) "Organum ex machina?" (Open Peer Commentary on Bickerton's "The Language Bioprogram Hypothesis"). In *The Behavioral and Brain Sciences* 7:2 1984, pp.210–211.
- WARREN, N. (ed) (1977) *Studies in Cross-cultural Psychology. Volume 1*. London: Academic Press.
- WAUGH, L.R. & M. MONVILLE-BURSTON (eds) (1990a) *On Language. Roman Jakobsson*. Cambridge, Massachusetts: Harvard University Press.

- (1990b) "Introduction: The Life, Work, and Influence of Roman Jakobson". In Waugh, L.R. & M. Monville-Burston (eds) (1990a), pp.1–45.
- WEKKER, H. (ed) (1996a) *Creole Languages and Language Acquisition*. Berlin & New York: Mouton de Gruyter.
- (1996b) "Introduction: Creole Languages and Language Acquisition". In Wekker, H. (ed) (1996a), pp.1–6.
- WESSÉN, E. (1955) *Svensk Språkhistoria, I. Ljudlära och Ordböjningslära*. Stockholm: Filologiska Föreningens Bokförlag.
- (1979) *De nordiska språken*. Stockholm: Almqvist & Wiksell.
- WINFORD, D. (1993) "Directional Serial Verb Constructions in Caribbean English Creoles". In Byrne, F. & J. Holm (eds) (1993), pp. 183–203.
- WINTERS, M.E. (1987) "Syntactic and Semantic Space: The Development of the French Subjunctive". In Ramat, A.G., O. Carruba & G. Bernini (eds) (1987), pp. 607–618.
- WOLFRAM, W. (1980) "a-Prefixing in Appalachian English". Labov, W. (ed) (1980), pp.107–142.
- WOOLFORD, E. (1984) "Why Creoles Won't Reveal the Properties of Universal Grammar" (Open Peer Commentary on Bickerton's "The Language Bioprogram Hypothesis"). In *The Behavioral and Brain Sciences* 7:2 1984, pp.211–212.
- WRIGHT, J. & E.M. WRIGHT (1908) *Old English Grammar*. Oxford University Press: London.

Dictionaries

- CONCISE ANGLO-SAXON DICTIONARY, A. 4th edition (1969) Clark Hall, J.R., with supplement by Meritt, H.D., Cambridge: Cambridge University Press.
- KRIO-ENGLISH DICTIONARY, A. (1980) Fyle, C.N. & E.D. Jones. Oxford: Oxford University Press.
- OXFORD ADVANCED LEARNER'S DICTIONARY OF CURRENT ENGLISH. (1974) Oxford: Oxford University Press, (OALD).
- OXFORD ENGLISH DICTIONARY. (1993) CD-ROM version. Oxford: Oxford University Press, (OED).
- WORDCRAFT, CONCISE DICTIONARY & THESAURUS, MODERN ENGLISH–OLD ENGLISH. (1993) Pollington, S. Pinner, Middlesex: Anglo-Saxon Books.

Corpora and other Source Materials

- BROWN CORPUS OF AMERICAN ENGLISH, THE. CD-ROM version, (BROWN).
- CHARLEY, D. (1982) *Petikot Kɔna*. Krio Publications Series Volume 1. Shrimpton, N. & N. Sulayman (eds). Umeå: Department of English, Umeå University.
- DECKER, T. (1988) *Julius Siza*. Krio Publications Series Volume 4. Shrimpton, N. & N. Sulayman (eds). Umeå: Department of English, Umeå University.
- (no date) *Udat di Kyap Fit*. Krio Publications Series Volume 7. Shrimpton, N. & N. Sulayman (eds). Umeå: Department of English, Umeå University.
- Gud Nyus Fɔ Olman*. (1992) The New Testament in Krio. Freetown: The Bible Society in Sierra Leone.
- King James Bible*. (no date) New York: The World Publishing Company.
- LONDON-LUND CORPUS OF SPOKEN ENGLISH, THE. CD-ROM version, (LL).
- LONDON, OSLO, BERGEN CORPUS OF ENGLISH, THE. CD-ROM version, (LOB).
- New English Bible, The*. (1970) Oxford: Oxford University Press.
- QUAKU-WOODE, L. (1988) *Gɔd Pas Kɔnsibul*. Krio Publications Series Volume 5. Shrimpton, N. & N. Sulayman (eds). Umeå: Department of English, Umeå University.
- TAYLOR-PIERCE, E. (1989) *Bad Man Betɛ Pas Emti Os*. Krio Publications Series Volume 6. Shrimpton, N. & N. Sulayman (eds). Umeå: Department of English, Umeå University.

Index Corrigenda:

A small number of index entries appear to refer to incorrect page numbers. The words and expressions in question are, however, located either at the bottom of the previous page, or at the top of the following one.

For example:

ability (156) -> (157) at the top

anterior (20) -> (19) at the bottom

Indices

Index of Names

- Aksu (5)
Allerton (13), (35)
Arends (9)
Bache (37), (39-40)
Bertinetto (39-40), (107-109)
Bickerton (5-11), (21), (32), (42),
(69-70), (72-73), (79), (84),
(108-109)
Binnick (27), (37)
Bloom (69-71), (84)
Bybee (92), (110-111), (114-115),
(144), (154)
Bynon (91-92), (96), (117), (154),
(157)
Chaurand (118)
Chung (121)
Clark (69-71), (84)
Comrie (1), (5), (12), (14-17), (19),
(28), (35-37), (42-47), 108-109),
(113-114), (121), (144), (147),
(150)
Crystal (34), (113)
Dahl (92), (110-111), (114), (144)
De la Cruz (117)
Declerck (12), (29)
Drinka (54), (68-69)
Duffley (19), (98)
Einstein (3)
Fleischman (5), (19-21), (115), (154)
Garey (16), (47), (51)
Givón (19-21), (43), (161)
Greenbaum (16-17)
Heidegger (3)
Jakobson (8), (11), (148),
Johnson (4-5)
Kardela (34)
Klein (33), (92)
Lakoff (4-5)
Lamb (88-89)
Langacker (4), (6)
Lass (116-117)
Leech (16), (62)
Magnusson (4)
McNeill (4), (174)
Mufwene (9), (78), (121)
Muysken (9)
Mühlhäusler (9)
Njie (22)
Palmer (19), (90), (118)
Persson (4)
Pomorska (8), (11), (148)
Quirk (12), (16-19), (26-28), (34),
(42), (63), (100)
Reichenbach (27), (121)
Romaine (9), (95)
Rosch (31-32)
Schwenter (147)
Slobin (5)
Smith (9)
Svartvik (16)
Timberlake (121)
Tobin (29)
Todd (9)
Vendler (11-15), (29), (47)
Visser (145)
Wessén (116)
Winford (94-96)
Wright (116)

