

When-Clauses and Temporal Structure

Renaat Declerck

Routledge Studies in Germanic Linguistics



**Also available as a printed book
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WHEN-CLAUSES AND TEMPORAL STRUCTURE

Tense is one of the central issues of linguistics, and has been the focus of much attention in recent years. In this book, Renaat Declerck offers a detailed discussion of the temporal structures that are expressed by the combination of tense forms with the conjunction *when*. He is able to develop and test his earlier model and in doing so reveals the close relation between the semantics of *when* and the English tense system.

Included are:

- A detailed functional typology of English *when*-clauses.
- A model of the English tense system.
- An analysis of the possible tense combinations—both normal and special—in head clauses and *when*-clauses.
- A discussion of the many different temporal interpretations of *when*-clauses.
- A treatment of the special class of ‘narrative *when*-clauses’.

The specific focus is on how situations are located in time in sentences involving both a head clause and a *when*-clause. Declerck’s thorough investigation of the *when*-clause gives a fascinating insight into the English tense system which will interest linguists and all those involved with teaching English.

Renaat Declerck has published some forty-five articles in twenty different journals and is the author of *Tense in English: Its Structure and Use in Discourse* and several other books. He is Professor of English Linguistics at the University of Leuven (KUL) in Belgium.

ROUTLEDGE STUDIES IN GERMANIC
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WHEN-CLAUSES AND TEMPORAL STRUCTURE

Renaat Declerck



London and New York

First published 1997
by Routledge
11 New Fetter Lane, London EC4P 4EE

This edition published in the Taylor & Francis e-Library, 2005.

“To purchase your own copy of this or any of Taylor & Francis or Routledge’s collection of thousands of eBooks please go to www.eBookstore.tandf.co.uk.”

Simultaneously published in the USA and Canada
by Routledge
29 West 35th Street, New York, NY 10001

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British Library Cataloguing in Publication Data

A catalogue record for this book is available from the British Library

Library of Congress Cataloging in Publication Data

A catalogue record for this book has been requested

ISBN 0-203-21147-2 Master e-book ISBN

ISBN 0-203-21195-2 (Adobe eReader Format)
ISBN 0-415-15488-X (Print Edition)

For Magda, Veerle and Stefaan

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ACKNOWLEDGEMENTS

I wish to thank Kazuhiko Tanaka and an anonymous referee for their useful comments on the first draft of this book. Thanks are also due to the native speakers who have kindly lent me their competence in judging the acceptability of some of the example sentences, especially A.C.E.Caldicott and K.Carlon; also to X.Dekeyser for translating some of the Old English examples. Finally, I am extremely thankful to W.Detailleur for his kind offer to reproduce the requested camera-ready copies of the many figures that are included in the book.

I would like to thank the following journals for permission to reproduce articles here:

Chapter 2 is a revised version of my forthcoming article, ‘A functional typology of English *when*-clauses’, *Functions of Language* 3 (1996).

Section 3 of Chapter 3 was published as ‘The so-called “temporal conjunction” *when*’, *Linguistica Antverpiensia* 2–3 (1995–6): 25–42.

The article ‘Tense choice in adverbial *when*-clauses’, *Linguistics* 34 (1996): 225–61, summarizes some of the findings of the book and contains passages from it.

ABBREVIATIONS

Adv-NRC	nonrestrictive relative clause modifying (the head of) a temporal adverbial
Adv+RRC	temporal adverbial of the type ‘preposition+NP+restrictive relative clause’ (e.g. <i>at the time that...</i>)
Adv-RRC	restrictive relative clause forming part of an <i>Adv+RRC</i> construction
CTE	common TE (see section 2.2 of Chapter 5)
HC	head clause
ITO	included time of orientation (see section 2.2 of Chapter 5)
NP	noun phrase
NP-NRC	nonrestrictive relative clause modifying a temporal NP which does not form part of a temporal adverbial
NP+RRC	temporal NP supporting a restrictive relative clause and not forming part of a temporal adverbial
NP-RRC	restrictive relative clause modifying a temporal NP which does not form part of a temporal adverbial
NRC	nonrestrictive relative clause
NW-system	‘No <i>will/would</i> ’ system (i.e. <i>will/would</i> cannot be used to refer to a future or posterior situation)
RRC	restrictive relative clause
STO	situation-TO (time of the predicated situation—see section 4 of Chapter 4)
t_0	temporal zero-point (see section 1 of Chapter 4)
T	time indicated by the antecedent NP of an NP-RRC or NP-NRC (see section 2.1 of Chapter 11)
T-existential	sentence asserting (or questioning) the existence of a time (see section 2.1 of Chapter 11)
TE	time established by adverbial or context

TFS	time of the full situation (see section 1.1.2 of Chapter 5)
TO	time of orientation (see section 3 of Chapter 4)
WC	<i>when</i> -clause
W-simultaneous	interpreted as simultaneous in the real world (but not necessarily represented as simultaneous by the tense form)
W-system	' <i>will/would</i> ' system (i.e. the expression of futurity requires or allows the use of <i>will/would</i>)

1

INTRODUCTION

1

AIM AND SCOPE OF THE WORK

The main purpose of this book is to investigate how situations are located in time in sentences involving a head clause (henceforth: HC) and a *when*-clause (henceforth: WC).¹ It offers a detailed discussion of the tense system(s) used in such sentences, as well as the role played by temporal adverbials.

As we will see, there are many different types of WC, and there is quite a number of temporal structures that can be expressed in a complex sentence involving a WC. Because of this, WCs are particularly interesting if one wants to get a better insight into the English tense system. They therefore seemed a natural choice when I was looking for a possibility of putting the model of the English tense system I had presented in Declerck (1991a) to the test.

Apart from this, WCs constitute an interesting topic in themselves, because they can be used in many different ways. This will be clear from [Chapter 2](#), which presents a rich typology of WCs on the basis of their syntactic, semantic and functional characteristics. It will be shown there that WCs can be used not only as ‘canonical WCs’ (as in *I was there when he left*) but also as ‘narrative WCs’ (e.g. *We had hardly left the house when it started to rain*), nominal (free relative) WCs, WCs used as restrictive or nonrestrictive relative clauses, atemporal WCs, etc. As will be illustrated in [Chapter 2](#) and more fully investigated in [Chapter 11](#), this typology is not only interesting in itself but proves relevant to the use of the tenses in WCs, since there is a high degree of correlation between the various types of WC and the particular tense choices that can or must be made.

The general structure of the book is as follows. As already said, the present introductory chapter is followed by a chapter presenting a typology of WCs. In [Chapter 3](#) I will have a closer look at what is generally known as the ‘temporal conjunction’ *when*. I will present evidence, both synchronic and diachronic, that this ‘conjunction’ is really a free relative with an adverbial function, which is interpreted as ‘at the time at which’. This claim is important, as it forms the basis

for the hypothesis that the use of tenses in canonical WCs is exactly the same as that in relative clauses depending on phrases like *at the time (when/that)*—a hypothesis which will be put to the test (and found to be correct) in [Chapter 6](#).

[Chapter 4](#) sketches a model of the English tense system which enables us to describe (and predict) the use of tenses in the various types of WC.

[Chapter 5](#) is concerned with the temporal structure of sentences involving a WC. It examines the various factors that contribute to the temporal interpretation of a sentence, and investigates the temporal structure realized by a sentence consisting of an HC (head clause) and a canonical WC. ('HC' is to be understood here as the clause into which a WC is syntactically embedded, irrespective of whether it is a subordinate clause or an independent one.) It is shown that the temporal relations expressed by the tense forms do not relate the times of the two situations referred to directly to each other. Rather, the times of the situations are related to each other indirectly via a 'common frame', which is established by *when*. Since both the HC and the WC can use a tense form expressing simultaneity, anteriority or posteriority, the relations expressed can build at least nine different temporal structures, which are referred to as 'temporal configurations'.

In the same chapter I also examine a number of restrictions on canonical WCs: barring some systematic exceptions (such as habitual sentences), WCs cannot refer to the moment of speech, cannot use the present perfect or depend on an HC in the present perfect, and cannot depend on an HC whose tense form expresses simultaneity.

[Chapter 6](#) presents a detailed analysis of the system of tenses used to express temporal relations in sentences involving an HC and a canonical WC. In this Chapter I investigate how the nine configurations are expressed with reference to the past, the pre-present, the present and the future. In doing so I also verify the hypothesis that this system is exactly the same as in clauses introduced by *at the time that*.

[Chapter 7](#) examines some special uses of 'relative' tense forms in WCs, viz. the expression of 'indirect binding', 'sloppy simultaneity' (which are concepts introduced in [Chapter 4](#)) and irrealis.

[Chapter 8](#) is a brief chapter devoted to the exceptional use of 'absolute' tenses (e.g. the future tense) in canonical WCs.

[Chapter 9](#) is a longer chapter in which I examine the temporal interpretation of sentences with canonical WCs. The temporal interpretation of such sentences depends not only on the tenses used but also on the information structure and the thematic structure of the clauses, the time(s) specified by the time adverbial(s) (if

1 I will use the term 'situation' as a cover-term for anything that can be described by a clause (viz. an action, state, event or process). Since the linguistic expression of a situation is a clause, I will treat sentences consisting of several clauses as describing more than one situation.

any) in the HC and/or WC, the time (if any) that is given in the linguistic or extralinguistic context, the progressive or nonprogressive aspect of the verbs, the repetitive or nonrepetitive representation of the situations, the Aktionsart (lexical aspect) expressed by the verb phrases, and the homogeneous or heterogeneous representation of the situations and of the time interval(s) indicated by the adverbial(s). **Chapter 9** investigates the interplay between all these factors in sentences consisting of an HC and a canonical WC.

Chapter 10 deals with so-called ‘narrative’ WCs. This is a special type of WC, which is used to ‘push forward’ the action (e.g. *I was just going to leave when the phone rang*). In this chapter I discuss the special semantic and syntactic characteristics of this type of WC, as well as the peculiarities of their tense system (for example, they differ from canonical WCs in that they can use the future tense: *Hardly will they have arrived when one of the kids will already have broken something*).

Chapter 11, finally, is devoted to a (necessarily brief) discussion of the tense system(s) used in the many types of WC that are neither canonical WCs nor narrative WCs.

A final note in connection with the structure of the work is that there is no chapter giving an overview of the state of the art in the field of WCs. The reason is simply that, to my knowledge, there are no works dealing specifically with English WCs. This is not to say, of course, that WCs have escaped the attention of linguists altogether. As will become clear from the references, there are some treatments of WCs to be found in works on temporal clauses generally (see especially Edgren 1971 and Harkness 1985), as well as a couple of articles focusing on WCs (see especially Hirtle 1981 and Hamann 1989). However, there does not appear to exist a detailed and systematic study of WCs paying special attention to the use of tenses. It is the purpose of this book to fill this gap.

2

THE ILLUSTRATIVE MATERIAL

Many of the examples illustrating the various kinds of WC discussed below are attested examples coming from well-known computerized corpora or from personal reading.

Examples coming from a computerized corpus are tagged as follows:

BR	the Brown University Standard Corpus of Present-day American English
DR	the corpus of drama texts computerized at the KUL (University of Leuven) in the early 1970s
LOB	the Lancaster-Oslo-Bergen Corpus
SEU	the Survey of English Usage Corpus of Written English

WSJ a corpus of articles that appeared in the *Wall Street Journal* in 1989

Examples bearing the following labels come from computerized texts made available through the Gutenberg project:

AVON	L.M.Montgomery, <i>Anne of Avonlea</i>
DUGL	Frederick Douglas, <i>Narrative of the Life of Frederick Douglas, an American Slave</i>
ROBI	Daniel Defoe, <i>Robinson Crusoe</i>
SCRLT	N.Hawthorne, <i>The Scarlet Letter</i>

Examples stemming from the Leuven drama corpus bear the label *DR-* followed by an abbreviation of the name of the author. The plays in question and the labels assigned to them are the following:

DR-BARN	Peter Barnes, <i>The Ruling Class: a Baroque Comedy</i>
DR-BAX	David Baxter, <i>Will Somebody Please Say Something?</i>
DR-BEN	Alan Bennett, <i>Getting on</i>
DR-BOW	John Bowen, <i>After the Rain</i>
DR-BREN	Howard Brenton, <i>Christie in Love</i>
DR-COOP	Giles Cooper, <i>Happy Family</i>
DR-DELL	Dell, <i>The Duel</i>
DR-HAMP	Christopher Hampton, <i>The Philanthropist: a Bourgeois Comedy</i>
DR-HOW	Donald Howard, <i>Three Months Gone</i>
DR-LAF	Kevin Laffan, <i>It's a Two-foot-six-inches-above-the-ground World</i>
DR-MAR	Frank Marcus, <i>Mrs Mouse are you within?</i>
DR-MAUG	Robin Maugham, <i>The Servant</i>
DR-MERC	David Mercer, <i>Belcher's Luck</i>
DR-MILN	Roger Milner, <i>How's the World Treating You?</i>
DR-NICH	Peter Nichols, <i>A Day in the Death of Joe Egg</i>
DR-NORM	Frank Norman, <i>Inside out</i>
DR-ONEI	Michael O'Neill and Jeremy Seabrook, <i>The Bosom of the Family</i>
DR-ORT	Joe Orton, <i>What the Butler Saw</i>
DR-OSB	John Osborne, <i>West of Suez</i>
DR-PIN	David Pinner, <i>Dickon</i>

DR-RAT	Terence Rattigan, <i>A Bequest to the Nation</i>
DR-ROSS	Kenneth Ross, <i>Mr Kilt and the Great I am</i>
DR-SEL	David Selbourne, <i>The Damned</i>
DR-SHAF	Peter Shaffer, <i>Black Comedy</i>
DR-SHAW	Robert Shaw, <i>Cato Street</i>
DR-SIMP	N.F.Simpson, <i>The Cresta Run</i>
DR-STOP	Tom Stoppard, <i>Jumpers</i>
DR-STOR	David Storey, <i>Home</i>
DR-TAYL	Cecil Taylor, <i>Bread and Butter</i>
DR-UST	Peter Ustinov, <i>The Unknown Soldier and his Wife: Two Acts of War Separated by a truce</i>
DR-WEL	Vivienne C.Welburn, <i>Johnny so Long</i>
DR-WESK	Arnold Wesker, <i>The Friends</i>
DR-WHIT	E.A.Whitehead, <i>The Foursome</i>

Examples from personal reading bear the following labels, followed by the page number:

ADIMV	Ruth Rendell, <i>A Demon in my View</i> , London: Arrow, 1977
BM	David Lodge, <i>The British Museum is Falling Down</i> , London: Penguin, 1983
CP	David Lodge, <i>Changing Places</i> , London: Penguin, 1975
DEW	P.D.James, <i>Death of an Expert Witness</i> , London: Penguin, 1989
DOJ	Colin Dexter, <i>The Dead of Jericho</i> , London: Pan, 1983
DS	Agatha Christie, 'Double sin', in A.Christie, <i>Surprise! Surprise!</i> , New York: Dell, 1975, pp. 9–23
DW	Agatha Christie, <i>Dumb Witness</i> , Glasgow: Fontana, 1958
ENDAF	Graham Greene, <i>The End of the Affair</i> , Harmondsworth: Penguin, 1971
FORG	Edgar Wallace, <i>The Forger</i> , London: Pan, 1960
GREEM	Kingsley Amis, <i>The Green Man</i> , St Albans: Panther, 1971
HOD	Agatha Christie, 'The red signal', in A.Christie, <i>The Hound of Death and Other Stories</i> , Glasgow: Fontana, 1964, pp. 23–42
LBW	Colin Dexter, <i>Last Bus to Woodstock</i> , London: Pan, 1977
LOD	Ruth Rendell, <i>Lake of Darkness</i> , London: Arrow, 1981
LSW	Colin Dexter, <i>Last Seen Wearing</i> , London: Pan, 1977
MMF	Georges Simenon, <i>Madame Maigret's Friend</i> , Harmondsworth: Penguin, 1967

NMDT	Ruth Rendell, <i>No More Dying Then</i> , London: Arrow, 1971
NW	David Lodge, <i>Nice Work</i> , London: Penguin, 1989
PAD	Agatha Christie, <i>4.50 from Paddington</i> , London: Fontana
PKD	Rhona Petrie, 'People keep dying round here', in Tony Wilmot (ed.), <i>The Gourmet Crook Book</i> , London: Everest, 1976, pp. 202–12
RTD	Colin Dexter, <i>The Riddle of the Third Mile</i> , London: Pan, 1983
SHF	Ruth Rendell, 'Shake hands forever', in <i>Third Wexford Omnibus</i> , London: Arrow, 1990, pp. 185–366
SOA	Colin Dexter, <i>The Secret of Annexe 3</i> , London: Pan, 1987
SW	David Lodge, <i>Small World</i> , London: Penguin, 1984
TOM	Daphne du Maurier, 'The old man', in Tony Wilmot (ed.), <i>The Gourmet Crook Book</i> , London: Everest, 1976, pp. 182–92
TPH	Agatha Christie, <i>The Pale Horse</i> , London: Fontana, 1974
TSM	Ruth Rendell, <i>Talking to Strange Men</i> , London: Arrow, 1987
TWID	Colin Dexter, <i>The Wench is Dead</i> , London: Pan, 1990
WTW	Colin Dexter, <i>The Way through the Woods</i> , London: Pan, 1993

A TYPOLOGY OF *WHEN*-CLAUSES

WCs can be used in many different ways. They may have several meanings or connotations and fulfil various syntactic functions. In this chapter I will review the various types of (finite) WC.¹ As I have already said, this typology is relevant to the use of the tenses, for different types may sometimes require different tense forms. To illustrate this point, I will draw attention to the use of tenses in the various types of WC when they depend on an HC (head clause) referring to the future. As is well known, adverbial WCs cannot normally use the future tense or the future perfect if the situation (i.e. action, event, state, etc.) referred to in the HC is represented as posterior to the moment of speech: they use the present tense and the present perfect instead. Similarly, adverbial WCs do not use forms with *would* or *would have* if they depend on an HC whose situation is represented as posterior to a past time of reference: they use the preterite and the past perfect instead. For example:

(1)

- (a) I will leave when they *{arrive/*will arrive}*.
- (b) I will leave when they *{have arrived/*will have arrived}*.
- (c) I promised I would leave when they *{arrived/*would arrive}*.
- (d) I promised I would leave when they *{had arrived/*would have arrived}*.