Subject Index

- ability (10), (69-70), (93), (115),
(155-156), (158), (160)
- absolute
 past (151)
- absolute
 tense (121)
- accomplishment (12-14)
- achievement (12-13)
- actionality (39-40), (107)
- activity (12-14), (71), (75)
- adjectival
 verbal nuclei (87)
 verbs (2)
- adjective (64), (86-87), (130)
 predicative (2)
- adverb
 modal (157)
- adverbial (13), (17), (26), (36), (41),
(58), (63-64), (76), (135-139),
(140), (142), (147-148), (153),
(156), (162), (167)
 phrase (58), (142), (148)
 modal (155), (161)
- Aktionsart (11), (39), (68)
- anaphoric
 reference (109)
- anterior (6), (9-10), (20-21), (49),
(52), (55), (73-75), (77), (79),
(92-93), (102), (104), (110),
(113), (115), (121), (126), (128),
(145), (151-152), (159), (165)
 tense (2), (18), (30), (87), (91),
(122), (130), (137), (139), (144),
(166)
- anterior/non-anterior
 distinction (9), (21), (102), (165),
(167)
- anteriority (3), (74), (79), (92),
(122-123), (130-132), (144),
(157)
 non-stative (110)
- anterior-marking languages (73)
- argument (15), (18), (21), (40), (77),
(94-95), (97), (151-152)
 nominal (96)
 structure (13), (32-33), (39), (96)
- aspect (1-2), (5-8), (11-16), (18-22),
(25-26), (33), (35-36), (51-51),
(53), (61-62), (64), (68), (78),
(81-82), (86-87), (91), (96),
(102-104), (107-111), (116),
(118), (120), (125-133),
(137-138), (143-144),
(151-153), (157), (160-162),
(165-166)
 marker (13), (86), (112),
(131-132), (151), (160-161)
 marking (2-3), (8), (86), (110),
(153), (165)
 distinction (9), (135)
 perfective (3), (9), (50), (83-84),
(92), (105), (112), (114-115),
(139), (145), (167)
- aspect-oriented language (1)
- aspectology (14)
- aspectual
 distinction (15), (68), (162)
- aspectuality (9), (11-12), (14), (19),
(21-22), (64), (107), (137),
(140), (158)
- assertion (20-21), (136), (139),
(147-149), (154)
- atelic (15), (39), (46), (142), (173),
(184)
- Atlantic
 creoles (41), (72), (95), (151)
- auxiliary (21), (96), (125), (154),
(158)
 modal (10), (19), (21), (63-64),
(90), (92-94), (101), (117-119),
(136-137), (154), (156-158),
(161-162)
 non-modal verb (125)
 verb (10), (19), (36), (58), (64),
(85), (88), (90-93), (94), (98),
(100-101), (117-119), (136-
137), (156-157), (161-162)
 verbal constructions (91)
- axis of reference (121)
- background (4), (6-7), (69-70),
(77-79), (104), (161), (165-166)
 distinction (70)
- background/foreground
 distinction (6-7), (70), (77),

- (165-166)
- before/simultaneous
 - distinction* (6), (7)
- beforeness (3), (6), (26), (78), (102), (145), (165)
- beforeness/simultaneity
 - distinction* (6), (165-166)
- bounded (14), (18), (38), (40), (47-48), (60), (68), (111), (136), (141-143), (153), (162), (166-167)
- bounded/unbounded
 - distinction* (14), (18), (141-142), (162), (167)
- boundedness (14), (16), (39), (41), (48), (142)
 - situational* (47), (59)
- British English (16), (22)
- case relation (95-97)
- co-extension (63), (122-123)
- Cognitive Grammar (4), (6), (176)
- commentator's present (82), (104)
- complement (14), (18), (35), (88), (91), (94), (97-98), (100), (105), (136), (138-139), (140), (143), (145), (159), (167)
- complementizer (35), (94), (158)
- completion (3), (46), (50), (56), (68), (74), (77-78), (111), (114), (136)
 - implicit* (38), (51-52), (54), (57)
 - necessary* (54)
 - phase* (37), (131), (140-141)
 - point of* (54-55), (143-144)
- completive (79), (144)
- completiveness (20)
- composite
 - nuclei* (105)
 - realization* (89-90), (97), (105)
- concept (22), (25-26), (29), (32), (39), (43), (51-52), (65), (74), (80), (104-105), (112), (165)
 - predicative* (64), (86-87), (106)
 - verbal* (31), (33), (35), (41), (48), (54), (57-58), (64), (67), (72), (78), (83), (85), (86), (97), (99), (135)
- conceptual
 - dynamicity* (67)
 - place-holder* (64), (86)
- condition (76), (122-124), (160)
- conditional (9), (76), (115), (122), (124-125)
- conditionality (155)
- content
 - lexical* (11), (28), (30), (63), (85-86), (91), (93), (95-97), (97), (128-129), (131), (156), (158), (162)
- continuousness (19), (72), (83), (102), (111), (138), (158)
- contradiction (115), (156)
- copula (86-88), (125), (128), (131)
- count (42), (99)
- countable (42), (169)
- counter-factuality (10), (131), (158)
- creole (1-2), (7-10), (22), (42), (49), (73), (79), (108), (165)
 - Atlantic* (41), (72), (95), (151)
- creolist (22)
- creolistics (22), (72)
- current
 - focus* (75-77)
- declarative (154), (184)
- deictic (108-109), (113), (120), (123)
 - centre* (97), (121)
 - reference* (109)
- deixis (108), (123)
 - external* (109)
- desiderative (154)
- developmental
 - phase* (20)
- discourse
 - focus* (27), (73-77), (120), (123), (147)
 - marker* (151-152)
- distinctions
 - anterior/non-anterior* (9), (21), (102), (165), (167)
 - aspect* (9), (135)
 - aspectual* (15), (68), (162)
 - background/foreground* (6-7), (70), (77)
 - before/simultaneous* (6), (7)
 - beforeness/simultaneity* (6), (165-166)
 - bounded/unbounded* (14), (18), (141-142), (162), (167)
 - durative/punctual* (8-9), (21), (23), (54), (67-71), (74), (77), (80), (83-84), (166)
 - factual/hypothetical* (10)

- figure/ground* (6)
foreground/background (6), (165-166)
imperfective/perfective (1), (15), (102), (165), (167)
indicative/subjunctive (116)
modality (9)
mood (135)
mood/modality (118), (136), (154)
perfect/non-perfect (141), (167)
punctual/non-punctual (69)
real/hypothetical (7)
realis/irrealis (9), (21), (47), (102), (154), (165), (167)
reality/hypotheticality (165)
reality/imagination (6), (166)
space/time (165)
specific/generic (14)
state/dynamic (42)
state/non-state (3), (7), (8), (11), (21-22), (41-42), (67-72), (74), (77), (79-80), (82-84), (166)
state/process (7), (150)
stative/dynamic (16), (42)
tense (10-11), (135)
tense/temporal (137)
- dubitative* (154)
duration (9), (27), (37-38), (44), (48-50), (54-55), (68), (70), (78), (103-104), (143), (145)
telic (56)
durationless (38), (50), (103), (114)
durative (8-9), (21), (23), (39), (49), (54), (67-71), (74), (77-78), (80), (83-84), (103), (166)
durative/punctual
distinction (8-9), (21), (23), (54), (67-71), (74), (77), (80), (83-84), (166)
durativity (72)
dynamic (15-17), (39), (42), (44-45)
dynamicity (18), (21), (25), (28), (36), (38), (53), (56), (65), (67), (99), (166)
eventive (62), (103)
non-state (44)
nucleic (12), (15), (29), (31-33), (35), (41), (48), (63), (72), (74-75), (83), (102-103), (105), (129), (145), (165)
procedural (48)
- processive* (103)
situational (29), (41), (58), (61), (111), (135), (142)
state (43-44), (78)
stative (103)
telic (63)
value (13-14), (29), (31), (37), (39-41), (48), (51), (54), (57-58), (60-63), (72), (82-83), (102-105), (112), (130), (138), (142), (158), (167)
- ellipsis* (34), (185)
English (1-3), (5), (8-12), (16), (20-22), (29), (32), (41-42), (46), (63-64), (67), (71), (73), (80-84), (86-88), (90-94), (96-98), (100), (103), (110-112), (115-119), (121-123), (125-126), (128), (130-131), (133), (136), (140), (144-146), (150-151), (154), (156-159), (161-162), (165-166)
- entailment*
temporal (114)
- equator* (128)
- European language* (10), (73), (115)
- event* (1), (4), (6), (9-10), (15), (20-21), (27-28), (33), (35), (37-41), (44-46), (48), (52), (60), (98), (109), (114), (119), (123-124), (142-143), (145), (166)
- past* (16)
- eventive* (13), (15), (31), (37), (40), (48-49), (51-53), (56-57), (62), (65), (68), (70-71), (72), (75), (78-80), (82-83), (102-104), (109), (112), (124), (135), (142), (161), (165), (167)
dynamicity (62), (103)
nucleus (38), (41), (47), (50), (54-55), (74), (76-77), (102-104), (146), (150)
- eventiveness* (14), (39), (41), (47), (111)
- exclamative* (154)
- external*
deixis (109)
temporal constituency (122)
time (11), (120), (135)
time scale (108)

- factual
 time (109), (115), (135)
 factual/hypothetical
 distinction (10)
 factuality (5), (10), (20), (109-110),
 (112), (115), (125), (131), (158),
 (162)
 figure/ground
 distinction (6)
 focus (12), (26-27), (59), (63),
 (73-77), (120), (123), (142),
 (147), (149), (151), (153),
 current (75-77)
 discourse (26-27), (73-77), (120),
 (123), (147)
 foreground (4), (6-7), (69-70),
 (77-79), (165-166)
 French (115), (117), (144), (173),
 (183)
 future (9), (19), (26-28), (47), (53),
 (58-59), (62), (93), (102-103),
 (107), (116-117), (119-120),
 (131), (157-158), (160-161)
 improbable (10), (115)
 Gambian
 Krio (22)
 gapping (34)
 German (31), (88), (116)
 Germanic weak preterite (117)
 gerund (98-100), (157)
 gram (63), (110)
 grammatical
 marker (117-118)
 Greek (118)
 Guyanese (72-73)
 habit (54), (75-76), (139-140), (161)
 habituality (10), (19-20), (39), (53),
 (72), (102), (111), (115), (131),
 (135), (138), (155), (160-161)
 have
 possessive (99), (146)
 periphrasis (92)
 have to
 obligational (100)
 historical present (82), (114)
 hortatory (154)
 hypothetical
 time (10), (28), (102), (109),
 (161)
 Icelandic (116)
 imperative (115), (159)
 imperfective (15), (20), (46), (52),
 (60), (63), (68), (73), (102),
 (115), (126), (128-132), (138),
 (144), (148), (150), (152)
 aspect (1), (3), (9), (18-19),
 (51), (53), (62), (81), (87),
 (103-104), (111-114), (120),
 (127), (130-131), (137), (139),
 (157)
 marker (2), (8-9), (72), (74-77),
 (82), (112), (158), (160)
 imperfective/perfective
 distinction (1), (15), (102), (165)
 imperfectivity (8), (20), (72), (76),
 (82), (102), (138), (147)
 imperfectivizer (147)
 implicit completion (38), (51-52),
 (54), (57)
 improbable
 future (10), (115)
 indicative (115-117)
 indicative/subjunctive
 distinction (116)
 Indo-European (54), (68), (95)
 inflectional gram (110)
 inflectional systems (107)
 modal (116)
 intensive (154)
 internal
 temporal constituency (109),
 (111), (113), (152)
 internal
 time (9), (48), (109), (111),
 (120), (135), (162)
 irrealis (5), (18), (20), (53),
 (101-102), (117-118),
 (124-125), (127-128), (131),
 (136-137), (165-166)
 marker (10), (154), (156),
 (158-162)
 marking (10)
 modality (20), (116)
 mood (9-10), (19-21), (47),
 (92-93), (109), (115-116),
 (119-120), (139), (155-157),
 (159), (161-162)
 irregular verbs (70)
 iteration (53)
 iterativity (19), (72), (111), (138),
 (158)
 jussive (154), (185)

- Kikongo-Kituba (121)
 Krio (1-3), (8-11), (21), (29), (42),
 (62-64), (67), (71-75), (79-88),
 (90), (94-95), (110), (112), (115),
 (118-119), (121-123), (130),
 (133), (136), (146), (151-152),
 (154-156), (158-162), (165-166)
Gambian (22)
TMA phrase (77), (125), (131),
 (133), (161)
 language acquisition (69-70), (84)
 Latin (118)
 Leonenet (22)
 lexical
 content (11), (28), (30), (63),
 (85-86), (91), (93), (95-97), (97),
 (128-129), (131), (156), (158),
 (162)
 meaning (91), (93), (96), (115-
 116), (118), (125)
 lexifier language (2)
 linguistic
 time (4), (7), (25), (28), (34),
 (135), (137), (165-166)
 location
 temporal (26-27), (49-50), (52),
 (55), (81), (113), (119-120)
 locus
 tense (121)
 main verb (17-18), (25), (29), (32),
 (34-36), (50), (58), (61), (86),
 (91-96), (101), (105), (107),
 (112), (117-118), (126)
notional (100)
 markedness (8), (38), (41), (81),
 (103-104), (127), (150)
contrast (128)
 marker (8-10), (21), (63), (72-77),
 (79), (82), (86-87), (91), (94),
 (98), (110), (112), (115), (119),
 (133), (136-137), (151-152),
 (154-162)
grammatical (117-118)
tense (1-2), (13), (116),
 (130-132)
TMA (31), (64), (85), (90), (125),
 (163)
 matrix
 verb (96-97)
 meaning
 lexical (91), (93), (96), (115-116),
 (118), (125)
 metaphor (4-5), (26)
 Middle English (117)
 modal
 adverbial (155), (161)
 adverb (157)
 auxiliary (10), (19), (21),
 (63-64), (90), (92-94), (101),
 (117-119), (136-137), (154),
 (156-158), (161-162)
 inflectional systems (116)
 modality (12), (19-21), (64),
 (107-108), (116), (118),
 (136-137), (154-162)
distinction (9)
 modals (93), (101), (117),
 (156-158)
 moment
 present (1), (26-28), (49-53),
 (63), (73-75), (77-78), (84),
 (88), (93), (109), (114-116),
 (120-123), (147), (150-151)
 moment of
 reference (2), (113), (120)
 speech (10), (26-27), (41), (49),
 (62-63), (72-74), (76-77), (81),
 (83), (87), (92), (104), (113),
 (119-124), (127), (144-147),
 (149-150)
 utterance (2), (47), (50), (76),
 (79), (92), (104), (114),
 (121-122)
 mono-phasal (44), (48), (50)
 mood (3), (5-7), (11-12), (25-26),
 (28), (33), (35-36), (61), (64),
 (86), (96), (102), (104),
 (107-108), (117-118), (125),
 (127-129), (133), (136-137),
 (143), (154), (158), (160),
 (165-166)
distinction (135)
irrealis (9-10), (19-21), (47),
 (92-93), (109), (115-116),
 (119-120), (139), (155-157),
 (159), (161-162)
markers (10), (63), (115-116),
 (119), (131-132), (154-155),
 (161-162)
realis (18), (20), (47), (87), (91),
 (109-110), (115), (119-120),
 (124), (130), (144)