However, there are WCs that can easily use *will (have)* or *would (have)* if the same form already occurs in the HC. In the typology presented here illustrations will be given of this. For ease of reference I will (provisionally) refer to the latter system as the ‘*will/would* system’ (abbreviation: W-system), while the system illustrated by (1 a–d), in which *will* and *would* cannot be used, will be called the ‘NW-system’ (NW=no *will/would*). In the present chapter I will restrict myself to illustrating briefly the choice of system made in the different types of WC. A fuller discussion, with more illustrations, will be presented in Chapters 6, 10 and 11.

Before I start enumerating the various types of WC, two remarks are in order. First, I will use the term ‘situation’ as a cover-term for anything that can be expressed in a sentence (i.e. an action, state, process, event, etc.). The verb

‘actualize’ will be used as a cover-term for verbs like *perform*, *hold*, *take place*, *happen*, etc. which are typically associated with a specific type of situation. Second, when operating with the notions ‘W-system’ and ‘NW-system’, we must distinguish carefully between two different uses of the present tense with future time reference. Compare:

(2)

- (a) The show *will begin* in ten minutes.
- (b) The show *begins* in ten minutes.
- (c) These lights will go out when the show *{begins/*will begin}*.

While the form *will begin* clearly belongs to the W-system, the form *begins* belongs to the NW-system in (2 c), but not in (2 b). In the latter sentence the present tense is used to represent the future situation as determined by present circumstances (the so-called ‘arranged future’ use). In this sentence, *begins* could be replaced by *will begin*, whereas this is impossible in (2 c).

Now that the necessary preliminary remarks have been made, we can bring together the various types of WC into the following typology.

1

WHEN-CLAUSES USED AS DIRECT (INDEPENDENT) QUESTIONS

(3)

- (a) When did it happen?
- (b) When was the last time you saw her? (DR-SHAF)

Note that *when* is an interrogative adverb (meaning ‘at what time?’) in (3 a), but functions as a nominal (meaning ‘what time’) in (3 b).

When the reference is to the future, independent WCs like these invariably use the W-system: *When will it rain?*

2

WHEN-CLAUSES USED AS INDIRECT (DEPENDENT) QUESTIONS

(4)

- (a) I asked him when it had happened.

1 Nonfinite WCs will be disregarded because nonfinite clauses are by definition tenseless and therefore do not fall within the scope of this book.

- (b) I asked when had been the last time he had seen her.
- (c) The woman said she was unsure exactly when the bomb had exploded.

This type of WC also uses the W-system:

(5)

- (a) I will ask him when we'll be able to relax.
- (b) The spokesman promised he would soon reveal when the restructuring *would be completed*.

3

WHEN-CLAUSES USED AS RELATIVE CLAUSES MODIFYING A TEMPORAL NOUN PHRASE

These WCs can be further subclassified on the basis of two parameters: (a) the relative clause may be a restrictive relative clause (RRC) or a nonrestrictive relative clause (NRC); (b) the constituent 'antecedent+WC' may or may not constitute, or form part of, a time adverbial. On the basis of these two parameters we can distinguish between four types of relative WC modifying an overt temporal antecedent.

3.1

WCs used as NP-RRCs

These are WCs used as RRCs modifying a temporal NP which does not have an adverbial function. For example:

(6)

- (a) The time came when I had to change my mind.
- (b) Those were the days when everybody had flowers in their hair.

In examples like these, the unit 'antecedent+RRC' is used as an NP and not as an adverbial. However, *when* itself functions as a time adverbial in the RRC which it introduces: *the time when* means 'the time at which'. If the HC refers to the future, NP-RRCs may use either the W-system or the NW-system:

(7)

- (a) I suppose the day will inevitably come when the area *will be encrusted* with developments, but at present it is deserted and seductive. (BR)
- (b) Never had Mary thought the day would come when Dora May's silence *would be* unwelcome. (LOB)
- (c) There *would be* only a few more nights now when he *would* have to dine in Hall with that odious man. (RTD 26)

(8)

- (a) The day will come, in midsummer, when you *find* your plants becoming 'leggy', running to tall-growing foliage at the expense of blossoms. (BR)
- (b) There will come a time in a basement shelter when the radiation *has decayed* enough to allow use of the whole basement. (BR)

Note that the W-system is obligatory in the NP-RRC if the HC does not refer to the future:

(9)

- (a) And the women sighed for the day when their men *would be expelled* from the womb for the last time...(BM 45)
- (b) On the third panel were all the details, specifications and costs and—more to Charles's interest—the projected dates when work on the building *would commence* and when be finished. (TSM 253)

Notice, finally, that NP-RRCs may modify not only a temporal noun proper but also a noun such as *occasion*:

(10)

- (a) Then the Vicar pointed to the trees, young and old, that had been planted on the green, witnessing to other occasions when the village had been at one. (LOB)
- (b) The vast, dungeon kitchens may seem hardly worth using except on occasions when one is faced with a thousand unexpected guests for lunch. (BR)
- (c) A British estate agent, Mr Moliz Fleischmann, of St John's Wood, London, told the court trying Adolf Eichmann, today, of the occasion 23 years ago when he faced the Nazi leader across a desk in the Gestapo's Vienna headquarters. (LOB)

3.2

WCs used as NP-NRCs

I will use the term 'NP-NRC' to refer to a WC used as nonrestrictive relative clause modifying a temporal NP which does not have an adverbial function. For example:

(11)

- (a) The most awful day of the week is Monday, when I have to get up at 5 a.m. to catch the train.
- (b) The next time we will meet is next Sunday, when we will have more time than we did today.

In these examples *when* means ‘at which time’ and has an adverbial function in the NRC itself.

NP-NRCs use the W-system:

(12)

- (a) Later on I will give you instructions concerning next Tuesday, when I *will be* in Glasgow.
- (b) The Elections Committee will soon be looking forward to 1996, when there *will be* elections for Borough Councils throughout London.

The reason why NP-NRCs use the W-system is that, like NRCs generally, they are semantically independent and therefore have independent time reference.

3.3

WCs used as Adv-RRCs

I will use the term ‘Adv-RRC’ to refer to a WC used as restrictive relative clause modifying (the head of) a temporal adverbial. For example:

(13)

- (a) He left the week when I arrived.
- (b) He had said that to Colin in the days when he had had to open his heart to someone. (TSM 16)
- (c) That had happened on the day when two other unusual things had occurred. (BR)
- (d) I grew up in an age when there was a great deal of hypocrisy about women’s sexual misfortunes. (DR-MERC)

In examples like the following, the Adv-RRC specifies the occasion on which the situation referred to in the HC actualized:

(14) It is recorded also that in some outburst of domestic tension Ralph burned all his mother-in-law’s clothes in the middle of Manchester Square garden. Another time when an invitation to dinner with the Princess Polignac at her palace in Venice was not forthcoming, he jumped into a gondola. (LOB)

Adv-RRCs that specify a time can be further subclassified on the following basis. As we will see in Chapter 5, any time adverbial specifying the time of a situation establishes a (durative or punctual) interval which includes the time of the situation or coincides with it. In the case of an Adv-RRC, the temporal NP in the adverbial antecedent may indicate either the complete interval in question or just its beginning or end. This depends on the preposition used. With prepositions like *at*, *in*, *on*, *during* (e.g. *at the time when*, *on the day that*, *in the week when*, *during the days when*), or when there is no preposition, as in (13 a), the temporal noun indicates the interval directly. With prepositions like *after*,

before, since, until, the temporal noun indicates the beginning or end of the period in question.

Adv-RRCs may use either the W-system or the NW-system, though not always interchangeably (see section 1.1 of [Chapter 11](#)):

(15)

- (a) She expected he would do it on a day when she herself *{was/would be}* absent.
- (b) I will stay there until the time when the others *{leave/*will leave}*.
- (c) Inspect the site in the field during the time of the year when the area *will be* most heavily used for recreation. (BR)

3.4

WCs used as Adv-NRCs

These are WCs used as NRCs modifying the head of a temporal adverbial. As in the case of Adv-RRCs, the antecedent NP may indicate the time interval as a whole or just its beginning or end. For example:

(16)

- (a) He fixed the appointment at 7 p.m., when he would have plenty of time to discuss the matter.
- (b) Not until about three weeks before her disappearance had he spoken personally to Valerie again, when she told him that she was expecting a baby. (LSW 63–4)
- (c) This will be the worst quarter since the third quarter of 1987, when steel companies were just on their way up. (WSJ)

A special type of Adv-NRC is that in which *when* follows a preposition, and therefore has a nominal (rather than adverbial) function in the NRC:²

(17)

- (a) I went to bed at 10, before when I was reading for an hour. (*Longman Dictionary of Contemporary English*, 1978:1253)
- (b) They will come back next summer, by when the new house should be ready, (*ibid.*)
- (c) I arrived here an hour ago, since when I have been waiting in vain for someone to serve me.

² Not all combinations of a preposition and *when* are equally acceptable. While most of my informants readily accepted *since when*, only some were happy with *after when*, and most found *before when* unacceptable.

As appears from (16 a) and (18 a–c), Adv-NRCs use the W-system rather than the NW-system:

(18)

- (a) Buyers who aren't in a hurry will probably prefer to wait until spring, when Ford *will introduce* its new model.
- (b) The almanac will be making new friends and enemies on Oct. 27, when an updated version *will be released*. (WSJ)
- (c) Anyway, I will leave all further news till I reach my final destination some time this week, when I *will transmit* all. (SEU)

4

WHEN-CLAUSES AS NONRESTRICTIVE RELATIVE CLAUSES WITHOUT OVERT ANTECEDENT

When a WC is used as an NRC without there being an overt temporal antecedent, it links up with the time which the speaker implicitly refers to when describing the situation of the HC: the covert antecedent is the time of the situation in question.

(19) And it was hard to imagine a prettier teacher. Nothing gave him greater pleasure than to watch his improvements in her face, when she would genuinely sigh and toss her lovely head in sweet agony. (LOB)

In some of the examples the NRC 'pushes forward the action', i.e. functions as a so-called 'continuative relative clause':

Continuative clauses are a subdivision under non-restrictive [relative] clauses; they are always added after what might have been the end of a whole sentence, and instead of them we might just as well have had a separate sentence with *and* and a following personal pronoun.

(Jespersen 1928:105)

The following are typical examples of this kind of NRC:

(20)

- (a) I gave the book to Bill, who sold it to Betty, who read it and then gave it to me for my birthday.
- (b) He called her an idiot, whereupon she slapped his face and ran out of the room.

WCs that are NRCs without an overt antecedent can be used similarly:

(21)

- (a) She shook herself, opened her eyes and put up her hand as if to stifle a yawn, when she stood up, took her bag from the rack and turned towards the door. (LOB)
- (b) She wore slacks and a jumper, and went to bed by simply undoing one button, when the whole caboodle fell off on the floor. (LOB)
- (c) At 4.30 we three went to Lula's and wandered round the garden till Acheson turned up, when Clare and he wandered round together and Ma and I kept out of the way. (LOB)
- (d) At about seven o'clock she makes some excuse to go out, when she gives the key to Bowman himself, who's waiting somewhere near the annexe... (SOA 194)

Like NRCs generally, WCs used as NRCs without an overt antecedent use the W-system:

(22)

- (a) Perhaps glub itself will burn. Then we shall stack wet driftwood against the stove to dry, when it *will be burned* in its turn and dry other driftwood. (DR-BOW)
- (b) It may be opened with a lancet or a needle, when the fluid *will run out*. (*The Compact Edition of the Oxford English Dictionary*, 1971: 3752)
- (c) From here he may be appointed one of the 67 county court judges, when he *will become known* as Judge Smith, with a salary of £4,400 a year. (Edgren 1971:194)

In some cases the covert antecedent is implicit in a temporal conjunction. In the following sentence, *until* is equivalent to *until the time that*

(23) If you now CONFIRM, the system will search for the character exactly as it has been typed, starting at the current cursor position and working forward until it either finds a match, or searches the end of the document, when it *will stop*. (SEU)

5

WHEN-CLAUSES AS FREE RELATIVE NOUN CLAUSES

I will begin by briefly setting off free relatives from indirect questions, because it is important to distinguish carefully between these homophonous structures. Compare:

(24)

- (a) I know what he wrote in his diary.
- (b) I copied what he wrote in his diary.
- (c) I saw what he wrote in his diary.

The first sentence contains an indirect question: it can be paraphrased as ‘I know the answer to the question: What did he write in his diary?’ The second sentence cannot be so paraphrased, because the *what*-constituent is a free relative: *what* means ‘that which’. Sentence (24 c) is ambiguous between two interpretations: either of them can be brought to the fore by a suitable context:

(25)

- (a) I saw what he wrote in his diary, but I will not tell anybody, (indirect question)
- (b) I saw what he wrote in his diary, but I couldn’t read it. (free relative)

A useful test to distinguish between a question word and a homophonous free relative is that the former allows clefting of the clause it introduces, whereas the latter does not (unless it is a free relative in *-ever* or receives the same interpretation, i.e. the interpretation which Donnellan (1966) calls ‘attributive’):

(26)

- (a) I asked what (it was that) he had said to her.
- (b) I threw away what (*it was that) he had given me, viz. a book.

This test is also applicable to *when*:

(27)

- (a) I asked when it was that he had left.
- (b) These memories of when (*it was that) I was in India are gradually fading.

The test makes clear that *when* is a question word in (27 a), but a free relative in (27 b).

WCs in which *when* is a free relative can be used in various nominal functions.

5.1

Nominal WCs depending on a preposition

(28)

- (a) She has always been like this, from when she was a child.
- (b) He would look at the coded words and speculate and then gradually feel speculation being displaced by images of Jennifer and by memories of when they were together. (TSM 59)
- (c) She was reminded of when they had gone back to her room at the Frankfurt hotel and how he had sprung on her behind the door. (NW 342)

In examples like these, *when* means ‘the time when’. The WC as a whole has a nominal function (viz. object of the preposition) in the HC, while *when* functions as a time adverbial in the WC itself. If the HC refers to the future, the WC may use either the W-system or the NW-system, but not always interchangeably:

(29)

- (a) In the coming months I will no doubt often dream of when I {*will finally have finished*/*have finally finished*} my dissertation.
- (b) I will save my money for when I {*need/will need*} it.
- (c) I am waiting for when Johnny *comes back*. (DR-WEL)

If the HC does not express or imply future time reference, the WC uses the W-system:

- (30) He is dreaming of when he {*will be/is*} promoted.