- mood/modality
distinction (118), (136), (154)
- morphology
perfect (144)
- multi-phasal (44), (49), (51), (61)
- historical present (82), (114)
- necessary
completion (54)
- NEG marking (2), (87)
- nominal (4), (7), (14), (18), (26),
 (67), (70), (98-100), (136), (139),
 (153), (162), (167)
arguments (96)
- non-anterior (9), (21), (49), (79),
 (93), (102), (121), (126), (128),
 (144-145), (165)
tense (18), (122), (130), (137),
 (139), (166)
tense marking (18), (122), (130),
 (137), (139), (166)
- non-completiveness (20)
- non-count (42), (99)
- non-duration (70)
- non-future (28), (120)
- non-obligational modals (101)
- non-past (28)
- non-perfect (141), (148), (167)
- non-punctual (9), (69), (72)
- non-state (3), (7-8), (11), (21), (23),
 (41-42), (45), (62), (67-72), (74),
 (77), (78-80), (82-84)
dynamicity (44)
- non-stative (1-3), (8), (11), (42),
 (49), (54), (65), (67), (72-74),
 (77-84), (122), (146)
anteriority (110)
- non-termination (144), (147)
- notional main verb (100)
- noun phrase (35-36), (41), (58),
 (142-143)
- nucleus (23), (30), (34), (43), (50),
 (95), (104), (107), (112), (127),
 (133), (139), (141), (144), (158),
 (161), (167)
eventive (38), (41), (47), (50), (54-
 55), (74), (76-77), (102-104),
 (146), (150)
processive (13-14), (38), (41),
 (49), (52), (69), (75), (128),
 (136), (140), (146-147)
stative (37-38), (41), (48), (54),
 (61), (71-72), (74), (79-83),
 (87), (103), (122), (128), (130),
 (132), (145-146), (150)
telic (15), (37), (40), (47-48),
 (51), (53-54), (56), (65),
 (68), (72), (79-80), (146),
 (165)
verbal (11), (13-14), (16-18),
 (21), (25), (28-29), (31), (33),
 (35-41), (47-49), (51-52),
 (56-58), (60-65), (72-74), (77),
 (84-86), (88-91), (93-94),
 (97-100), (102-103), (105),
 (111), (122), (130-131), (135),
 (138), (140), (142), (159-160),
 (163), (166)
- nucleic
dynamicity (12), (15), (29),
 (31-33), (35), (41), (48), (63),
 (72), (74-75), (83), (102-103),
 (105), (129), (145), (165)
potentiality (105)
telicity (47-48)
verb (18), (34-35), (44), (97-98),
 (122), (127), (131-133), (141),
 (157), (159), (161)
- obligation (19), (93), (100), (102),
 (158-160)
- obligational (97), (101-102)
- obligational
have to (100)
- OE [Old English] (117)
- Old English (93), (98), (116-117)
- openendedness (20)
- operator (99), (101)
verb phrase (100)
- optative (115)
- passé composé (145)
- past (1-2), (9-11), (19-20), (26-28),
 (41), (50), (55), (73-74), (76),
 (80), (88), (93), (115-116),
 (120), (148), (152), (162)
absolute (151)
participle (92), (99), (145), (158)
perfective (16)
progressive (108)
relative (75), (77), (79),
 (113-114)
tense (30), (71-72), (90-91),
 (111), (118), (124-125), (158)
tense marking (30), (71-72),

- (90-91), (111), (118), (124-125), (158)
- perfect (46), (74), (88), (91-94), (97), (99), (124), (126-127), (132), (137), (142), (144-154), (163)
- morphology* (144)
- perfective (1), (15), (18), (20), (69), (93-94), (103), (113), (127), (144), (151), (153), (166)
- aspect* (3), (9), (50), (83-84), (92), (105), (112), (114-115), (139), (145), (167)
- perfect/non-perfect
- distinction* (141), (167)
- performative
- verb* (50), (83-84), (115)
- peripheral (21), (23), (53), (64), (139), (158), (162-163), (167)
- modifier* (66), (136), (137-138), (154)
- periphery (36), (64-65), (89), (117), (138-139), (154-155), (157-159), (167)
- periphrastic have (94), (99), (146-147)
- permission (120), (157)
- phasal development (44), (111)
- phase (17), (20), (25), (36-40), (42-46), (49-52), (54-55), (61), (112), (132), (137-139), (143-144), (146), (154), (163), (166)
- developmental* (20)
- termination* (47), (53), (141-142), (153), (162)
- phrasal
- verb* (30-31), (35), (64), (89-90), (94), (98)
- pidgin (9)
- pidgin-speaking (9)
- pluperfect (74), (108), (124-125), (142), (152), (154)
- point of
- completion* (54-55), (143-144)
- reference* (1), (3), (26), (52), (63), (74), (79), (93), (99), (105), (120), (122-125), (140), (145-148), (150), (152), (156), (161)
- point present (10), (74)
- Polish (114)
- portmanteau
- realization* (89)
- possessive
- have* (99), (146)
- possibility (19), (27), (44), (59), (63), (77), (79), (84), (94), (137), (143), (157)
- potentiality (106), (116-117), (132), (156)
- pragmatics (49)
- predicative
- adjectives* (2)
- concept* (64), (86-87), (106)
- construction* (87), (89), (131)
- pseudo-* (64)
- prediction (10), (19), (28), (159), (161)
- prepositional (31), (89), (140), (154), (163)
- phrase* (59-60), (90), (143)
- present
- moment* (1), (26-28), (49-53), (63), (73-75), (77-78), (84), (88), (93), (109), (114-116), (120-123), (147), (150-151)
- progressive* (41), (82-84)
- relevance* (80), (88), (145)
- present* (16)
- subjunctive* (94), (108)
- tense* (26-28), (49), (53), (55), (82-84), (104), (115), (123-124)
- tense marking* (26-28), (49), (53), (55), (82-84), (104), (115), (123-124)
- procedural development (36-39), (63), (136), (139-140), (143-144), (146), (152), (154), (163)
- dynamicity* (48)
- process (7), (12), (14-17), (33), (35), (37-38), (40-41), (44-48), (51-63), (69), (75), (82-83), (91), (103-104), (140-144), (146), (148-151), (154), (166)
- processive (13-16), (31), (37-41), (48-49), (52), (53-57), (60-61), (65), (69), (73), (75-81), (83-84), (113), (128), (136), (140), (143), (146-147), (166)
- dynamicity* (103)