5.2

Nominal WCs in specificational structures

‘Specificational sentence’ is the term used by, for example, Higgins (1976), Akmajian (1979), Declerck (1988a) and Keizer (1990) to denote the type of sentence in which a value is either specified or rejected for a presupposed variable. For example, the sentences *It was a book that was given to Bill*, *What was given to Bill was a book* and *A BOOK was given to Bill* all specify the value ‘a book’ for the variable ‘the *x* that was given to Bill’ (i.e. the variable in the open proposition ‘*x* was given to *y* [*y*=Bill]’). In all three sentences the value that is specified is focused, either structurally (through the use of a cleft or pseudo-cleft, which are constructions which are typically focusing and specificational) or internationally. Specificational sentences can typically be paraphrased with the help of the phrase *the following* and colon intonation: ‘The following was given to him: a book’.

A WC may function as a noun clause expressing either the variable or the value of a specificational sentence. In that case *when* is interpreted as ‘the time when rather than as ‘at the time when’ (as is the case when the WC is an adverbial clause). If the WC represents the value, the variable constituent is usually an NP with a temporal noun as head (e.g. *the time when...*). However, in some cases it is a nominal clause introduced by the free relative *what*. This is an indication that WCs are not exclusively used to specify times. (For example, it will be shown in section 8.1 below that WCs can also specify occasions or ‘cases’.)

In order to review the various possibilities, we will classify specificational structures on the basis of their syntactic form:

5.2.1

Basic pseudo-clefts

Basic pseudo-clefts are pseudo-clefts in which the *wh*-clause (representing the variable) precedes the copula.

(a) Nominal WCs may constitute the variable constituent of a basic pseudo-cleft:

(31) When he visited Emma was last week, not last night.

When the HC refers to the future, the WC may use either the *W*-system or the *NW*-system. The latter is the less marked:

(32) When he *{will do/does}* it will be tomorrow, not tonight.

(b) Nominal WCs may constitute the value constituent of a basic pseudo-cleft. As noted above, the free relative introducing the *wh*-clause (representing the variable) may then be either *when* or *what*

(33)

(a) (The time) when all this happened was when Bill was working in London.

(b) When I miss him most is when I am alone in my flat in the evening.

(c) What upset me most was when they threw a stone at my window.

These examples show that if the WC represents the value, the variable constituent may be (a) an NP with a temporal noun as head such as *the time when...*, (b) another WC, and (c) a nominal clause introduced by the free relative *what*.

The following sentence is similar, except for the fact that the variable and value constituents form a question-answer pair rather than being combined into a single copular sentence:

(34) Do you know what upset me more than anything else, Morris? When they started knocking down the houses in the Gorbals. (DR-TAYL) If the variable constituent of the basic pseudo-cleft is a clause in the future tense, both the HC and the WC functioning as the value constituent may use either the *W*-system or the *NW*-system. The *NW*-system is the less marked in the WC:

(35)

(a) What will upset her most is when they *{will throw/throw}* a stone at her window.

(b) What will upset her most will be when they *{throw/will throw}* a stone at her window.

5.2.2

Inverted pseudo-clefts

Inverted pseudo-clefts are pseudo-clefts in which the *wh*-clause (representing the variable) follows the copula.

(a) Nominal WCs may constitute the variable constituent of an inverted pseudo-cleft:

(36)

- (a) I do not know what she did last Sunday, because that was when I went to Scotland.
- (b) I don't get off work until eleven o'clock. That's when my evening commences. (BR)
- (c) The buying of futures contracts by exporters was heavy enough to push up corn prices despite the strong downward pressure that is exerted during the harvest, which is when many grain handlers sell futures contracts to hedge the corn they are buying from farmers. (WSJ)

In the following example, the WC functioning as value is right-dislocated:

(37) He's such a sensitive boy. That's when he wets the bed, when he's upset about something, and Mick doesn't help. (DR-LAF)

If the reference is to the future, both the HC and the WC may use either the W-system or the NW-system:

(38)

- (a) Next Tuesday. That *will be* when I {*will hand in/hand in*} my paper,
- (b) Next Tuesday. That *is* when I {*will hand in/hand in*} my paper.

(b) WCs may constitute the value constituent of an inverted pseudo-cleft. In the following example, the first WC has this function:

(39) Do you really miss him?—Sometimes, yes. When I am alone in my flat is when I miss him most. Reference to the future normally requires the NW-system in the WC:

(40) The best time to break the news to him will be when he {*is/*will be*} alone tonight.

5.2.3

Clefts

(a) A nominal WC may constitute the variable constituent of a cleft:

(41)

- (a) It was the end of the afternoon when he took the huge key out of his pocket and inserted it into the keyhole. (BR)
- (b) So a happy week passed, and it was a lunar noon, and the dark Earth was fringed with the 'Wedding ring effect', when eventually Sally Dreyfus took Harry to see the Lester Perons. (LOB)
- (c) A photocopy of the poem was waiting on his desk that day when Johnson returned from lunch.

It had been the following morning, however, when things had really started to happen. (WTW 42)

Clefts like these, in which the variable constituent is introduced by *when* rather than *that may* be referred to as '*when-clefts*'. It should be noted that in the above examples the two constituents (variable and value) are nominals. We therefore interpret (41 a) as 'The time when he took the huge key...was: the end of the afternoon'. This type of *when-cleft* should be distinguished from the type in which the value constituent is an adverbial:

(42)

- (a) It had been about a year ago when she had first become aware that her husband was showing unmistakable signs of becoming a semi-drunkard. (SOA 103)
- (b) It was late that night—a little after midnight—when Yves drove into the villa garage in his Lagonda. (Edgren 1971:174)
- (c) It is advisable to keep in reserve a small amount for advertising during March/April to catch those people who do not decide where or what they are going to do until later in the year, or possibly are wanting to see what the Budget is going to do for them. *It is at this time when the public are thinking of planning their forthcoming annual holiday.* (LOB)
- (d) Then, long after the Boat Inn is closed, the two men carry the body the hundred yards or so along to the one point where no boats are moored or can be moored: the bend in the canal by Aubrey's Bridge. The job's done. *It must have been in the early hours when the two of them get back to London, where the faithless Bert returns to his faithful Emily and...* (RTD 210)

Clefts such as these are exceptional because the copula in the HC links an adverbial prepositional phrase with a noun clause, which is a syntactic mismatch. If the adverbial functioning as value involves *at*, the clause representing the variable is usually introduced by *that*:

(43) It was at ten minutes past ten {that/?when} I got there, not earlier.

When-clefts like (41 a–b) should be distinguished from noncleft sentences like the following, to which they are structurally similar:

(44) It was ten o'clock when you asked me five minutes ago, so I suppose it's five past now. (DR-MAUG)

Some examples appear to be ambiguous between a noncleft and a cleft reading:

(45) It was ten minutes past ten when I got there.

The interpretations are paraphrasable as follows:

(46)

- (a) When I got there, it was ten minutes past ten.
- (b) The time when I got there was: ten minutes past ten.

If the reference is to the future, *when-clefts* use the W-system in the HC, whereas the WC may use either system:

(47)

- (a) It *will be* August, not July, when the work *{will be/is}* finished,
- (b) [?]*It *is* August, not July, when the work *will be* finished.

(b) Nominal WCs may constitute the value constituent of a cleft

(48)

- (a) It's when the plant is three months old that *{is/it's}* the best time to prune it.
- (b) It's when the prices are cheapest that *{is/it's}* the best time to buy.
- (c) By themselves, committees function reasonably well. It seems to be when committees join forces and become either the General Purposes Committee or a public meeting of the Town Council that feathers begin to fly. (LOB)

When the reference is to the future, the WC may use either system, but the NW-system is preferred:

(49) It's when he *{will be/is}* three years old that *{it will be/it'll be}* the best time to get him inoculated.

5.2.4

Noncleft copular specificational sentences

Nominal WCs can form part of a specificational copular sentence which is neither a cleft nor a pseudo-cleft. In that case it is automatically the value constituent. (Since *when* is a free relative, structures of the type 'WC as variable +*be*+value' are pseudo-clefts.)

In many examples the variable for which the WC is the value is expressed as an NP with a temporal noun as head:

(50)

- (a) My proudest moment was when I married you. (DR-MILN)
- (b) The last time I saw a similar congressional hearing was when 'Tail Gunner Joe' McCarthy did his work. (WSJ)
- (c) Today's warrior is tomorrow's cultivator and the time for wars is when the harvest has been got in. (LOB)

Sometimes the variable NP does not have a temporal NP as head but does refer to a particular time:

(51)

- (a) The first we knew of the weather's change was when Mr Ball knocked on our door and told us that a taxi had come to take them to the airport. (LOB)

- (b) His second surprise was when she did not attempt to accompany him. (FORG 177)
- (c) Their biggest achievement, however, is when they hear that the Americans are launching a satellite which will broadcast a tape recording of goodwill for seven years. (LOB)

In some cases, however, the variable NP does not refer to a specific time: (52)
The ultimate form of charity is when you don't tell anyone. (WSJ)

In this example, the WC is probably of the type that I will refer to as 'atemporal WC' in section 8 below.

A WC that is the value constituent of a noncleft copular specificational sentence normally uses the NW-system if the HC uses the W-system:

(53)

- (a) The best time to do it will be when mother *{is/*will be}* out.
- (b) No one of these five is known to the other four. Their first knowledge of one another's identity will be when they *meet* for the first time under the floorboards of a typical suburban house somewhere in greater London. (DR-SIMP)

5.3

Free relative WCs used as extraposed noun clauses?

There are cases in which the WC seems to have the function of a time adverbial as well as that of an extraposed noun clause. In each of the following examples, the (a) sentence appears to be a shorter version of the (b) sentence:³

(54)

- (a) I don't like it when you talk about money. (DR-TAYL)
- (b) When you talk about money, I don't like it that you talk about money.

(55)

- (a) They both thought it quite funny when they discovered 'chocolate' was the same in both languages. (LOB)
- (b) When they discovered 'chocolate' was the same in both languages, they both thought it quite funny that 'chocolate' was the same in both languages.

³ For a thorough discussion of a similar use of *wenn-clauses* in German, see Fabricius-Hansen (1980).

For reasons of redundancy, these (b) sentences are hardly acceptable, but they become fully acceptable if the repeated clause is replaced by a resumptive (anaphoric) pronoun:

(56)

- (a) When you talk about money, I don't like it.
- (b) When they discovered the word 'chocolate' was the same in both languages, they both thought it quite funny.

These sentences alternate with (54 a) and (55 a), where the WC follows the HC and *it* is an anticipatory (cataphoric) rather than resumptive pronoun.

The following are some further examples of sentences like (54 a) and (56 a), respectively:

(57)

- (a) It was a great relief when he left the country.
- (b) It's nice when people say that.
- (c) You know what it's like when you're talking about somebody that somebody else doesn't know. (DR-MAUG)
- (d) It is a very great help when people do co-operate in such a friendly spirit. (DR-SIMP)

(58)

- (a) When I see a young couple giving up their lives to a lost cause, it gives me the screaming habdabs. (DR-NICH)
- (b) When a company of that size and brainpower invests heavily into research, that always spells good news for the company. (WSJ)

In this connection we can also draw attention to examples like the following:

(59)

- (a) I hate it when you talk like that.
- (b) I hate you when you talk like that. (DR-MAUG)

The use of *you* rather than *it* in (59 b) seems to be motivated by the fact that both sentences ultimately receive an interpretation similar to that of *I hate your talking like that*.

Free relative WCs in examples like (57)–(58) have to use the NW-system when the reference is to the future:

(60)

- (a) It will be no surprise to us when they {*bungle*/**will bungle*} the job.

- (b) I think it'll be a good idea when you *'re packed off on* to confidential duties.
(DR-SIMP)

The fact that the NW-system must be used suggests that in spite of their interpretation as extraposed noun clauses, these WCs are basically adverbial clauses. This conclusion is in keeping with the paraphrases (54 b) and (55 b) and also accords with Bresnan and Grimshaw's (1978) observation that, unlike indirect questions, free relatives used as nominals cannot be extraposed:

(61)

- (a) What he wrote in his diary is known, (indirect question)
(b) It is known what he wrote in his diary.

(62)

- (a) What he wrote in his diary was read and copied by John the same day. (free relative)
(b) *It was read and copied what he wrote in his diary.

The conclusion that we do not really have extraposition of a noun clause in sentences like (54 a) also accords with the observation that similar examples can be found with *that* or *this* instead of *it*, and with the observation that the WC may also precede the *it*-clause, in which case we cannot possibly talk of extraposition:

(63)

- (a) That'll be a slap in the face for Bernstein, won't it? When I come walking in, waving my...(DR-TAYL)
(b) When stocks stabilized, that was a disappointment. (WSJ)
(c) ...and when a breakdown occurs this is televised in about 15 to 20 seconds. (Edgren 1971:195)

(64)

- (a) When they said good morning, it was a matter of recognition and not guess-work, (ibid.)
(b) When I have the window open it just makes a draught, (ibid.)

A further piece of evidence that we do not have true extraposition is that the putative underlying structure is ungrammatical:

(65)

- (a) What does it mean to you when she says that?
(b) *What does when she says that mean to you?

5.4

Free relative WCs used as subject or object clauses

There are cases in which the WC has the function of (nonextraposed) subject or object in a nonspecificational sentence:

(66)

- (a) When you did it yesterday—I think it was six o'clock—was better than this late hour. (Bolinger 1972:104)
- (b) You remember when you looked at those photographs of Sylvia, Lewis? (LBW 187)
- (c) If the company wants to play mind games, it's just going to delay when those airplanes get out. (WSJ)
- (d) That's better. I don't like when people argue, Louie. (LOB)

In (66 a–c), *when* is interpreted as 'the time when'. Syntactically, the WC functions as subject or object in the HC. Example (66 d) is similar to the above-mentioned cases in which the WC looks like an extraposed noun clause, only there is no *it*, so that it is the WC itself that fills the object position.

6

WHEN-CLAUSES USED AS ADVERBIAL TIME CLAUSES

In [Chapter 3](#) evidence will be presented that adverbial WCs are also free relative clauses, but then used in adverbial rather than nominal function. It will be shown that the so-called conjunction *when* is in fact a free relative adverb, i.e. a relative which contains its antecedent and fulfils an adverbial function in the clause it introduces. What distinguishes this use of the free relative *when* from the ones considered in section 5 is that the function of the relative in the relative clause now determines the function of the free relative clause as a whole, i.e. this type of free relative WC functions as an adverbial clause with respect to the HC. For that reason we can rightfully speak of an 'adverbial WC'.

Within the class of adverbial WCs we can distinguish a number of subclasses on the basis of their syntactic and/or semantic characteristics:

6.1

Canonical WCs

This class represents the prototypical class of WC functioning as time adverbial in the HC. Such a WC may specify either the time of the HC-situation, or a time to which the time of the HC-situation is related, or the occasion(s) on which the HC-situation actualizes. The following examples illustrate these three possibilities, respectively:

(67)

- (a) John will leave when I arrive.
- (b) When I arrive, John will already have left.
- (c) Mr Brian John Bedford, a service engineer, of 28, Grange Road, Bushey, Hertfordshire, said he was acting manager of the coffee bar. When he went to it one morning, the first thing he noticed was that the shelf on which chocolates and sweets were placed, was bare. (LOB)

The following are some further examples of canonical WCs defining occasions rather than times:

(68)

- (a) When a person has thoughtlessly or deliberately caused us pain or hardship it is not always easy to say, 'Just forget it.' (BR)
- (b) You see, sir, I don't expect you realise how seldom I can get out in the evenings. I'm at work from eight in the morning sometimes until eleven or twelve at night when you have guests. (DR-MAUG)

Like all other types of adverbial WCs, canonical WCs invariably use the NW-system. This will be clear from the italicized verb forms in the examples presented in the various subsections below.

Syntactically, canonical WCs can be used in various ways.

6.1.1

The WC may be the only time adverbial, as in the above examples (67)–(68).

6.1.2

The WC may be co-ordinated with another time adverbial:

(69)

- (a) I met him in 1976 and when I was in the army.
- (b) I met him when I lived in Eastbourne, when I moved to Oxford, and when I was in the army.
- (c) I will see him tomorrow and when he *comes* here himself next week.

6.1.3

The WC may be one of several juxtaposed time adverbials. Compare:

(70)

- (a) He left at five o'clock yesterday.

- (b) He left on Friday, in the afternoon, after lunch, at 3 p.m. (Hornstein 1990: 25)
- (c) He left yesterday when it was five o'clock.
- (d) He will do it tomorrow when the others *have left*.

In sentences like these, the time adverbials are not coreferential: they indicate different times (which are, however, related in that a shorter time is each time interpreted as included in a longer one, i.e. except for the shortest time interval, each interval acts as a 'frame' for a shorter one). For that reason we had better not speak of apposition (which as a rule requires coreferentiality) but rather of juxtaposition. The following are some further examples involving a juxtaposed canonical WC:

(71)

- (a) The phone stood on the top of the desk, a white phone, the same phone that had rung at lunchtime when Mrs Webb had called a man who then lay cold and dead beside the opened fridge. (LSW 116)
- (b) Mr Ty lost control to the government in 1980 when a government bank made emergency loans to the cash-strapped institution. (WSJ)
- (c) And where were all our handsomely paid Indian Ocean allies last year when our convoys were being attacked? (WSJ)
- (d) Another statistic will be added today when the government *reports* the August consumer-price index. (WSJ)

6.1.4

A canonical WC can be used in apposition to another time adverbial.

An adverbial WC is in apposition when it is juxtaposed to another indication of time with which it is (roughly) coreferential. The apposition may be restrictive or nonrestrictive.

- (a) Canonical WCs in nonrestrictive apposition to a time adverbial
- (72)

- (a) Later, when People neared bankruptcy, its chairman, Donald Burr, claimed American's pricing strategies contributed to People's demise. (WSJ)
- (b) It happened shortly before the track was officially opened, when a ballast train was chugging down the line. (LOB)
- (c) Mr Dines was relatively conservative then, when he thought gold would rise only as high as \$400 an ounce, but he's far more bullish now and thinks it could rise to a record level. (WSJ)

WCs of this type distinguish themselves from Adv-NRCs (i.e. nonrestrictive relative clauses modifying a temporal NP that forms part of a time adverbial, as

in (16)–(18) above) in that, like canonical WCs generally, they use the NW-system. Compare:

(73)

- (a) I will do it tonight, when it *is* dark.
- (b) I will do it tonight, when it *will be* dark.

In (73 a), the WC is in nonrestrictive apposition to *tonight*, which means that it functions as a time adverbial in the HC. In (73 b), by contrast, the WC is an Adv-NRC: this sentence is interpreted as ‘I will do it tonight, at which time it will be dark’. In this sentence the WC does not function as an adverbial adjunct in the HC but represents an independent speech act. (See also Hirtle 1981: 222.)

The following are some further examples of canonical WCs that are in nonrestrictive apposition and use the NW-system:

(74)

- (a) I feel that if somebody doesn’t get up and start talking about this now, the next time around, when we *have* the next iteration of these programs, it will still be true that everyone is scared to talk about it. (WSJ)
- (b) How curious England will be in fifty years’ time, when every fair-sized town *has* a university, doubtless interconnected by motorways, and everyone under twenty-five *is* a student, belonging to that Union. (LOB)
- (c) Tomorrow, or the day after, when life *is* really settled again, I shall go to various ‘experts and authorities’ e.g. the Nigerian Embassy, and find full details. (SEU)
- (d) I am inclined to believe you now. But tomorrow morning, when you *bring in* my morning coffee, I may think differently.
- (e) In the remote future, when space-travel *has become* as easy as train travel is now (...), Lunik I may be recovered. (Edgren 1971:106)

There are three further things worth noting. First, in narrative a WC is often added to an (*and*) *then*, the main function of which is to ‘push forward the action’ (see [Chapter 10](#) below):

(75)

- (a) He kept apologizing all the time, asking me to forgive him. Then, when I was leaving, he asked me to marry him. (DR-HAMP)
- (b) Let him do as he likes. And then, when he’s sweeping the roads, let him come crawling back to us with his tail between his legs and watch us slam the door in his face. (DR-ONEI)

Second, if the first time adverbial is indefinite and the WC is in final position, the WC may be interpreted as the value of a specificational reading, as if it were preceded by *viz.* (see section 5.2 above):

(76) And in any case the story takes place a bit earlier than that, when the guerrilla war in the highlands had not yet made internal travel a gamble with destiny. (WSJ)

Third, instead of the WC being in apposition to another time adverbial, it may be the other way round:

(77)

(a) Her parents died in an accident when she was young, in 1977.

(b) Canonical WCs in restrictive apposition to a time adverbial

(78)

(a) He could only nod his agreement. 'Yes, I think that would do very well', he managed after a moment when power of speech returned. (LOB)

(b) Bonds received a bigger boost later in the day when stock prices moved broadly lower. (WSJ)

Like canonical WCs generally, this type of WC uses the NW-system:

(79)

(a) OPEC supplies about half of the EC's oil needs, and many expect that the 13-nation oil cartel will play an even greater role in the late 1990s when non-OPEC production *declines*. (WSJ)

(b) In a day or two when I *have located things* like post offices and cities I will send on my diary. (SEU)

(c) An indication of Akzo's success in reshaping itself will come Thursday when it *reports* third-quarter results. (WSJ)

(d) And that should be much less of a problem next year when the comparisons *become* easier. (WSJ)

(c) Canonical WCs in apposition to a temporal NP inside a time adverbial? In some cases the WC seems to be in apposition to a temporal NP inside a time adverbial, rather than to the adverbial as a whole:

(80)

(a) Their game lasted till nearly ten o'clock when Señora Gonzalez commanded everybody inside for dinner. (LOB)

(b) Rob did not have a chance to be alone with Gaby until after three o'clock when most of the others had gone to their rooms to rest. (LOB)

However, it is difficult to say whether the WCs in these examples are canonical WCs in apposition or Adv-NRCs. The absence of a comma suggests that we can speak of restrictive apposition, but punctuation is not a reliable criterion, for many people omit putting a comma before an NRC. More dependable as a

criterion is the choice of system when the HC refers to the future. Whereas Adv-NRCs use the W-system, canonical WCs always use the NW-system. Compare:

(81)

- (a) They will continue begging for money until someone {*chases*/**will chase*} them.
- (b) They will continue begging for money until the day when someone {*chases*/**will chase*} them.
- (c) They will continue begging for money until tomorrow, when someone {*will chase*/**chases*} them.
- (d) They will continue begging for money until tomorrow when someone *chases* them.

Sentences (81 a–b) show that the NW-system is the rule in an adverbial time clause and in an Adv-RRC. It is clear from (81 c) that the W-system is used in an Adv-NRC. Sentence (81 d), with the NW-system in the WC, would be an example in which a canonical WC was in restrictive apposition to an NP inside a time adverbial. The unacceptability of this sentence on the intended reading (viz. that in which *chases* is an NW-system-form, not an instance of a present tense expressing ‘arranged future’) suggests that canonical WCs cannot really be used this way.

(d) Canonical WCs in apposition to a frequency adverbial

Since frequency adverbials imply times (e.g. *sometimes* is more or less equivalent to *at times*), they can be followed by a WC in apposition:

(82) The weather had changed and outside the window strong winds swayed the heavily leafed chestnut tree in the dark summer evening, sometimes showing the wet concrete of the house next door, *sometimes when* the whole top was driven sideways by a violent gust showing the grey clouds moving fast above. (LOB)

6.2

Adverbial WCs in specificational sentences

The adverbial WC may be one of the constituents of a specificational construction. The latter may be a cleft, pseudo-cleft or noncleft sentence, or a special type of specificational structure which Declerck and Seki (1990) call a ‘premodified reduced *it*-cleft’. Like canonical WCs, these WCs cannot use the W-system. This will be clear from the italicized NW-system forms in some of the examples below.

6.2.1

Clefts

An adverbial WC may be the value constituent of a cleft:

(83)

- (a) It was when she became really cruel that I stopped adoring her. (DR-STOP)
- (b) It's only when that attitude *changes* that things will turn around. (WSJ)
- (c) We realized that it was especially when there *were* guests in the house that we would have to be on our guard.

6.2.2

Pseudo-clefts

It is possible for a time adverbial to be the value constituent of a pseudo-cleft whose *wh*-clause is introduced by *the time when* or, less usually, *when*:

(84)

- (a) The time when he left was just before 5 p.m.
- (b) ?When he left was just before 5 p.m.

Similar examples can be found with a WC as focus (value):

(85)

- (a) (The time) when he left was, I think, when the others left.
- (b) (The time) when he will search your room will probably be when you {*have left*/**will have left*} for the museum.

The impossibility of using the W-system confirms that the postcopular WC is an adverbial WC rather than a nominal one.

6.2.3

Noncleft specificational sentences

Examples like the following are specificational sentences, with an adverbial WC functioning as value constituent:

(86)

- (a) When was the last meeting?—The last meeting was when we had just left for our holidays.
- (b) The next meeting will be when we *have* just *left* for our holidays.
- (c) Under the proposal, a President would have a chance twice each year to return a package of 'rescissions' to the Hill—once when he proposes his budget and again after Congress disposes. (WSJ)

6.2.4

Premodified reduced it-clefts and similar structures

'Premodified reduced it-cleft' is the term used by Declerck and Seki (1990) to refer to a cleft whose *that*-clause is deleted because it would only repeat what is already expressed in a premodifying subclause, usually introduced by *if* or *when*:
(87)

- (a) If he didn't arrive on time, it was because his train was late.
- (b) He stood quite still. When he spoke it was with an eloquent, far-from-Old-World, 'Wow!' (LOB)
- (c) I guess I was a bit tired, too. When I moved, it was a bit too late. (LOB)
- (d) When they {arrive/*will arrive}, it will certainly not be in a hurry.

There are similar examples (with a WC as premodifying clause) in which the specificational HC is not reduced because it is a noncleft:
(88)

- (a) When Alistair says you are a student, are you an eternal student like, say, Trefimov? (DR-OSB)
- (b) But Fairfax, perhaps because of its unpleasant early associations for him, avoided Bath. When his ailing wife and daughter Elizabeth went there in 1740, they went alone. (LOB)
- (c) No, its you that I want. Well, when I say 'want' I mean 'love' of course. (DR-COOP)
- (d) When we say, then, that today, in our situation, the demand for demythologization must be accepted without condition, we are simply saying that at least this much of the liberal tradition is an enduring achievement. (BR)

Another type of alternative is that in which the WC does not precede the HC (i.e. is not a 'premodifying' clause) but comes at the end:

(89) Wednesday, as usual, had been a fairly busy evening, and it was with some relief when, at 10.25 p.m., she politely, but firmly, called for last drinks. (LBW 11)

This kind of sentence structurally resembles a *when*-cleft, but it is not one because the value assigned to the variable is not a temporal value: it is neither a temporal NP nor a temporal adverbial. The interpretation of (89) is identical with that of the corresponding premodified reduced *it*-cleft (90):

(90)...and when, at 10.25 p.m., she politely, but firmly, called for last drinks, it was with some relief [that she did so].

The following are also structurally similar, but differ from *when*-clefts as well as premodified reduced *it*-clefts in that they do not have a specificational meaning:

(91)

- (a) It was like a pebble thrown into a quiet, still pool when Daniel Elliot met the doctor's daughters! (LOB)
- (b) Perhaps it had only been a slip of the tongue when Nigel had said, only last evening, 'If we get married, old girl, you'll have to stop that lark, I can tell you!' (LOB)

6.3

Adverbial WCs modifying a nontemporal NP

WCs may depend on a nontemporal NP if the referent of the latter is interpreted in relation to a specific time (or specific times). We can distinguish between the following possibilities. (Note that in all of them, reference to the future requires the NW-system in the WC if the HC expresses or implies reference to the future—see the italicized tense forms in the example sentences.)

(a) The modified NP may be a nominalization. Such an NP names a situation which is linked up with a specific time, which is specified by the WC.

(92)

- (a) I told him about her adoption when she was a child. (LOB)
- (b) He could imagine everyone's surprise when Nelly began to change. (LOB)
- (c) She remembers the dry, hot painfulness of her eyes when she first lost her sight. (LOB)
- (d) A heart attack when she was barely 20 put an end to the 10-hour daily practicing. (BR)
- (e) The road's engineers look for further improvement when the turnpike *is extended* into Boston. (BR)
- (f) Trade union officials (...) are among the local personalities who have urged support for the London to Holy Loch Polaris protest marchers when they *arrive* here after completing their 14-mile stint from Daventry tomorrow. (LOB)

In the following example, the NP implies a future time of actualization, which is specified by the WC:

(93) Here is a word of advice when you *go* shopping for your pansy seeds. (BR)

(b) The modified NP may be another kind of NP (i.e. not a nominalization) referring to a specific situation:

(94)

- (a) Bernard felt sure they would all be reminded of that incident when a disgruntled undergraduate had pissed all over Felix's carpet two years ago. (LBW 75)

- (b) He is lame because of an accident when he was fourteen.
- (c) Researchers couldn't estimate the cost of the drug when it *reaches* the market. (WSJ)
- (d) A historical example of non-co-operation can be seen by comparing the scene when Tosca places the candles by the dead Scarpia in the original vocal score and in the usual vocal score. (LOB)

(c) The modified NP may name a specific period (even though its head is not a temporal noun):

(95)

- (a) Since the Industrial Revolution, when factories emerged, this classical pattern has been followed. (BR)
- (b) She remembered the war, when he had his hand on the door of his home when the bomb fell, taking with it all he held dear. (LOB)
- (c) The reticent users were asked simply, as described above, to state the methods they had ever used and the stage in family building when they started these practices. (LOB)
- (d) My next tournament, when I'm *playing* the champion, will surely be one I'll never forget.

(d) The modified NP may imply (rather than name) a time:

(96)

- (a) He looked down at her delicately fingered left hand, and saw across the bottom of the index finger the faint white line of an old scar—like the scar that was mentioned in the medical report on Valerie Taylor, when she had cut herself with a carving knife—in Kidlington, when she was a pupil at the Roger Bacon School. (LSW 207)
- (b) He began at once to tell her of his plans for the flat when she *came* to live with them. (LOD 106)

In the latter example, the noun *plans* implies reference to a future time of execution, which is specified by the WC (which involves a NW-system-form).

In (96 a), *the scar that was mentioned...* implies a time when the scar was made, and it is to this time that the WC (*when she had cut herself...*) refers.

(e) The WC may seem to depend on a nontemporal NP because the NP is all that remains of the HC after ellipsis of the verb (usually *be*) and, in some cases, the subject. In the following examples the deleted material is added within square brackets:

(97)

- (a) A visitor of the creeper epoch recalls [there being] a rat in her bedroom while she was undressing, [there being] a rat inside the mattress when she

got into bed, and [there being] unmistakeable signs that a rat had been before her when she got down to breakfast next morning. (LOB)

- (b) I've always imagined they must be softer than ours. Like the skins of young ladies [were] when I was a girl. (DR-SHAF)
- (c) Nobody witnessed the fall—just the sickening impact [that there was] when his body smashed on the pavement just outside the basement delivery entrance. (BR)
- (d) The [one who was the] duty-officer when John was on deck will be at the disciplinary hearing tomorrow. (Larson 1983:14)
- (e) Among [the people who were] the clergy at Warwick Street when Mrs Bellamy knew it was the Reverend John Darcy, who was there from 1748 to 1758. (LOB)
- (f) The [person functioning as] duty-officer when you {are/*will be} on deck tomorrow will tell you what you have to do.

When the WC is placed immediately after a noun preceded by a possessive determiner or genitive, it may sometimes be interpreted as specifying the time of the 'have'-relation expressed by the possessive or genitive. Thus, (98 a) is interpreted as (98 b):

(98)

- (a) She recounts her feelings last month, when she was asked to speak to students at Smith College. (WSJ)
- (b) She recounts the feelings she had last month, when...