- nucleus* (13-14), (38), (41), (49),
(52), (69), (75), (128), (136),
(140), (146-147)
- processiveness (14), (39), (41)
- progressive
 present (41), (82-84)
 form (3), (9), (53), (82), (128),
 (131), (151)
 morpheme (158)
- progressiveness (83)
- prototype (31)
- prototypicality (33), (41)
- pseudo-predicatives (64)
- punctual (8-9), (21), (23), (39), (45),
(50), (54), (68-73), (75), (8), (81),
(84-85), (146), (167),
 verb (71)
- punctual/non-punctual
 distinction (69)
- punctuality (69), (71), (112)
- punctuative (69)
- putative
 should (94)
- real/hypothetical
 distinction (7)
- realis (5), (9-10), (21), (92), (102),
(116), (118), (125), (127-129),
(132), (137), (139), (154),
(156-157), (161), (165-166)
 mood (18), (20), (47), (87), (91),
 (109-110), (115), (119-120),
 (124), (130), (144)
- realis/irrealis
 distinction (9), (21), (47), (102),
 (154), (165), (167)
- reality/hypotheticality
 distinction (165)
- reality/imagination
 distinction (6), (166)
- realization
 portmanteau (89)
- reference (11), (19), (29), (34),
(40-41), (49), (55-56), (59), (62),
(68), (72), (75), (78), (80), (82),
(98), (104), (111), (113), (116),
(121), (123-124), (131), (139),
(144), (149), (151), (154),
(160-161)
 point (1-3), (10), (26-27), (52),
 (63), (73-74), (79), (92-93), (99),
 (105), (109), (119-125), (140),
 (145-148), (150), (152), (155-
 156), (159)
 temporal (77), (79), (92),
 (108-109), (120), (122),
 (145), (155), (159)
- relative
 past (75), (77), (79), (113-114)
 tense (121), (123)
 tense marking (121), (123)
 time (120), (123)
- relativity theory (3)
- relevance
 present (80), (88), (145)
- repetitiveness (83)
- Russian (113)
- semantic
 duality (116), (136), (154-157),
 (162)
 feature (29)
 scope (70), (127-128)
- semantics (19), (42), (57), (63),
(67), (96), (142), (167)
- sequence marking (73)
- serial verb (91), (95-96)
 construction (90), (94)
- Sierra Leone (1), (22)
- simultaneity (3), (6), (26), (75),
(81), (92), (102), (123),
(144-145), (155), (165)
- situation (1-2), (5), (8-11), (10-18),
(20-21), (23), (25-29), (31-54),
(56), (58), (60-65), (68),
(71-78), (81-83), (85-86),
(90-92), (97-99), (103-105),
(107-116), (118-125), (127),
(130-131), (133), (135-145),
(146-148), (150-163),
(165-167)
- situational
 boundedness (47), (59)
 dynamicity (29), (41), (58), (61),
 (111), (135), (142)
 telicity (59), (142)
 time (29), (104), (138), (154)
- space (3-7), (26), (67), (108)
- space/time
 distinction (165)
- specific/generic
 distinction (14)
- speech point (109)
- Standard English (2), (10), (80-81),

- (123)
- state (3), (7-8), (11-13), (15), (17),
(20-21), (23), (27), (32-33), (35),
(37-38), (40-42), (45-46),
(48-50), (55-57), (60-62),
(67-72), (74), (77), (79-84), (86),
(92), (99), (102), (110), (115),
(117), (119), (138), (141-150),
(153), (160-161), (165-166)
dynamicity (43-44), (78)
present (16)
- state/dynamic
distinction (42)
- state/non-state
distinction (3), (7-8), (11),
(21-22), (41-42), (67-72), (74),
(77), (79-80), (82-84), (166)
- state/process
distinction (7), (150)
- static (39), (42)
- stative (1-3), (8), (11), (13), (15-18),
(27), (37-38), (40-43), (48-49),
(52-57), (60-62), (65), (67),
(71-74), (78-84), (87),
(103-104), (110), (122), (128),
(130), (132), (135), (142),
(145-146), (150), (165-167)
dynamicity (103)
nucleus (37-38), (41), (48), (54),
(61), (71-72), (74), (79-83), (87),
(103), (122), (128), (130), (132),
(145-146), (150)
- stativity (14), (39), (41), (78), (147),
(150), (178)
- stative/dynamic
distinction (16), (42)
- stativizer (147), (150)
- Stratificational Grammar (88-89),
(176)
- subcategorization
frames (97)
- subjunctive (10), (93), (107),
(115-118), (154)
present (94), (108)
- SVC [Serial Verb Construction]
(94-97), (105)
- Swedish (22), (29), (32), (116-117)
- telic (13), (15), (37-41), (45-49),
(51-57), (60-61), (65), (68), (72),
(74-80), (82-83), (135), (142),
(146), (165)
duration (56)
dynamicity (63)
nucleus (15), (37), (40), (47-48),
(51), (53-54), (56), (65),
(68), (72), (79-80), (146),
(165)
- telicity (14-16), (39), (41), (46-48),
(51), (56), (59), (142-143),
situational (59), (142)
- temporal
entailment (114)
location (26-27), (49-50), (52),
(55), (81), (113), (119-120)
reference (77), (79), (92),
(108-109), (120), (122),
(145), (155), (159)
structure (9), (102)
- temporal constituency
external (122)
internal (109), (111), (113),
(152)
- temporality (4), (9), (12), (21), (64),
(73), (100), (107)
- tense (3), (5-13), (18-20), (21),
(25-28), (30), (33), (35-36),
(49), (53), (55), (61), (64),
(70-71), (73), (75), (81-82),
(86-87), (89-91), (96),
(102-104), (107-110),
(114-118), (120), (123-126),
(128), (131-133), (143), (145),
(151-153), (157), (162), (165)
absolute (121)
anterior (2), (18), (30), (87),
(91), (122), (130), (137), (139),
(144), (166)
distinction (10-11), (135)
locus (121)
marker (1-2), (13), (116),
(130-132)
system (107-108), (121), (123)
- tense marking (73), (81)
non-anterior (18), (122), (130),
(137), (139), (166)
past (30), (71-72), (90-91),
(111), (118), (124-125), (158)
present (26-28), (49), (53), (55),
(82-84), (104), (115), (123-124)
relative (121), (123)
- tense/temporal
distinction (137)