Similarly:

(99)

- (a) His hair, when he was a child, had been white-blond but had now faded to the neutral greyish beige of cardboard. (LOD 8)
- (b) One of GE's goals when it bought 80% of Kidder in 1986 was to take advantage of 'synergies' between Kidder and General Electric Capital Corp. (WSJ)

6.4

Adverbial WCs depending on a preposition

Adverbial WCs cannot normally depend on a preposition. However, examples like the following form an exception to this rule:

(100)

- (a) (*daughter speaking to father some time after the disappearance of her brother in Spain*) Why did you go back to Spain? Why didn't you stay here

- in England, with me?—I had to go back. You see, I had to be there for when he *came* back. (BBC drama)
- (b) All these fires are lit to warm the house for when you *get* there. (DR-HOW)
- (c) The committee is formulating Hong Kong's constitution for when it *reverts* to Chinese control in 1997. (WSJ)
- (d) Martin left early, having taken from the bathroom cabinet one of the sleeping pills his mother had for when she went on holiday. (LOD 179)
- (e) It gives them some cash in the back pocket for when they want to do something. (WSJ)

As is clear from the use of the NW-system-forms in (100 a–c), this WC is no free relative WC used in nominal function (the type discussed in section 5.1) but an adverbial WC. This use of *for when* is similar to that of *for if* (as in *They took their umbrellas for if it should rain*), which according to Wood (1967:33) 'is sometimes heard in spoken English, but...is not regarded as correct. The accepted idiom is *in case*.'

The WC would also appear to be an adverbial WC depending on a preposition in examples like the following:

(101)

- (a) I suppose I judge as many shows as most people but I must confess that so far this year—apart from *when I have judged at Ch shows*—I have not come across more than a dozen Bull Terriers. (LOB)
- (b) It was the only thing I remember him saying the whole time I was there. Except for *when he said you* must have gone to the pub the previous evening. (Edgren 1971:195)
- (c) He was here from *when the party started* until about midnight.

Note that apart from *from*, canonical WCs cannot depend on temporal prepositions (e.g. *after, before, until*, etc.).⁴

6.5 Focalizing WCs

Focalizing WCs differ from canonical WCs in that they do not specify the time of the HC-situation or a time to which the time of the HC-situation is related. Instead they express the speaker's focus on a time of evaluation or observation.

(a) The WC may indicate the time when the speaker observes the situation expressed in the HC:

(102)

- (a) When the smoke cleared, six people were dead (three from heart attacks), and everyone wondered what in the world they were shooting at. (WSJ)

- (b) We also had a little Mission Hall leading off the Brighton Road, in a street full of small houses. This was called Ellen Avenue when I first went there, but was soon changed into the better-sounding name of Lansdowne Road. (LOB)
- (c) His eyes appeared enormous when one looked back at him, like watery amoeba in a microscope. (LOB)
- (d) (*stage direction*) Darkness. When the stage is lighted we are in the Cato Street Loft. (DR-SHAW)

Some of these focalizing WCs suggest the idea of a travelling observing consciousness:⁵

(103)

- (a) Nobody should have to live in such poor conditions as in 'Sugar Ditch', but *when you travel to Washington*, Boston, Chicago or New York, the same problems exist. (WSJ)
- (b) As to Saxon times, *when you leave the Thames*, there is scanty evidence. (Edgren 1971:83)
- (c) As you open the door, you are in a small five-by-five room which is a small closet. *When you get past there*, you're in what we call the foyer... (Linde and Labov 1975:929)

Like other adverbial WCs, focalizing WCs cannot use the W-system:

(104) When the smoke {*clears/*will clear*}, dozens of soldiers will be dead.

- (i) The character of the countryside alters too, as the high, walled wolds become more wooded and broken. (Edgren 1971:228)

(b) In some cases the focalizing WC indicates what may be called the 'epistemic time of evaluation', i.e. the time when the speaker reaches the conclusion that the statement made in the HC is true:

(105)

- (a) 'Not a bad fellow, Strange, is he?' suggested Lewis, after a slightly awkward little pause.
'Not when you get to know him, I suppose', admitted Morse. (TWID 15)

4 The same rule applies in Dutch, with one exception: in adverbial time clauses, *tot wanneer* ('until when') is a possible alternative to *totdat* ('until').

5 The following is a similar example in which the time clause is introduced by *as*:

- (b) He hadn't touched her. And when he came to examine the scene, there was a certain staginess to it, it had the smell of planning, and a swift suspicion darted into his mind. (BR)
- (c) When you look at the economics, Traub needs a Japanese and a European partner to make it work. (WSJ)
- (d) When you consider that the Cananea mine in Mexico is still out and there still are other mine production problems around the world, there remains a strong bullish element in this market. (WSJ)
- (e) White people, it seemed, when one looked into it, did much the same things as Africans, though in a less reasonable fashion. (LOB)
- (f) Beryl's life recently—the whole thing—was very strange when you think of it. (LOB)
- (g) Already her mind was racing. When you came to think of it, what was there to stop her turning up to claim the money? (LOB)
- (h) The Liberal achievement is all the more remarkable when one remembers the disadvantages under which the Liberal candidates worked. (LOB)
- (i) Henry Moore's stylisation is entirely consistent when one recognises that... (LOB)
- (j) When one considers the impositions, I'm not surprised you failed. (DR-ROSS)
- (k) Fantastic as the theory is, it becomes more so when we learn that it was acceptable to Diluvialists in England and abroad for many years. (LOB)
- (l) Communist techniques, when their background is studied, remain police methods. (LOB)

One of the peculiarities of WCs like these is that they may refer to the present. As we will see in [Chapter 5](#), canonical WCs cannot normally do so. However, like canonical WCs, this type of WC uses the NW-system if the HC refers to the future:

(106) The theory will become even more fantastic when you (**will*) learn that...

(c) WCs such as the following also indicate a time of evaluation, but then of a slightly different kind:

(107)

- (a) Each legislator, after all, is only one out of 535 when it comes to national policy making. (WSJ)
- (b) Economists, bankers and businessmen expect an increasing number of these manufacturers, and supporting businesses, to expand. That seems especially true when it comes to what people eat and drink. (WSJ)
- (c) Jim's a most reliable chap when it comes to picking up a small tip. (LOB)
- (d) The girls only a kid when all's said and done and from up-country too. (LOB)

In some of the examples *when it comes to* is more or less equivalent to *as regards*.

The same is true of *when we come to* in the following example:

(108) But it is when we come to the second distinction, that made among the sheep or within the pale, that my system would differ most sharply from the established one. (LOB)

The kind of WC illustrated by (107)–(108) differs from the canonical type in that it does not specify a particular time, but resembles it in that it cannot use the W-system:

(109) Jim will prove a most reliable chap when it {comes/*will come} to picking up a small tip.

6.6 Explicatory WCs

In some cases the primary function of the adverbial WC is not to specify a time but to explain what is said in the HC. (This is not to say that the WC does not specify a time at all. Only, this is no longer the primary reason for its use.) We can distinguish between the following possibilities. (Note, however, that this list is not necessarily exhaustive, and that it is not always possible to draw a clear line between the possibilities.)

(a) Sometimes the HC offers an interpretation or evaluation of a situation, and the WC gives explanatory information about the situation in question:

(110)

- (a) The limits to legal absurdity stretched another notch this week when the Supreme Court refused to hear an appeal from a case that says corporate defendants must pay damages even after proving that they could not possibly have caused the harm. (WSJ)
- (b) In the same sentence he contradicts himself when he reports that the government still retains 40% of the total equity of the airline. (WSJ)
- (c) Mr Angell is incorrect when he states that the Soviet Union's large gold reserves would give it 'great power to establish credibility'. (WSJ)
- (d) In my view, Justice Louis Brandeis was a 'true friend of freedom' when he wrote, 'Experience should teach us to be most on our guard to protect liberty when the government's purposes are beneficial.' (WSJ)
- (e) When you suggest otherwise, you leave the realm of reporting and enter the orbit of speculation. (WSJ)

Because it does not refer to one specific occasion but has a gnomic meaning, the last example is equivalent to 'To suggest otherwise is to leave the realm of reporting and enter the orbit of speculation.'

(b) The WC may provide details about a situation that is briefly referred to in the HC:

(111)

- (a) A fast disappearing scar on her left leg, and a slightly discoloured eye—well-camouflaged by make-up—were the only visible reminders of the accident, which occurred when a car in which she was travelling overturned at Hyde Park Corner. (LOB)
- (b) Just last week it suffered another major setback when British Airways PLC, the largest equity investor in the labor-management bid, withdrew its support. (WSJ)
- (c) She began to walk at the age of twelve months when she un-expectedly slipped down from her mother's lap after she had been lifted out of the morning tub, and ran to catch patterns of sunlight dancing on the bathroom floor. (LOB)

This kind of WC may also depend on an NP naming a situation:

(112)

- (a) But no doubt Lady Diplock recalls an accident in 1957 when her husband's horse fell and he was badly thrown. (LOB)
- (b) ...the climax is 'The lanimers', when an enormous fancy-dress parade of children goes through the town to the Wallace Monument. (Edgren 1971: 196)
- (c) In some cases the WC makes clear how or by what means the HC-situation is performed. In these sentences, *when* is more or less equivalent to *by* (+gerund):

(113)

- (a) Then Neil Mochan tingled Jim Brown's fingers. Again the goalie saved the Albion bacon when he fisted over a whizzer from Dennis Gillespie. (LOB)
- (b) The Twins tied the score in the sixth inning when Reno Bertoia beat out a high chopper to third base and scored on Lenny Green's double to left. (BR)
- (c) Mr Dorfman provides confirming evidence of this phenomenon when he reports that...(WSJ)
- (d) Britain helped American companies in April when it lowered its tax on imported spirits and levied a tax on many domestic products. (WSJ)
- (e) Fujisankei took the plunge into the music business last week when it bought a stake in Virgin Music Group. (WSJ)

(d) In some cases the WC makes clear that the actualization of the HC-situation results from the actualization of the WC-situation:

(114)

- (a) Once highly profitable, the Arizona utility gained notoriety over the summer when its chairman resigned under pressure after selling most of his shares.
- (b) I was glad when he asked me to be his wife. (LOB)
- (c) Octobers troubles began when the trust failed to sell a state-owned commercial bank, Associated Bank, for the minimum price of 671 million pesos (\$31 million). (WSJ)
- (d) Computer maker Hewlett-Packard Co., based in Palo Alto, says one of its buildings sustained severe damage when it was knocked off its foundation. (WSJ)

Explicatory WCs of any subtype are like canonical WCs in that they cannot use the W-system if the HC refers to the future:

(115)

- (a) Mr Morris will be mistaken when he *{claims I*will claim}* that...
- (b) The building will sustain severe damage when it *is knocked* off its foundations.

6.7

Adverbial WCs with a nontemporal adverbial connotation

Temporal WCs may have other adverbial connotations, such as the following.

- (a) Concessive or contrastive connotation

In examples like the following, the WC not only denotes a time but also has a concessive or contrastive connotation:

(116)

- (a) Why is he to be whipped?—He failed to kill an enemy when he had a golden opportunity. (DR-UST)
- (b) As a matter of fact it wasn't a theft at all. I put down two tins of marmalade when I should have put two tins of jam. (DR-MILN)
- (c) Let's all—think—what we might be doing—'stead of sitting here when the rest have all gone home. (DR-NICH)
- (d) I saw you drifting away—but I tried. And you wanted no part of me when I had so much to give. (BR)
- (e) Is there a man who could stand aside when this fair creature is in trouble? (DR-STOP)

- (b) Connotation of reason

In examples like the following the WC explains why the speaker makes the HC statement:

(117)

- (a) And so did the arms of Dai Pugh. How could they be otherwise, when his beloved was circling the Poles at three-and-a-quarter-hour intervals, regular as clockwork? (LOB)
- (b) We live in a topsy-turvy world when good simple people like Alice Barker are pushed into the headlines. (Edgren 1971:229)

In this case *when* is more or less equivalent to *seeing that*.

- (c) Causal connotation

In the following examples, the WC expresses why the HC-situation actualized at the time it did:

(118)

- (a) He did it when the warder was not paying any attention to him.
- (b) He was very upset when the police came to arrest his son.
- (c) Everybody laughed when John was trying to climb a palm tree. (Heinämäki 1978:23)

WCs with a causal implicature differ from canonical WCs in that they cannot be turned into main clauses without a drastic change of meaning. Compare:

(119)

- (a) He left when it was five o'clock,
- (b) It was five o'clock when he left.

(120)

- (a) The riots stopped when the police intervened,
- (b) The police intervened when the riots stopped.

There is no real difference of meaning between (119 a) and (119 b), in which the WC is each time of the canonical type. By contrast, (120 a), in which the WC has a causal implicature, differs significantly in interpretation from (120 b).

- (d) Connotation of manner or means

(121) Lea remembered that Mort Paladrey had put an end to that, when he'd interrupted one cheerfully scandalous anecdote with a terse, 'That's libel.' (LOB)

- (e) Conditional connotation

(122)

- (a) You know I'm compliance itself—when I'm not thwarted. (Poutsma 1929: 669)
- (b) There's never a dull moment in a mealtime when you use Heinz Pickles. (Edgren 1971:226)

Whichever nontemporal connotation they have, adverbial WCs do not use the W-system:

(123)

- (a) Next time I will be careful not to promise to take her with me when I (**will*) *have* only one ticket.
- (b) They will have to surrender when they (**will*) *have run out* of ammunition.

7

NARRATIVE *WHEN*-CLAUSES

So-called ‘narrative *when*-clauses’ do not have the semantic function of specifying the time of the HC-situation or a time to which the time of the HC-situation is related: they do not answer the question ‘When?’ Instead, they are semantically like HCs: they ‘push forward the action’ (i.e. *when* is equivalent to ‘and then’). For this reason they should not be treated as adverbial WCs, but rather as a special type of WC that has many characteristics in common with HCs. The following are some typical examples:

(124)

- (a) I was sitting quietly in the kitchen when suddenly a stranger entered the room. (=and then it suddenly happened that...)
- (b) She had just dried the last plate and was setting clean coffee cups on a tray, when a dark-haired, spectacled young man put his head through the kitchen window. (LOB)
- (c) Closing the garage doors behind her, she was about to turn when she felt the cold muzzle of a gun against her back. (LOB)
- (d) I had hardly obtained a pair of spectacles when I ceased to need them, my eyes suddenly getting a second wind. (LOB)

As we will see in [Chapter 10](#), narrative WCs differ from other adverbial WCs in quite a number of respects. One of them is that they use the W-system rather than the NW-system when the reference is to the future:

(125)

- (a) He predicted that one day we would be sitting quietly in our sitting-room when suddenly there *{would be/*was}* an explosion.
- (b) The warders will hardly have turned their backs when the prisoners *{will already have started/*have already started}* fighting.
- (c) I am afraid that the following will happen. We will be sitting quietly in the drawing-room when suddenly Bill *will come in* and *will tell* us that...

It should be noted that in the last example the WC could also use present tense forms. However, these would not be interpreted as NW-system-forms but rather as instances of the ‘historic present’ used for dramatic effect.⁶

8

ATEMPORAL *WHEN*-CLAUSES

In some cases the WC does not function as a time adverbial at all. The meaning it expresses is purely atemporal. We can distinguish between the following possibilities.

8.1

Case-specifying WCs

8.1.1

WCs as RRCs modifying the noun case

Obviously, WCs are case-specifying rather than temporal if they are relative clauses modifying an NP with the noun *case* as head:

(126)

- (a) This is what usually happens in cases when the divorced woman has no income of her own.
- (b) I remember that was one of the worst cases when our legal system proved deficient.
- (c) The extension of equation (9) to the case when the effective mass is tensorial may be expected to follow in the same way as equation (8) is an extension of equation (7)...(LOB)

8.1.2

WCs not depending on an overt antecedent and defining the case(s) in which the HC statement is true

In some cases *when* is purely atemporal and can be paraphrased in one of the following ways.

- (a) *When* meaning ‘in a case when’ or ‘in cases when’

(127)

- (a) You can’t ask one carrier to underwrite on social grounds when that might destroy it in the marketplace. (WSJ)

6 As pointed out in Declerck (1991a:73), historic present forms can be used not only in contexts referring to the past but also in contexts referring to the future.

- (b) When—as usually happens—the husband dies first, the widow often stays on her own. (LOB)
- (c) Who wants to read or listen to what some old writer has pumped out of his diseased heart when he can read a balanced and reasoned judgement about life, love and literature from an aloof and informed commentator? (DR-OSB)
- (b) *When* meaning ‘in that case when’ or ‘in those cases when’
(with cataphoric *that/those*)

(128)

- (a) Many modern scriptwriters seem to be incapable of writing drama, or anything else, without foul-mouthed cursing. Sex and violence are routinely included even when they are irrelevant to the script. (WSJ)
- (b) Entries are summarized only when by doing so the amount of information retained in the dictionary is reduced and the time required for dictionary operations is decreased. (BR)
- (c) Most of the Protestant churches hold contraception and periodic continence to be morally right when the motives are right. (BR)
- (d) There are many stone circles—we call them standing stones even when they are recumbent. (Edgren 1971:228)
- (e) You have much more flexibility when you’re a private company. (WSJ)

In examples like these, *when* is generally interchangeable with *if*. In the following example the speaker uses them without any apparent difference of meaning:

(129) If the market surges, holders can make that much more profit; the leverage effectively acts as an interest-free margin account for investors. But when the market moves against the fund, investors lose more than other junk holders because the market decline is magnified by the amount the fund is leveraged. (WSJ)

If there are coreferential NPs in HC and WC, the case-specifying WC may sometimes be very similar to a RRC (restrictive relative clause).⁷ Compare:

(130)

- (a) Children are orphans when they have no parents,
- (b) Children that have no parents are orphans.

The following are some further examples of atemporal WCs that could be replaced by RRCs:

(131)

- (a) When a person meets Gods requirements for the experience of forgiveness he is forgiven. (BR)
- (b) A man is little use when his wife is a widow. (Scottish proverb)

- (c) When a novel is given over entirely to the Romantic experience it ceases to be a novel. (LOB)
- (d) Biography becomes trivial when its sole object is to introduce us, like prying tourists, into the intimacy of the great. (LOB)
- (e) When pornography is produced by writers or artists of talent it is usually dubbed 'erotica'. (LOB)
- (f) He had an almost vicious contempt for military 'bumpkins' when they could not understand that large political objects may often best be accomplished by employing a small military force. (LOB)

Another use of case-specifying WCs is to be observed in sentences like the following:

(132)

- (a) The only problem is when people do not want to co-operate.
- (b) In Britain, the former rule was that the socially superior person should be the first to extend a hand—and as few people of gentle instincts like, nowadays, to claim social superiority, the usage is less often followed. Exceptions are when a much younger person is introduced to an older one, or where the distinction of rank is obvious; then the senior person, if she wishes, will extend a hand. (LOB)

In these examples the case-specifying WC fills the postcopular position of a specificational sentence and denotes the value constituent of the specificational relation.

Whichever subtype they belong to, case-specifying WCs resemble canonical WCs in that they use the NW-system when the HC refers to the future:

(133) In the near future people will be arrested when they (**will*) *fail* to observe this rule.

However, unlike adverbial WCs, case-specifying WCs may sometimes have independent time reference. This makes it possible for a case-specifying WC depending on an HC in the present tense to establish future time reference by means of the W-system:

(134) There are far worse sins than to commit acts of violence—i.e. brutality—either when the cause is too trivial to justify it or when the almost-certain result of the violence *will be* to harm rather than to advance a major cause. (Wekker 1976:143)

7 Farkas and Sugioka (1983) and Declerck (1988b) use the label 'restrictive *when*-clause' for this type of WC. However, since WCs may also be NP-RRCs or Adv-RRCs, and since the *when* of adverbial WCs is a free relative, preference will be given here to Carlson's (1979) term 'atemporal *when*-clause'.

In this example, *when...will* means ‘when it is the case that...will...’. The WC thus refers to a present case with future actualization.

8.1.3

Atemporal WCs expressing a closed condition

In some cases *when* refers to something that is the case at the moment of speaking (or at the relevant time of reference) and therefore expresses a kind of closed (fulfilled) condition. We can distinguish between two cases.

(a) *When* meaning ‘in this case, in which’

The WC here refers to a single situation which is holding at the time of speech or at a particular time of reference. It usually has the connotation of reason or cause:

(135)

- (a) What the hell do I care for the dead knowledge of evil when I’m blessed with a sister as sweet as this? (DR-WESK)
- (b) Very considerate of you. Especially when we’re sending one of our best men on a fool’s errand. (DR-SIMP)
- (c) I thought it time to be no longer scrupulous, that it was in vain to have any reserve when I had said so much. (LOB)
- (d) Mollie, there’s no sense in stalling when we both know our own minds. (LOB)
- (e) The doctors know what they’re doing, dear. By giving him one more, it could upset his whole balance—especially when he shouldn’t have had them in the first place. (DR-PIN)
- (f) ‘It was a mistake going to that hotel’, she said. ‘Boarding houses were more in our line. But Mr Scott was doing so well and it wasn’t for me to argue when he said he was as good as the next man and why not a hotel *when* we could afford it?’ (NMDT 148)

Because the WC expresses a closed condition and has the connotation of reason or cause, *when* is roughly equivalent to *given the fact that* or *seeing that*. If the condition which is represented as fulfilled at the time of speech concerns the future actualization of the WC-situation, the WC uses the W-system:

(136)

- (a) Why shouldn’t I tell him the truth when he *will hear* it from Tom anyhow?
- (b) We shouldn’t be proud of ourselves when we’re *going to leave* him in the lurch.

Since *when...will* is interpreted as ‘seeing that it is the case that...will...’, the WC combines an element of present time reference with the idea of future actualization (as it also does in (134)).

(b) *When* meaning ‘in a case like this, in which’

In the following examples, the relevant case (holding at the time of speech) is just one of the cases in which the HC statement is true. That is, the speaker makes a generalization on the basis of one instance of a situation that holds at the time of speech:

(137)

- (a) I was going to give a final demonstration this afternoon. But how can I demonstrate a machine when it doesn’t work properly? (DR-MILN)
- (b) In a media-linked world, scientists may earn wide praise and even Nobels for their work, but they also attract the attention of people who wish to gain control over the content, funding and goals of that work. When a David Baltimore—or the next target—decides it is better to stand up to these forces, his fellow scientists would do well to recognize what is fundamentally at stake, and offer their public support. (WSJ)
- (c) Indeed this is one of the reasons I don’t go to the theatre: it’s hard to believe in Pastor Manders when you knew him first as a somewhat below average window cleaner. (DR-BEN)

As is clear from (137 c), this kind of WC locates its situation in time independently of the HC. It is therefore predictable that it is the W-system that is used to refer to future actualization(s) of the WC-situation:

(138) Of course I haven’t prepared a meal for you. You told me you wouldn’t come today. You can’t expect me to prepare a meal when you *won’t come*.

Since *when...will* is interpreted as ‘whenever it is the case, as it is now, that ... will...’, the WC again combines an element of present time reference with the idea of future actualization.

8.1.4

WCs giving instances

A variant of case-specifying WCs are WCs giving instances. Such WCs may be purely atemporal, but they are obviously not if the reference is to a real-world instance (which is automatically linked up with a specific time).

(a) Like the word *case*, the noun *instance* may be the antecedent of a RRC introduced by *when*:

(139) Ford Holdings’ offering of preferred, which is being arranged by Goldman, Sachs & Co. and Shearson Lehman Hutton Inc., is unusual because it is one of the rare instances when so-called money market preferred has been sold with voting rights, which are required to achieve beneficial tax treatment in this case. (WSJ)

(b) There are relative WCs not depending on an overt antecedent which also specify one or more instances:

(140)

- (a) It's like when you have five kids and someone asks which one is your favorite. (WSJ)
- (b) A few attorneys offer horror stories of jobs botched by consultants or of overpriced services—as when one lawyer paid a consultant (not at Litigation Sciences) \$70,000 to interview a jury after a big trial and later read more informative interviews with the same jurors in *The American Lawyer* magazine. (WSJ)
- (c) But conventional as Ms. Anderson has become, she still can make the inspired, ironic, off-beat observation now and then, as when she offers her off-center interpretation of the 'Star-Spangled Banner'. (WSJ)

8.2

Adversative WCs

These are atemporal WCs that establish a contrast and/or have a concessive meaning.

(a) There are WCs that are basically case-specifying, but have an adversative connotation:

(141)

- (a) How is a travel agent going to sell a holiday when he cannot guarantee a return flight? (WSJ)
- (b) How can you know about the needs of people's bodies when you think all flesh is evil? (DR-LAF)
- (c) How does one know what it is one believes when it's so difficult to know what it is one knows? (DR-STOP)
- (d) Sometimes he has a very unfortunate manner. People think he's being hostile when he's not really. (DR-ONEI)

(b) There are WCs that are purely adversative (contrastive and/or concessive):

(142)

- (a) Why do you maintain the House-passed capital-gains plan is a 'temporary' reduction when it is not? (WSJ)
- (b) It was silly to feel indignant about being a suspect, Tarrant reminded himself, when the truth was that he might have killed Haines. (LOB)
- (c) Why do you remember now what I said then, when I can't remember myself? (DR-BARN)
- (d) The reports, for example, put total sales at less than \$1 million when they actually exceeded \$29 million. (WSJ)
- (e) Why did these yokels still wear boots, anyway, when most had scarcely sat a horse in years? (BR)

- (f) The question that bothered me was why she should have taken her own life, if she did take it deliberately, when she had so much to look forward to. (LOB)

When the reference is to the future, adversative WCs use the W-system:

(143)

- (a) I won't waste my time trying to raise £100,000 for the Charity Fund when such a large sum of money *will* no doubt never *be found*.
- (b) The report will put the cost at less than £150,000, when it *will* actually *exceed* £250,000.
- (c) The Committee to Preserve Social Security, which led the fight against the catastrophic-illness surtax, irritated many in Congress with what legislators said were distorted claims that many seniors would have to pay the maximum \$800 surtax this year, when in fact, only about 5% *would pay* the top amount. (WSJ)
- (d) He said he would not choose a respectable hotel as the scene for a killing when it *would be* so much safer to take his victim for a one-way ride on a lonely country road.

It should be noted, finally, that atemporal WCs can appear in some of the specificational constructions in which adverbial (temporal) ones can occur. Thus, an atemporal WC may be the value constituent of a cleft or other type of specificational sentence:

(144)

- (a) It's when they have no parents that children are orphans.
- (b) The only case in which a widow gets so high a pension is when she has more than three children.

An atemporal WC may be the variable constituent of a pseudo-cleft. In this case *when* is equivalent to 'the case(s) in which':

(145) Widows sometimes get a higher pension. When they do is when they have more than three children.

An atemporal WC may also be the premodifying clause of a premodified reduced *it*-cleft (see section 6.2.4 above):

(146) When people have no children, it is very often because they cannot have any.

9 CONCLUSION

In this chapter I have presented a typology of dependent WCs which distinguishes between the following types of WC: (a) WCs used as direct questions; (b) WCs used as indirect questions; (c) WCs used as relative clauses

modifying a temporal NP: NP-RRCs, NP-NRCs, Adv-RRCs, Adv-NRCs; (d) WCs as NRCs without an overt antecedent; (e) WCs that are free relatives used as noun clauses; (f) adverbial WCs: canonical WCs, adverbial WCs in specificational sentences, adverbial WCs modifying a nontemporal NP, adverbial WCs depending on a preposition, focalizing WCs, explicatory WCs, adverbial WCs with a nontemporal adverbial connotation; (g) narrative WCs; (h) atemporal WCs: case-specifying WCs, adversative WCs.

For some of these classes a further distinction has been made between various uses. It has also been shown that when the HC refers to the future, some types of WC require either the W-system or the NW-system, whereas others allow both: (a) the NW-system is strictly the rule in WCs used as the value constituent of a noncleft copular specificational sentence, in all types of adverbial WC and in case-specifying WCs; (b) the W-system must be used in WCs used as indirect questions, NP-NRCs, Adv-NRCs, NRCs without an overt antecedent, WCs used as the variable NP or value NP of a basic pseudo-cleft, narrative WCs and adversative WCs; (c) either system may be found (but not always interchangeably) in NP-RRCs, Adv-RRCs, nominal WCs depending on preposition, WCs used as the variable NP or value NP of an inverted pseudo-cleft or cleft.

It is the main aim of this book to examine the temporal structure of *when* and the use of the tenses in the various kinds of WC that have been identified. It will be shown that what unifies the class of WCs and distinguishes them from other types of subordinate clauses (such as *that*-clauses) is that the time of the WC-situation is not related directly to the time of the HC-situation or to the time of speech. The times of the two situations are related to each other indirectly through being included in a common interval defined by *when*.

THE ‘TEMPORAL CONJUNCTION’ *WHEN*

1

INTRODUCTION

Most temporal conjunctions used in Modern English have a prepositional origin: they have developed from constructions of the type ‘preposition+ cataphoric demonstrative+relative clause’. For example, *after* was not yet used on its own as a conjunction in Old English: instead a prepositional phrase of the form ‘after then that’ (realized as *after tham that/the* or something similar) was used—see Visser (1970:868), Mitchell (1987:346ff.). Similarly, the conjunction *before* has developed from a phrase of the form ‘before the time that’ or ‘before then that’ (variously realized in Old English as *toforan tham timan the, foran to tham timan the* and *toforan tham the*—see Mitchell 1987:379). And various other temporal conjunctions have a similar prepositional origin.

A notable exception to the above evolution is the conjunction *when*, which has not developed from a structure of the type ‘preposition+demonstrative/NP+relative clause’. *When* is originally a question word, which at the end of the Old English period came to be used as a relative. As a relative it could be used either with a temporal noun as antecedent or as a free (headless) relative. In the latter use it corresponded exactly to the present-day conjunction *when*. As a matter of fact, there is ample evidence that the conjunction *when* should actually be treated as a free relative. Since this question is directly relevant to the use of the tenses in canonical WCs, I will devote the present chapter to going into this.¹

The widespread view that *when* is a conjunction (at least in canonical WCs)² is obviously based on the observation that canonical WCs are adverbial clauses. However, the claim that *when* is a free relative is not irreconcilable with this observation. As is well known, a free relative has a function both in the relative clause which it introduces and in the HC. For example, in *I don’t believe what he told me* the free relative *what* is direct object in the relative clause, while the *what*-clause as a whole functions as direct object in the HC. For this reason *what* is interpreted as *that which*, in this paraphrase *which* functions as object in the relative clause, whereas the NP as a whole (*that*+relative clause) functions as

object in the HC. The interpretation of *when* is quite similar, the only difference being that the double function of *when* is adverbial rather than nominal: *when*=‘then when’, i.e. ‘at the time at which’ (see also Leech 1969:112). In *He came when I left* the free relative *when* functions as time adverb in the relative clause, while the WC as a whole functions as time adverbial in the HC: *when* means ‘at the time at which’. The impression that *when* is a conjunction follows from the fact that the clause which it introduces has an adverbial function: as a rule, adverbial clauses are introduced by conjunctions. However, it should be clear that the view that *when* is a free relative is not incompatible with the observation that the WC has an adverbial function. (Similar remarks could be made for *where*.)

In the remainder of this chapter I will point out a number of characteristics which adverbial WCs share with RRCs (restrictive relative clauses). I will also have a closer look at the diachronic origin of *when*, to show more clearly that adverbial WCs have been free relatives all along the history of the English language.

2

SYNCHRONIC EVIDENCE

2.1

Other uses of *when* as relative

Analysing *when* as a free relative adverb in canonical WCs is in keeping with the observation that *when* can be used as a relative adverb in various types of relative clause, such as Adv-RRCs, Adv-NRCs, NP-RRCs, NP-NRCs, and free relative WCs in nominal function. As a matter of fact, its very form—it is a *wh*-word—shows that it belongs to the class of words that are used as relatives and question words. (This, incidentally, is also true of its Dutch, French, German, etc. counterparts.)

1 The view that the ‘conjunction’ *when* is actually a free relative is not uncommon in the literature: it is voiced, for example, by Jespersen (1932:24), Kruisinga (1932:196), Pasicki (1972: 97, 1987), Bell (1974:134), Bresnan and Grimshaw (1978:345), Ritchie (1979:92–3, 1980: 209), Grimshaw (1985:37) and Enç (1987:655). (Janssen (1988:104; 1989:312) makes the same assumption for Dutch *toen/wanneer*.) However, none of these actually adduces evidence supporting this analysis.

2 One recent example of a discussion of WCs in which *when* is treated as a conjunction is to be found in Hamann (1989).

2.2

Alternative form in *-ever*

As noted by Bresnan and Grimshaw (1978), it is typical of free relatives that they have an alternative form in *-ever*. *When* shares this characteristic: it alternates with *whenever* in the same way as *what* alternates with *whatever*, etc. Moreover, *whenever* yields the two interpretations which are typical of free relatives in *-ever*, viz. a universal interpretation (i.e. all the members of the relevant set are included in the reference) and the reading which Donnellan (1966) has called 'attributive definite' (see also section 2.6 below):

(1)

- (a) I will drive to the station whoever wants to go there,
- (b) I will leave whenever you want me to.