- termination (20), (40), (49), (52),
 (54), (59), (72-73), (78), (92),
 (113-114), (139-140), (143-145)
phase (47), (53), (141-142),
 (153), (162)
 time (1-3), (5-6), (8-9), (18-21),
 (26), (37-38), (41), (43-44),
 48-49), (52), (54-55), (58), (61),
 (63), (67-70), (72), (74), 76-78),
 (80-82), (99-100), (103), (108),
 (110-111), (113-114), (116),
 (121), (124-125), (130), (136),
 (139-140), (144-145), (147),
 (149), (152), (155-156), (162),
 (167)
external (11), (120), (135)
factual (109), (115), (135)
hypothetical (10), (28), (102),
 (109), (161)
line (27), (112), (119-120)
linguistic (4), (7), (25), (28), (34),
 (135), (137), (165-166)
relative (120), (123)
schemata (12-14)
situational (29), (104), (138),
 (154)
topic (73), (75), (79), (92)
 TMA [Tense, Mood, Aspect] (2-3), (5),
 (36), (65), (93), (111), (115),
 (135-136), (139), (145), (153),
 (157-159), (162), (165-167)
carrier (86), (105), (125-128)
marker (31), (64), (85), (90),
 (125), (163)
marking (103), (137)
meaning (137)
phrase (77), (125), (131), (133),
 (151), (161)
system (86), (107), (121)
value (87-88), (91-92),
 (102-103), (125), (128),
 (130-131), (133), (137), (140),
 (144), (153)
 to-infinitive (98-100)
 topic
time (73), (75), (79), (92)
 unbounded (14), (18), (60), (136),
 (141-143), (153), (162), (167)
 unboundedness (18)
 VC [Verbal Constituency] (18), (23),
 (53), (59), (63-64), (93), (111),
 (116), (122), (132-133),
 (135-140), (143), (145),
 (150-151), (153-158),
 (161-163), (165-166)
 verb (1-4), (7-16), (19), (21), (26-
 27), (29-33), (35-36), (39),
 (42-44), (47-51), (54), (58),
 (60), (62-64), (68), (70-71),
 (73-74), (76), (78) (80-81), (88-
 97), (113), (116-119), (125),
 (130), (136-137), (140), (154),
 (156-158), (161-162), (165),
 (167)
main (17-18), (25), (29), (32),
 (34-36), (50), (58), (61),
 (86), (91-96), (100-101),
 (105), (107), (112),
 (117-118), (126)
matrix (96-97)
nucleic (18), (34-35), (44),
 (97-98), (122), (127),
 (131-133), (141), (157), (159),
 (161)
performative (50), (83-84), (115)
phrasal (30-31), (35), (64),
 (89-90), (94), (98)
punctual (71)
 verb phrase (1), (7), (9), (34), (42),
 (64), (91), (98)
operator (100)
 verbal (1-9), (15), (17), (19), (22),
 (25-26), (28-29), (38), (42),
 (53), (67-69), (70-71), (73),
 (89-95), (98), (103), (105),
 (108), (111-112), (115), (117),
 (120), (122-123), (128), (131),
 (133), (138), (146), (159-161),
 (163)
concept (31), (33), (35), (41),
 (48), (54), (57-58), (64), (67),
 (72), (78), (83), (85), (86), (97),
 (99), (135)
constituency (11), (13-14), (18),
 (21), (23), (31), (33), (36), (53),
 (59), (64-65), (86), (100), (107),
 (110), (118-119), (121), (132),
 (135), (137), (141), (144),
 (151), (153-154), (157-158),
 (162), (165-167)
nucleus (11), (13-14), (16-18),
 (21), (25), (28-29), (31), (33),

(35-41), (47-49), (51-52),
(56-58), (60-63), (64-65), (72-
74), (77), (84-86), (88-91),
(93-94), (97-100), (102-103),
(105), (111), (122), (130-131),
(135), (138), (140), (142),
(159-160), (163), (166)
volition (19), (93), (116), (119),
(156-157), (159)
weak past tense (71), (117)
weak preterite (117)
zero expression (110)

- 1 Bertil Malmbergs skolpojksbrev. Utgivna av Sven Vallmark. 1975.
- 2 Saga-Marianne Norlén & Teut Wallner. Skriftatlas för datering av Birger Sjöbergs manuskript. 1974.
- 3 Karin Eriksson. Studier i Umeå stads byggnadshistoria. Från 1621 till omkring 1895. Diss. 1975.
- 4 Sylvia Danielson. Läroboksspråk. En undersökning av språket i vissa läroböcker för högstadium och gymnasium. Diss. 1975.
- 5 Sigurd Fries. Svenska växtnamn i riksspråk och dialekt. 1975.
- 6 Folke Nordström. Mediaeval baptismal fonts. An iconographical study. 1984.
- 7 Sven-Bertil Jansson. Folket, de bildade och landsmålsliteraturen. Svensk dialektdikt 1875–1900. 1975.
- 8 Jan Nilsson. Plurala ortnamn på Island. Morfologiska iakttagelser. Diss. 1975.
- 9 Sylvia Danielson. Samuel Columbus' språkprogram i En Svensk Ordeskötsel. 1976.
- 10 Birger Liljestrand. Strindbergs Mäster Olof-dramer. En studie i 1800-talets dramaspråk. I. Diss. 1976.
- 11 Gudrun Utterström. Tillnamn i den karolinska tidens Stockholm. 1976.
- 12 Dialectology and Sociolinguistics. Essays in honor of Karl-Hampus Dahlstedt 19 April 1977. Edited by C.-C. Elert, S. Eliasson, S. Fries and S. Ureland. 1977.
- 13 Ann-Maria Ullsten. Umeå-pressen 1917–1922. En studie i lokalpress. Diss. 1977.
- 14 Gustaf Utterström. Fattig och föräldralös i Stockholm på 1600- och 1700-talen. 1978.
- 15 Gunnar Eriksson. Kartläggarna. Naturvetenskapens tillväxt och tillämpningar i det industriella genombrottets Sverige 1870–1914. 1978.
- 16 Iréne Johansson. Funktionella aspekter på satsintonationen i svenska. Diss. 1978.
- 17 Inger Nilsson. Grönlandsfrågan 1929–1933. En studie i småstatsimperialism. Diss. 1978.
- 18 Tom Ericsson. I fosterlandets tjänst. En studie i den svenska arméunderbefälskårens fackliga strävanden 1901–1922. Diss. 1978.
- 19 Brit Uppman. Samhället och samerna 1870–1925. Diss. 1978.
- 20 Teater i Göteborg 1910–1975. I–III. 1978.
- 21 Dag Nordmark. Samhället och scenen. En studie i Rudolf Värnlunds drama *Den heliga familjen*, dess litterära och sociala förutsättningar. Diss. 1978.
- 22 Björn Jernudd. The Language Survey of Sudan. The First Phase: A Questionnaire Survey in Schools. Diss. 1979.
- 23 Ulf Bäcklund. Restricted Adjective-Noun Collocations in English. 1981.
- 24 Nord-Skandinaviens historia i tvärvetenskaplig belysning. Utg. av Evert Baudou och Karl-Hampus Dahlstedt. 1980.
- 25 Rolf Hedquist. Emotivt språk: en studie i dagstidningars ledare. Diss. 1978.
- 26 Monica Loeb. Vonnegut's Duty-Dance with Death-Theme and Structure in Slaughterhouse-Five. Diss. 1979.