Sentence (1 a) can be interpreted either as 'I will drive to the station anybody (=everybody) who wants to go there' or as 'I will drive to the station the person who wants to go there, whoever he or she may be'. In the same way (1 b) can be interpreted either as 'I will leave any (=every) time you want me to' or as 'I will leave at the time that you want me to, whenever that may be' (see also Heinämäki 1978:28). The latter (attributive) interpretation is invited if the WC is clefted:

(2)

- (a) Have you spoken to the man who wrote this?—I don't want to speak to John Smith, or whoever it was (who wrote this),
- (b) Do you know, I was asking the brigadier the other day why this house was called 'Mesopotamia'? Apparently, his father was there in 1917 or whenever it was. (DR-OSB)

2.3

Matching

One of the typical characteristics of free relatives is that 'the syntactic category of the *wh-word* or *wh-phrase* is the same as that of the whole free relative clause, i.e. as that of the dominating node' (Grimshaw 1985:6):

(3)

- (a) I'll buy [_{NP} [_{NP} what(ever)] you want to sell].
- (b) I'll put my books [_{AdvP} [_{AdvP} wherever] you put yours].
- (c) John will be [_{AdjP} [_{AdjP} however tall] his father was].

Adverbial WCs share this characteristic: *when* is a relative adverb which has an adverbial function in the WC, whereas the WC as a whole functions as an adverbial with respect to the HC:

- (4) I'll leave [_{AdvP} [_{AdvP} when] you leave].

2.4

No coreferential element in relative clause

As is well known, a relative pronoun or adverb cannot be coreferential with an overt NP, pronoun or adverb in the relative clause: because the free relative itself fulfils a syntactic function in the relative clause, no other element can fulfil the same function.

(5)

- (a) The girl who I saw (*her) was tall.
- (b) What I gave John (*that) was a present.
- (c) That was the time when John was away (*then).

If one assumes Chomsky's *wh*-movement analysis, this means that the trace that is left behind when the *wh*-element is moved must not be lexicalized. If one assumes that the *wh*-element is generated in COMP position and binds (fills) a gap in the relative clause (see e.g. Larson 1983), it means that the gap must remain empty. Whichever analysis is advocated, there can be no doubt about the data. The interesting thing now is that the constraint in question is also operative in adverbial WCs:

(6) It happened when John was away (*then). Sentences like this are ungrammatical, unless *then* refers to a time which is not the time of the HC-situation but a (contextually established) larger time including that:

(7) There was a party last week. The accident happened when mother was away then.

In this example *then* can only refer to the time of the party, not the time when the accident took place.

2.5

Wh-movement

As is well known, a relative pronoun may have a syntactic function in a clause that is embedded into the clause which it introduces. In *This is the book which he says he read last week*, the relative pronoun *which* functions as direct object of *read*, not of *says*. Free relatives also allow this possibility: in *This is what he says he read last week*, the free relative *what* functions as object of *read*. It would therefore support our hypothesis if we could observe the same phenomenon in WCs.

As could be expected, WCs that are relative clauses depending on an overt antecedent satisfy the requirement:

(8)

- (a) That was the day when John said Bill believed Mary hit Gordon.
- (b) Dear Mrs H, I shall be most grateful if you can save yesterday's Times for me.... Your reward, which you must accept, will be a drink on me at the bar before dinner, when I promise to adhere religiously to every one of the management's ordinances. (WTW 23)
- (c) And exports could be even more critical in 1990, when domestic sales are expected to be sluggish. (WSJ)
- (d) Another 250 Libyans were already in Italy to stage a day of mourn-ing for victims of Italy's colonial rule between 1911 and 1943, when Tripoli says Rome kidnapped 5,000 Libyans and deported them as forced labor. (WSJ)
- (e) But Mr Kissinger will be in China in November, when he plans to hold private meetings with Chinese officials. (WSJ)

In the first example, (*the day*) *when* may refer either to the time of John's saying or to the time of Bill's believing or to the time of Mary's hitting Gordon.

What is more important for our purpose, however, is that adverbial WCs also allow the same range of interpretations. As noted by Rudanko (1981:53) and Stump (1985:130), a sentence like

(9) Jack did not keep silent when Bill told him to keep silent. is ambiguous between two readings. On the one reading the time of Jack's not keeping silent is the time when Bill gave him the order to keep silent; on the other it is the time stipulated by Bill in the order that he gave Jack. It will be clear that these two readings follow from the fact that *when* may function as time adverbial either in the first subclause or in the infinitive clause that is embedded into that. The two possibilities can be informally represented as follows:

(10)

- (a) Jack_i did not keep silent when_j [Bill told PRO_i THEN_j [PRO_i keep silent]]
- (b) Jack_i did not keep silent when_j [Bill told PRO_i [PRO_i keep silent THEN_j]]

In some contexts one of the two interpretations may come to the fore:

(11)

- (a) Jack did not keep silent when Bill had expected him to keep silent,
- (b) Jack did not answer me when I told him to come tomorrow.

In (11 a) the use of the anteriority form *had expected* renders it difficult to associate *when* with the time when Bill had the expectation: *when* is naturally interpreted as referring to the time when Jack should have been silent. In (11 b) *when* cannot be taken to refer to the time of Jack's coming, because *tomorrow* locates that time in the future, whereas the HC-situation (*did not answer*) is located in the past: since *when* must indicate identity of times, it is not possible for a WC referring to the future to specify the time of an HC-situation located in the past.

The following is another example in which *when* functions as a time adverbial in a subclause of the clause that it introduces:

- (12) I was there when he had said he would join me, but he did not turn up.

2.6

Donnellan's (1966) readings of definite descriptions

A free relative introduced by *what* can be used as a definite NP in either of the two interpretations that are typical of definite NPs, viz. the readings which Donnellan (1966) has called 'referential' and 'attributive'. A definite NP (e.g. *the man who is drinking a martini*) is used referentially if the speaker selects it (from a number of possible referential descriptions) in order to refer to a particular individual, assuming that the hearer will know which referent fits the description (i.e. assuming that the mere mention of the description will enable the hearer to pick out the referent from a given set). The description is used attributively if the speaker is familiar with the description (and assumes the hearer is familiar with it too) but does not know which particular individual it applies to. Since the distinction applies to definite descriptions generally, it also applies to free relatives that receive a definite interpretation, like the NP *what he gave Mary* in the following example:

- (13) What John gave Mary must have been very expensive.

Depending on whether or not the speaker knows what it is that John gave Mary, the free relative is used referentially or attributively.

The hypothesis that is being argued here, according to which *when* is a free relative paraphrasable as 'at the time when', predicts that *when* should be similarly ambiguous. This expectation appears to be borne out; witness examples like the following:

- (14) John left when Bill arrived.

The WC may be used either referentially (in which case it is assumed to be a description which suffices to identify the time in question, i.e. the hearer is supposed to know when it was that Bill arrived) or attributively (i.e. the hearer is not assumed to know when it was that Bill arrived). This is in keeping with our claim that the WC is a free relative which is interpreted as 'at the time that': the reference to the time in question may be referential or attributive.

2.7

Indefinite interpretation of *when*

Apart from the above interpretations, free relatives introduced by *what* may sometimes yield an interpretation which would seem to be indefinite rather than definite. In the following examples, the (a) sentences are more or less interchangeable with the (b) sentences:

- (15)

- (a) She's always asking me for what I can't give her!
- (b) She's always asking me for things that I can't give her!

(16)

- (a) All these years he's made me do what I didn't want to do.
- (b) All these years he's made me do things that I didn't want to do.

In these examples the indefinite aspect of meaning results from the fact that the reference is to an indefinite number of occasions. In (15 a–b) there are an indefinite number of occasions, each of which can be described in terms of the sentence *She's asking me for something I can't give her*. Since the thing in question may be different on each occasion, (15 a–b) imply the existence of an indefinite number of entities bearing the label 'something I can't give her'. The NPs referring to this set (viz. *things that I can't give her* and *what I can't give her*) are semantically indefinite, because the hearer is not assumed to be familiar with the set as a whole, nor with the individuals in it. That is, the things in question are not assumed by the speaker to be identifiable to the hearer in either of Donnellan's senses. This conclusion is rather surprising in the case of the free relative construction *what I can't give her*, since *what* is generally taken to mean 'that which', and *that* is an inherently definite lexical item. Still, it is a fact that *what* (as well as *that which*) can be used in examples like (15)–(16). What makes their use possible is the sense of indefinite repetition. With reference to a single occasion, *what* and *that which* could only be interpreted as semantically definite.

What is interesting now is that adverbial WCs can also be used with the same kind of indefinite interpretation:

(17)

- (a) She's always inviting me to come when I am not free!
- (b) All these years he's made me do things for him when I didn't really have any time to lose!
- (c) He sometimes disturbs me when I am working.

In cases like these, *when* can be paraphrased as 'at a time when' or 'at times when'. In this respect too, *when* is similar to a free relative like *what*.

2.8

Use of tenses

The hypothesis that the 'conjunction' *when* is a relative will be corroborated by the analysis of the tense system of canonical WCs that will be presented in [Chapter 6](#) below. It will be shown there that that system is exactly the same as that used in Adv-RRCs introduced by *at the time that*.

3

DIACHRONIC EVIDENCE

The view that *when* is a free relative derives support from diachronic evidence. Since the evidence is particularly interesting, I will review it in some detail. In doing so, I will rely on two works that offer an in-depth study of the origin of adverbial WCs, viz. Yamakawa (1969) and Pasicki (1987).

Modern English *when* has developed from Old English *hwonne* (*hwænne*), which, however, was not used as a conjunction the way *when* is used now. *Hwonne* was used as an interrogative adverb meaning 'at what time?'. In fact, Old English originally did not have a conjunction corresponding to Modern English *when*. The reason is that early Old English did not really have adverbial time clauses, but used paratactic structures instead. One such paratactic structure involved the use of *ponne*, which was a demonstrative adverb meaning 'then', 'at that time'. When this adverb was placed at the beginning of a sentence, it fulfilled a double function: on the one hand it denoted the time of actualization of the situation described in the clause which it introduced; on the other it indicated the temporal relation between this situation and the one expressed in the second clause. That is, the meaning of *ponne* was something like 'then when'. For example:

(18) Eornustlice ðonne ðu ðine ælmessan sylle, ne blawe man byman beforan ðe.

(=Therefore, when you give your alms, do not blow a trumpet before you.)

(example from the *Anglo-Saxon Gospels*, cited in Yamakawa 1969:8)

Apart from *ponne*, Old English also used *þa*. This adverb, which also had a demonstrative origin, also meant 'then', 'at that time', but had a more definite meaning than *ponne*:

ponne as conjunction, generally corresponding to German *wenn*, is used when the time of an action or occurrence is indefinite and general or it is to be habitually repeated, and is usually found either with a predicate verb in the present tense meaning a generic or future time-sphere or with a predicate verb in the past tense that implies a habitual or repeated state or action. On the other hand, *þa* as a conjunction, generally corresponding to German *als*, is used when the narrator is going to describe a definite action or occurrence confined to a particular point of time, and is most commonly found with a predicate verb in the past tense.

(Yamakawa 1969:11)

Both *ponne* and *þa* were often repeated in the second clause, thus yielding correlative constructions of the type *ponne...ponne...* or *þa...þa...*:

(19) *þa* he *þær* to gefaren wæs, *þa* eodon hie to hiora scipum. (=When he had arrived there, they retired to their ships.) (example from the *Parker Chronicle*, cited in Yamakawa 1969:12)

As noted by Yamakawa (1969:41), 'in such sequences (...) parataxis in structure naturally passed on to hypotaxis, thus conditioning the demonstratives to turn into subordinate conjunctions'. The fact that this evolution took place is also clear from the fact that *þonne* and *þa* are occasionally followed by the connective particle (complementizer) *þe* (comparable to Modern English *that*):

(20) Et monn þa þe he in are wes ne onget he efenmeten wes neatum unwisum.

(=And when a man was in honour but did not understand, he was compared to an ignorant animal.)

(example from the *Vespasian Psalter*, cited in Yamakawa 1969:14)

Another construction revealing the tendency of *þonne* and *þa* to be used as conjunctions was that in which *þonne* or *þa* was repeated twice:

(21) þa wæs Zosimus ryna hwæðra stic-mælum near gefremed.) þa þa he swa neah wæs þæt heo mihte his stemne gehyran. þa ongan he forð sendan þyllice stemne mid hluddre clypunga wepene and þus cwæð. (=...) When he was so near that she could hear his voice, then he began to emit such a noise lamenting in a loud voice, and thus spoke.)

(example from Ælfric's *Lives of Saints*, cited in Pasicki 1987:98)

(22) ða ða Dunecan, Melcolmes cynges sunu, ðis eall gehyrde ðus gefaren, se on ðæs cynges hyrede Willemes wæs. (=When Duncan, King Malcolm's son, heard all that had taken place—he was in King William's court since.) (example from the *Peterborough Chronicle*, dated 1093, from Clark 1958:45)

According to Pasicki (1987:98), 'it is arguable that the first of the two neighbouring *þa*'s (paraphrasable as "then") belongs to the main clause and that it is only the second one that has connective function.' In other words, *þa þa* is equivalent to 'then when'.

In their conjunction-like use, *þonne* and *þa* occasionally alternated with *hwonne* (= 'when'), but instances of this are extremely infrequent in the texts that have been preserved from the Old English period. This is not to say that *hwonne* was never used as a conjunction at all. The first use as a connective which it developed was after verbs of knowing, doubting, etc., where *hwonne* was used as an interrogative introducing a dependent question. *Hwonne* then also came to be used as a kind of conjunction introducing a complement clause depending on verbs expressing such notions as desire, anxiety, waiting or expectation. As noted by Yamakawa (1969:17), this represented 'a transitional stage where *hwonne* was turning from an indefinite adverb which introduced a noun clause into a subordinate conjunction which introduced an adverb clause'. At the same time, *hwonne* also began to be used as a relative adverb introducing restrictive relative clauses depending on temporal nouns:

(23) siteð æt symble, sæles bideð, hwonne ær heo cræft hyre cyðan mote werum on wonge.

(=She sits at the feast, waiting for the occasion when she can soon display her art to the people in the plain.)

(example from the *Exeter Book*, cited by Yamakawa 1969:18)

In the Middle English period there was a gradual decline in the use of 'the conjunctive or relative use of *þanne* [*þenne*, *then*] (<OE *þonne*) and *þo* [*tho*] (<OE *þa*)' (Yamakawa 1969:20), though instances of it were found till the first half of the fifteenth century. The decline of these forms was the result of the fact that 'in the course of the Middle English period the semantic domains that were properly assignable to *þanne* and *þo* came to be confused, and...*þanne*, and consequently *þo*, came to be replaced by *hwanne* [*hwenne*, *whan*, *when*] (<OE *hwonne*)' (ibid., p. 21). This evolution was a very gradual one. In early Middle English (eleventh century), the use of *þonne* and *þa* was still predominant, and the semantic difference between the two was still preserved. However, from the twelfth century onwards a twofold evolution took place: on the one hand, *þanne* was increasingly used as a real conjunction; on the other it was gradually replaced in this function by *hwen*. In the fifteenth century 'the tendency went on growing to substitute *when* [*whan*] for *then* [*than*] and *tho* as temporal conjunctions till the latter fell into complete disuse in the course of the century' (ibid., p. 30). At the same time *þo* was also replaced by *when* as a relative adverb introducing a restrictive relative clause depending on a temporal noun:

(24)...seotte þa dai hwonne man scolde þæt mynstre gehalegon. (=He appointed the day when the monastery should be consecrated.) (example from the *Peterborough Chronicle*, cited by Yamakawa 1969:36)

In the correlative constructions too, *when* came to be used: 'As *þanne* or *þo* was more or less replaced by *when* in Middle English, so the old double determinative form *þanne...þanne...or þo...þo...naturally changed to the more distinct correlative form "when...then..."*' (Yamakawa 1969:37).

The next step in the evolution was that *þat* often came to be added to *when*. The earliest use of this is to be found in East Midland texts of the thirteenth century. In late Middle English *when that* was widely used. This accords with the view that *when* had become a real conjunction by that time, for *that* was added to any kind of conjunction in this period: next to *when that*, late Middle English also used *if that*, *though that*, *because that*, *after that*, *before that*, *till that*, *since that*, etc.³

What is important for our purpose in this historical evolution is that in superseding *þanne* and *þo*, *when* inherited the original meaning of the latter. In Old English, *þonne* could be used with a double function: on the one hand it functioned as temporal adverb (meaning 'then') in (what we would now call) the head clause; on the other it functioned as a connective between two clauses. In this way *þonne* had the same meaning as 'then when'. As a matter of fact, examples have been preserved that show an explicit *then...when...* structure:

(25) Riche men rutte *tho* and in here reste were,
Tho it schon to the shepherdes a schewer of blisse.