- 27 **Algot Hellbom.** Ordbok över Njurundamålet. 1980.
- 28 **Kerstin Elert.** Portraits of Women in Selected Novels by Virginia Woolf and E. M. Forster. Diss. 1979.
- 29 **Veronica Bonebrake.** Historical Labial-Velar Changes in Germanic. Diss. 1979.
- 30 **Birger Liljestränd.** Strindbergs Mäster Olof-dramer. En studie i 1800-talets dramaspråk. II. 1980.
- 31 **Maria Bolander.** Predikativens funktion i svenskan. Diss. 1980.
- 32 **Konstkultur i Norrland.** En informationsskrift om forskning vid Institutionen för konstvetenskap. 1980.
- 33 **Internordisk språkförståelse.** Utg. av C.-C. Elert. 1981.
- 34 **Magnus von Platen.** Privatinformation i skolan. En undervisningshistorisk studie. 1981.
- 35 **Marja Sjöberg.** Brott och straff i Västernorrland 1861–90. Diss. 1981.
- 36 **Tvåspråkighet.** Utg. av E. Ejerhed och I. Henrysson. 1981.
- 37 **Svenskans beskrivning 12.** Utg. av C.-C. Elert och S. Fries. 1981.
- 38 **Ingeborg Nordin Hennel.** Dömd och Glömd. En studie i Alfild Agrells liv och dikt. 1981.
- 39 **Kjell Söderberg.** Den första massutvandringen. Diss. 1981.
- 40 **Claes-Christian Elert.** Ljud och ord i svenskan. 2. 1981.
- 41 **Rolf Hedquist.** Språklig kommunikation med förbehåll. En studie i det politiska språkets pragmatik. 1981.
- 42 **Bo Sundin.** Ingenjörsvetenskapens tidevarv. Ingenjörsvetenskapsakademien, Pappersmasskontoret, Metallografiska institutet och den teknologiska forskningen i början av 1900-talet. Diss. 1981.
- 43 **Readings on Unbounded Dependencies in Scandinavian Languages.** Edited by Elisabet Engdahl and Eva Ejerhed. 1982.
- 44 **Inger Hultgren.** Kvinnors organisation och samhällets beslutsprocess. Fredrika-Bremerförbundet och Husmodersförbundet Hem och Samhälle på riksplanet och lokalt i Jämtlands län 1925–1975. Diss. 1982.
- 45 **Teater i Stockholm 1910–1970. I–III.** 1982.
- 46 **Roger Qvarsell.** Ordning och behandling. Psykiatri och sinnessjukvård i Sverige under 1800-talets första hälft. Diss. 1982.
- 47 **Suppression, Struggle and Success.** Studies on Three Representatives of Cultural Life in Sweden: Fredrika Bremer, Andreas Kempe and Linnaeus. Edited by Claes-Christian Elert and Gunnar Eriksson. 1982.
- 48 **Åke Jonsson.** Den omsorgsfulle ordmålaren. Studier i Sven Jerrings radiospråk mot bakgrund av radions allmänna syn på språket under de första decennierna. Diss. 1982.
- 49 **Nordsvenska.** Språkdrag i övre Norrlands tåtorter. Utg. av C.-C. Elert och S. Fries. 1982.
- 50 **Per Frånberg.** Umeåsystemet. En studie i alternativ nykterhetspolitik 1915–1945. Diss. 1983.
- 51 **Maria Haar.** The Phenomenon of the Grotesque in Modern Southern Fiction. Some Aspects of Its Form and Function. Diss. 1983.
- 52 **Tage Boström.** Okänd soldat och kända soldater. Beteenden, attityder och struktur i Väinö Linnas krigsroman. 1983.
- 53 **Birgit Petersson.** "Den farliga underklassen." Studier i fattigdom och brottslighet i 1800-talets Sverige. Diss. 1983.
- 54 **Birger Liljestränd.** Tal i prosa. Om svenska författareshet anföringsteknik. 1983.

- 55 **Taisto Määttä.** Hur finskspråkiga uppfattar svenskans vokaler. En studie i kontrastiv fonetik med användning av naturligt och syntetiskt tal. 1983.
- 56 **Sverker R. Ek & Lennart Forslund.** Marionetten som avantgardist. Kring Marionetteatern i Stockholm. 1984.
- 57 **Från barnatid till åldrig dag.** Minnesanteckningar av Sophie Björkman. Utgivna av Christina Nordström. 1984.
- 58 **Ingeborg Nordin Hennel.** "Ämnar kanske fröken publicera något?" Kvinnligt och manligt i 1880-talets novellistik. 1984.
- 59 **Nordic Prosody III.** Papers from a Symposium. Ed. by C.-C. Elert, I. Johansson & E. Strangert. 1984.
- 60 **From Sounds to Words.** Essays in honor of Claes-Christian Elert 23 december 1983. 1983.
- 61 **Florilegium Nordicum.** En bukett nordiska språk- och namnstudier tillägnade Sigurd Fries den 22 april 1984. 1984.
- 62 **Anders Brändström.** "De kärlekslösa mödrarna." Spädbarnsdödligheten i Sverige under 1800-talet med särskild hänsyn till Nedertorneå. Diss. 1984.
- 63 **Ulf Bäcklund.** Realize and Recognize. A Study in Immediate Contextual Dependency. 1984.
- 64 **Birgitta Hene.** "Den dyrkade Lasse och stackars lilla Lotta." En syntaktisk-semantisk studie av personbeskrivande adjektiv och adverb i populära ungdomsböcker. Diss. 1984.
- 65 **Gull-Mari Rosén.** Konst- och konsthantverkscirklar under 1970-talet. De fyra största studieförbundens syn på denna verksamhet med anledning av den nya kulturpolitiken. Diss. 1984.
- 66 **Claes Rosenqvist.** Hem till historien. August Strindberg, sekelskiftet och "Gustaf Adolf". Diss. 1984.
- 67 **Elina Helander.** Om trespråkighet – en undersökning av språkvalet hos samerna i Övre Soppero. Diss. 1984.
- 68 **Karl Johan Danell.** Om franska munkars nöjesliv på medeltiden, om George Brassens' gorilla, om hertig d'Harcourt och grönkål samt andra kåserier kring franska fenomen och frågetecken. 1985.
- 69 **Eva Strangert.** Swedish speech rhythm in a cross-language perspective. Diss. 1985.
- 70 **Texten och läsaren i ett historiskt perspektiv.** Föredrag vid nordiskt symposium i idé- och litteraturhistoria. Utg. Raoul Granqvist. 1985.
- 71 **Hugo Olsson.** La concurrence entre *il*, *ce* et *cela* (*ça*) comme sujet d'expressions impersonnelles en français contemporain. 1985.
- 72 **Inga-Britt Lindblad.** Lokalradiospråk. En studie av tre lokalradiostationers sändningar. Diss. 1985.
- 73 **Inger Fredriksson.** Studier i Mikael Agricolas bibliska företal. Diss. 1985.
- 74 **Agneta Guillemot.** Rask Resolut Trogen. De indelta soldaterna i det svenska agrarsamhället. Diss. 1986.
- 75 **Ulf Magnusson & Gunnar Persson.** Facets, Phases and Foci. Studies in Lexical Relations in English. 1986.
- 76 **Kerstin Laitinen.** Begärets irrvägar. Existentiell tematik i Stig Dagermans texter. Diss. 1986.
- 77 **Gunilla Domellöf.** I oss är en mångfald levande. Karin Boye som kritiker och pro-samodernist. Diss. 1986.

- 78 **Jan Nilsson.** Relation och namn. Två kapitel om nordiska prepositionsnamn och liknande ortnamnskonstruktioner. 1986.
- 79 **Ingrid Melander.** The Transcendent Flame. Tematik/Structural Complexity in Francis Warner's Experimental Sonnets. 1987.
- 80 **Lennart Pettersson.** Verbböjningar i jukkasjärvifinskan. Diss. 1987.
- 81 **Inger Bergström.** Grammatical Correctness and Communicative Ability. A Performance Analysis of the Written and Spoken English of Swedish Learners. Diss. 1987.
- 82 **Christina Florin.** Kampen om katedern. Feminiserings- och professionaliseringsprocessen inom den svenska folkskolans lärarkår 1860–1906. Diss. 1987.
- 83 **Per Råberg.** The Space of Man. New Concepts for Social and Humanist Planning. 1987.
- 84 **Per Ringby.** Författarens dröm på scenen. Harald Molanders regi och författarskap. Diss. 1987.
- 85 **Jörg Lindner.** Den svenska Tysklands-hjälpen 1945–1954. Diss. 1988.
- 86 **Tom Ericsson.** Mellan kapital och arbete. Småborgerligheten i Sverige 1850–1914. 1988.
- 87 **Axel Groundstroem.** Finnische Kasusstudien. 1988.
- 88 **Eva Vikström.** Sverigespel. Kent Anderssons och Bengt Bratts dramatik 1967–71 mot bakgrund av samhälls- och teaterdebatten. Diss. 1989.
- 89 **Carl Eber Olivestam.** Idé och politik III. De politiska partierna – skolan och ideologin. 1989.
- 90 **Instead of Flowers.** Papers in Honour of Mats Rydén on the Occasion of his Sixtieth Birthday, August 17, 1989. 1989.
- 91 **Älvdal i norr.** Människor och resurser i Luledalen 1300–1800. Sune Åkerman och Kjell Lundholm (red). 1990.
- 92 **Gunnar Persson.** Meanings, Models and Metaphors. A Study in Lexical Semantics in English. 1990.
- 93 **Anders Öhman.** Äventyrets tid. Den sociala äventyrsromanen i Sverige 1841–1859. Diss. 1990.
- 94 **Brigitte Kusche.** Frauenaufklärung im Spätmittelalter. Eine philologisch-medizinhistorische Untersuchung des gynäkologisch-obstetrischen Gks 1657, Kopenhagen. Diss. 1990.
- 95 **Lena Kjersén Edman.** I ungdomsrevoltens tid. Svensk ungdomsbok och dess mottagande åren kring 1968. Diss. 1990.
- 96 **Börje Harnesk.** Legofolk. Drängar, pigor och bönder i 1700- och 1800-talens Sverige. Diss. 1990.
- 97 **Barbro Nilsson.** Le mot chien n'aboie pas. *Quand tu va chez les femmes.* Un roman autobiographique de Christiane Rochefort analysé à partir de ses œuvres précédentes. Diss. 1990.
- 98 **Ulla Lidén.** Der grammatische Tigersprung. Studien zu Hermito von Doderers Sprachterminologie. Diss. 1990.
- 99 **Signs and Signals.** Popular Culture in Africa. Edited by Raoul Granqvist. 1990.
- 100 **Språket som kulturspegel.** Umeforskare berättar. Red. Karl Johan Danell, Gunnar Persson & Astrid Stedje. 1991.
- 101 **Alf Arvidsson.** Sågarnas sång. Folkligt musicerande i sågverkssamhället Holmsund 1850–1980. Diss. 1991.

- 102 **Kent Larsson.** Svenska brev. Några bidag till studiet av en texttyps historia. 1991.
- 103 **Marianne Liliequist.** Nybyggarbarn. Barnuppfostran bland nybyggare i Frostvikens, Vilhelmina och Tärna socknar 1850–1920. Diss. 1991.
- 104 **Karl-Hampus Dahlstedt.** Gosshuvudet. Skolpojksminnen från Härnösand, Ådalen och Vilhelmina. 1992.
- 105 **Gerald Porter.** The English Occupational Song. Diss. 1992.
- 106 **Tuija Määttä.** Kvantitativa studier av syntaxen i finsk ungdomslitteratur. Diss. 1992.
- 107 **Lars-Erik Edlund & Gunnar Persson.** Language – The Time Machine. 1992
- 108 **Papers in Museology I.** 1992
- 109 **Tryggve Sköld.** Wortstudien. 1992
- 110 **Lars Johansson.** In the Shadow of Neocolonialism. Diss. 1992
- 111 **Österreich. Beiträge über Sprache und Literatur.** C. Pankow (Hg.) 1992
- 112 **La culture dans la langue.** I Söhrman (Red.) 1993
- 113 **Mikael Svonni.** Samiska skolbarns samiska. Diss. 1993
- 114 **Per Sörlin.** Trolldoms- och vidskepelseprocesserna i Göta hovrätt 1635–1754. Diss. 1993
- 115 **Eva Lambertsson Björk.** Campus Clowns and the Canon. Diss. 1993
- 116 **Alexander Pankow.** Prinzipien der literarischen Übersetzungsanalyse. Zu Übersetzungen russischer Lyrik ins Deutsche. Diss. 1993.
- 117 **Svante Norrhem.** Uppkomlingarna. Kanslitjänstemännen i 1600-talets Sverige och Europa. Diss. 1993.
- 118 **Sigurd Fries.** Växtnamn då och nu. Artiklar sammanställda till Sigurd Fries sjuttioårsdag den 22 april 1994.
- 119 **Sprache als lebendiger Kulturspiegel.** M. Todtenhaupt & I. Valfridsson (Hg.). 1994.
- 120 **Magnus Nordén.** Logische Beziehungskonzepte und Inferenzprozeduren. Diss. 1994.
- 121 **Seyyed Mohammad Fazlhashemi.** Förändring och kontinuitet, Al-Ghazâlîs politiska omsvängning. Diss. 1994
- 122 **Per Nordahl.** Weaving the Ethnic Fabric, Social Networks Among Swedish-American Radicals in Chicago 1890–1940 Diss. 1994
- 123 **Karl Johan Danell.** Le phénomène de concurrence en français moderne – Réflexions à partir de an-année, jour-journée, paraître-apparaître, et d'autres.
- 124 **Sune Åkerman and Jack L. Granatstein.** Welfare States in Trouble. 1995
- 125 **David Bell.** Ardent Propaganda: Miners' Novels and Class Conflict 1929–1939. Diss. 1995
- 126 **Raija Kangassalo.** Mastering the Question. The Acquisition of Interrogative Clauses by Finnish-Speaking Children. Diss. 1995
- 127 **Henryk Kardela & Gunnar Persson.** New Trends in Semantics and Lexicography. 1995
- 128 **John A Stotesbury.** Apartheid, Liberalism and Romance. A Critical Investigation of the Writing of Joy Packer. Diss. 1996
- 130 **Elisabeth Mårald.** In Transit: Aspects of Transculturalism in Janice Kulky Keefer's Travels. Diss. 1996
- 132 **Ingemar Friberg.** "Jag är alltid annorlunda"; en studie i identitetsproblematiken i Lars Gustafssons tidiga författarskap mellan åren 1959 och 1967. Diss 1996

- 133 **Clarence Larsson.** Identity Through the Oter: Canadian Adventure Romance for Adolescents Diss. 1996
- 134 **Johan Nordlander.** Towards a Semantics of Linguistic time. Diss. 1997.

Försäljning och distribution:

Swedish Science Press, Box 118, S-751 04 Uppsala Sweden.

Using English and the West-African creole language Krio as the objects of investigation, this study proposes an analysis in which verbs and the paradigms pertaining to verbs are conceived of as being the only direct carriers of linguistic time encoding. The fundamental assumption is that nominals encode substance, be it concrete or abstract, and that verbals encode abstract substance with time.

Three different layers of analysis are put forward: (1) the nucleic, which consists of the verbal carrying the meaning core of a situation; (2) the verbal constituency, in which we find all TMA encoding, that is, the tense, mood and aspect of the situation; and (3) the (verbal) situation, which is conceived of as a superordinate, maximum unit of description.

It is argued that the dynamicity value of the verbal nucleus to a large extent determines and limits the possible aspectual, modal and temporal interpretations of the situation.