(=Rich people were snoring in their beds [then] when a shower of bliss shone upon the shepherds.)

(example from *Piers Plowman*, cited in Yamakawa 1969:29)

(26) þeonne is ðe ueond i schend, hwonne me sceaweð i ne schrifte alle his weadschipes.

(=Then the fiend is dishonoured, when he shows me all his pledges in confession.)

(example from *Ancrene Riwe*, cited in Pasicki 1987:194)

(27) (Ah hwucche se beoð se stealewurðe þat...geornliche geigeð efter godes grace to help & to heale. &) þenne meast hwen þe preost in wið þe messe noteð godes licorne þat he nom of þat laðlese meiden.

(=...then most when the priest, during Mass, partakes of the body of God which he received from the innocent virgin.)

(example from *þe Liðlade of St. Juliana*, cited in Pasicki 1987:194)

Pasicki interprets these examples as follows:

At first sight (88) [=our (26)] looks like a fairly ordinary correlative construction, but that simple-minded view of it is mistaken: the main clause of (88) [= (26)] precedes the subordinate clause—the opposite of the usual order of correlative constructions with *þa* and *þonne*. In the case of (89) [=our (27)] a correlative analysis is even less plausible because of the proximity of *þenne* to the subordinate clause. It is thus at least a reasonable line of approach to regard *þenne* in such cases as the head of a complex NP of which the *hwen* clause is the relative modifier.

(Pasicki 1987:194)

In late Middle English too, similar examples could be found:

(28) and þan es drede perfyte in us and haly, when we drede to wreth God in) þe leste syn þat we may know.

(=And then perfect and holy fear is in us, when we dread to anger God in the least sin that we may know.)

(example from the *English Writings of Richard Rolle Hermit of Hampole*,
cited in Pasicki 1987:249)

The *Compact Edition of the Oxford English Dictionary* gives the following examples (p. 1763):

(29)

(a) Avij, As it is with yse which dissolveth, then when it vanisheth away, (dated 1567)

(b) Give him the firstlings of thy strength, even than When fading Childehood seeks to ripen man Vpon thy downy cheeks, (dated 1644)

3 The observation that *when that* was used as an alternative to *when* accords with the view that *when* had become a conjunction at the time but does not in itself corroborate this view, since *that* was also often added to relatives (e.g. *which that*, *what that*).

- (c) Melody had then its greatest Power, when the Melody was most confined in its Compass, (dated 1763)

In examples like these, *when* is clearly a relative depending on a determinative (cataphoric) *then*. Since WCs that do not depend on an overt *then* are interpreted in exactly the same way, it stands to reason to analyse *when* as a free relative in such clauses.

The above conclusion is also drawn by Pasicki (1987:95–6), who adduces several additional arguments supporting the view that OE *þa/þonne* and ME *when* were used as relatives:

(a) OE *þonne* and *þa* come from the same root as the demonstrative. As is well known, the demonstrative acquired a relative function in Old English. The ensuing demonstrative-relatives were subsequently ousted by *wh*-forms in the Middle English period. What has been argued in connection with *þonne* and *þa* is completely consonant with this: from purely demonstrative adverbs they developed into demonstrative-relatives, and were ousted by *when* in the Middle English period. This hypothesis thus explains the supplanting of *þanne* by *hwen* as being ‘part of the more general development whereby earlier demonstratives functioning as relatives were replaced by *hw*-pronouns’ (Pasicki 1987:195).

(b) If we consider the Old English period only, there is a parallelism between the ordinary demonstratives, which could be used as relative pronouns, and the ‘adverbial’ demonstratives *þonne*, *þa* (and also the locative *pær*), which (according to our hypothesis) could be used as relative pronouns too.

(c) Next to *þonne* and *þa*, Old English occasionally used *þonne þe* and *þa þe*. These forms ‘are explained in the most direct way as relatives consisting of a demonstrative and *þe*, analogous to *se þe* and the like’ (Pasicki 1987:95).

(d) Clauses introduced by *þonne* and *þa* ‘typically occur in contexts where there is no identifiable head in the matrix sentence; that is, they are to be regarded as free relatives. Yet there are also instances—and these provide a further argument for the status of *þonne* and *þa* as relatives—where the matrix does contain a head NP’ (Pasicki 1987:95–6):

(30) heo hafap wæstm sinewealtne & byterne, se ys to nymenne to þam timan þonne he æfter his grennysse fealwað.

(=She has a fruit (?) ever strong and bitter, which is to be taken at the time that he withers after his flourishing.)

(example from *Leechdoms*, cited in Pasicki 1987:96)

Examples can even be found of *þonne* introducing an extraposed nonrestrictive relative clause:

(31) niht cymb), þonne nan man wyrca ne mæg.

(=Night comes, when no man can work.)

(example from John 9.4, cited in Pasicki 1987:96)

The above brief survey of the history of adverbial WCs clearly corroborates the hypothesis that we are arguing. There is abundant diachronic evidence that what is usually considered to be the ‘conjunction’ *when* is actually a free

relative. (As a matter of fact, the same is true of the 'conjunction' *where* in sentences like *I left the key where I had found it*. Old English here used the adverb *ðære*, and examples of the type *ðære...ðære* (=there...where) are to be found in the literature:

(32)...oððe þider ferde 7 hine þær betealde þær seo forewarde ær wæs gewroht 7 eac gesworen.

(=...or else went thither, and there exculpated himself where the covenant had been drawn up and ratified.)

(example from the *Peterborough Chronicle*, dated 1094)

4

CONCLUSION

In this chapter I have presented evidence, both synchronic and diachronic, that the 'conjunction' *when* introducing adverbial time clauses is really a free relative, which is interpreted as 'at a/the time at which'. There are two reasons why this conclusion is relevant. First, it helps to explain why there are so many different types of WC. Since *when* is a free relative and has developed from a question word, it should come as no surprise that WCs can be used as direct or indirect questions, as relative clauses (either RRC or NRC and either with or without an overt antecedent), and as free relative clauses in adverbial function (i.e. as adverbial WCs). Apart from this, the conclusion that the 'conjunction' *when* is a free relative will prove to be of crucial importance when we investigate the temporal structure expressed by *when* and the tenses used in HC and WC (see [Chapter 5](#)).

A MODEL OF THE ENGLISH TENSE SYSTEM

The purpose of this chapter is to provide a model of the English tense system which can be used in analysing the systems of tenses that are used in the various types of WC (and in the HCs supporting them). The framework in question is that which is set out at greater length in Declerck (1991a). In the present book this model will be adopted without drastic changes, though there will be a couple of (especially terminological) adaptations, to which special attention will be drawn. Since, for obvious reasons, the survey has to be as concise as possible, I will restrict myself to just those aspects of the theory that are directly relevant to the topic of this book, viz. the use of tenses in sentences involving a WC of one of the various types under discussion.

In the introductory chapter of Declerck (1991a) some theoretical and methodological preliminaries are discussed which are relevant to the model that is presented. I will only briefly summarize them here. One such preliminary is that there is a relation between tense and time. I do not agree with the view that the basic use of tenses is not to express relations of time but to express such notions as ‘actual concern’ and ‘disactual concern’ (see e.g. Janssen 1988). I agree that tenses can be used to express oppositions of this kind, but claim that this use is a derived (metaphorical) use, not the basic function of tenses. My conviction that this claim is correct has become even stronger while I have been writing the present book, since there is no way in which one can account for the use of tenses in sentences involving a WC except in terms of temporal relations: the extremely high number of possible combinations of tenses in HC and WC (see [Chapter 6](#)) are a direct consequence of the many different relations of time that can exist between the situations referred to in the two clauses.

The first preliminary, then, is that the basic use of tense is to express temporal relations. Tense can be defined as the grammatical category whose function it is to express the temporal relationship which holds between the time of the situation that is being described and the temporal zero-point (which is usually the time of speech).¹ It follows that tense is a deictic category. A grammatical form is deictic if it refers to the ‘here and now’ of the speaker. Since the temporal zero-point is the ‘now’ of the speaker or hearer,² a tense form, which by definition

relates the time of a situation to this 'now' (either directly or indirectly), is a deictic element.

The second preliminary is that there is no reason to restrict the number of tenses in English to just two, viz. past and present (nonpast). There is no doubt that English speakers work with two temporal perspectives, and that there are two sets of tenses (past and present) corresponding with these, but this is no reason to claim that English has only two tenses. If one accepts the first preliminary, viz. that tense 'grammaticalizes the relationship which holds between the time of the situation that is being described and the temporal zero-point of the deictic context' (Lyons 1977:68), one must accept that there are as many tenses as there are different ways of relating the time of the situation to the temporal zero-point. This simply follows from the above definition of tense: if tense is the grammaticalization of a particular kind of temporal relation or complex of relations, then there are as many tenses as there are different grammatical forms expressing different temporal structures. As regards this I adhere to the traditional view that forms like *went*, *had gone*, *would go*, *would have gone*, *has gone*, *will go*, *will have gone*, etc. represent different tenses (all of which, however, belong to two 'families' or sets of tenses, which I will refer to as 'past time-sphere tenses' and 'present time-sphere tenses').

Another preliminary, following from the previous one, is that the present perfect is recognized as belonging to the set of English tenses. It is argued in Declerck (1991a: 10–12) that it will not do to say that the present perfect is a combination of the present tense and 'perfect phase' (as argued e.g. by Palmer 1988:35). Nor can we accept Comrie's (1985) claim that the present perfect expresses the same temporal structure as the past tense (viz. 'Event time before speech time') and differs from the latter only in that it also expresses 'perfect aspect' (current relevance). I argue that the temporal schema (structure of temporal relations) expressed by the present perfect is quite different from that expressed by either the present tense or the preterite. Even if the idea of 'perfect phase/aspect' should turn out to be a valid one, it remains a fact that the present perfect realizes a temporal schema of its own, and is therefore a tense according to the definition that is adopted here.

The same is true of the future tense. Granting that the future tense has modal implications, this does not alter the fact that a form like *will be* in *It will be five o'clock soon* realizes a temporal structure which is unlike the structure realized by any other tense. The future tense (as well as the future perfect) is therefore recognized as being a tense of its own.³

1 The notion 'time of the situation' will be rigidly defined in section 4. (It is not necessarily equivalent to 'time of the full (complete) situation'.)

2 As will be pointed out in section 1 below, there are exceptional cases in which the temporal zero-point is the 'now' of the hearer rather than that of the speaker, e.g. when a prerecorded radio programme starts with *You are now listening to...*

A further preliminary concerns nonfinite clauses. It follows from the above definition of tense that nonfinite clauses must be treated as tenseless (untensed) clauses. Only finite verb forms are tense forms. Nonfinite verb forms (i.e. infinitives, gerunds and participles) express a single temporal relation, viz. they relate the time of the situation referred to to some other time, which may or may not be the temporal zero-point. (In fact, the reference time in question is usually the time of the HC-situation.)

(1) Those *having* no valid season ticket [NOW or THEN] will not get inside. A tense form, by contrast, expresses the various relations that hold between the time of the situation and the zero-point. If the tense is an ‘absolute tense’, it relates the time of the situation directly to the zero-point. If it is a ‘relative tense’ (like the past perfect), it relates the time of the situation to a reference time which is itself related to the zero-point (either directly or via other reference times). In other words, tenses realize temporal schemata (structures) which necessarily involve the zero-point, whereas nonfinite verb forms do not. Nonfinite clauses will therefore be treated as tenseless. Since in this book we will be concerned with the use of tenses in sentences with a WC, nonfinite WCs (as in *I don’t know when to do it* or *When staying in London I always go to see her*) will be disregarded.

As a final preliminary, I would like to stress that I consider the difference between the simple (nonprogressive) form and the progressive form as an aspectual distinction (more specifically as a question of perfective vs imperfective aspect) and not as a distinction that is a question of tense. Both *walked* and *was walking* are past tense forms. The difference of interpretation which they entail will be discussed in [Chapter 9](#).

The theory of tense proposed in Declerck (1991a) hinges on a number of concepts and principles, the most important of which will be presented in this chapter. (As pointed out above, concepts and principles that are irrelevant to the description of the use of tenses in sentences with a WC will be disregarded.)

1

TEMPORAL ZERO-POINT

I will use the term ‘temporal zero-point’ or ‘zero-time’ (abbreviation: t_0) to refer to the time which is the ultimate ‘origin’ of all the temporal relations expressed by the tense form, i.e. the time to which the times of all the situations referred to in the sentence are directly or indirectly related, and which is not itself represented as dependent on any other (more basic) time. In English, the temporal zero-point is nearly always the time of utterance (coding time) (i.e. the

3 See also Vet (1994:74): ‘The Simple Future is like a mood in that it expresses the speaker’s attitude towards the future eventuality. It is a future tense because it places the eventuality posterior to the speech point.’

time of speaking or writing). However, when the time of decoding the message is later than the coding time, it is possible for the speaker to choose the former as temporal zero-point. For example, if I send a letter to somebody, knowing that he's on holiday in Scotland and will only find the letter on his return, I may write something like *I hope the weather was fine while you were in Scotland* (see also Fillmore 1972:167). As usual, the past tense forms in this sentence locate the situations at a time which is past with respect to the temporal zero-point. However, this zero-point is not the time of coding (writing) the message but the time when the message is expected to be decoded (read).

2

TIME-SPHERES AND SECTORS

As has often been noted in the literature, there is a difference between 'objective (physical) time' and 'linguistic time'. From the point of view of physics, time is a unidirectional continuum, which may be represented by a line (the 'time line') and which consists of two parts, the past and the future, separated by the present. The present is no more than a point which divides the past from the future; it has no extension, and it moves continuously from left to right on the time line. Whereas physical time exists 'in abstraction from any given language' (Quirk *et al.* 1985:175), 'linguistic time' is time as it is perceived and talked about by language users. The most important difference between physical time and linguistic time is that most languages 'treat the distinction of past and non-past as being of greater importance than the distinction of present and non-present or future and non-future' (Lyons 1977:809). This is the case in English, where the use of tenses implies a division of time into two (rather than three) 'time-spheres': the past time-sphere and the nonpast or present time-sphere. The past time-sphere is conceived as lying completely before t_0 (and hence as not including t_0). The nonpast (or present) time-sphere is conceived as a timespan including t_0 . Tense forms that show past tense morphology are used to locate situations in the past time-sphere. The other tense forms represent situations as lying in the nonpast time-sphere (where they may be anterior, simultaneous or posterior to t_0).

The claim that English divides time into two, not three, time-spheres is based on several observations. First, all English tense forms show either past or present tense morphology. There is no future tense morphology. Thus, in the same way as *would do* realizes 'PAST+will+do', *will do* realizes 'PRESENT+will+do' (see also Declerck 1995b). The reason is that the future tense is formed with the help of *shall* and *will*, whose use as future tense auxiliaries has developed from their use as forms expressing present modality (see Lyons 1977:815–16). Second (and in keeping with the previous observation), English uses the future tense not only to refer to situations that lie in the distant or near future but also to refer to situations that start at t_0 , as in *From now on we will no longer act on this kind of complaint* or *Now we will have no money to pay for the return ticket* (said on

(e.g. *does*), the present perfect (e.g. *has done*), the future tense (e.g. *will do*) and the future perfect (e.g. *will have done*).

There are a couple of further things to be noted. First, the above eight tenses do not exhaust the possibilities. There are still other temporal structures that can be expressed by tense forms (e.g. *would have been going to do*, *has been going to do*, *will be going to have done*, etc.) but for which there are no traditional labels. Our tense theory will have to account for these tense forms too. Second, it is important to see that the length of the time-spheres and the sectors cannot be defined in terms of objective time. Everything depends on how the speaker conceptualizes time. As has often been noted, the present (in our terminology: the present sector) can be conceived as a point (as in *I declare the meeting closed*) or as a period of indefinite length (e.g. *London lies on the Thames*). Similarly, the pre-present can be conceived either as very short (e.g. *I have just seen him*) or as stretching indefinitely far back (e.g. *The earth has existed for billions of years*), while the past time-sphere may be conceived as distant from t_0 (e.g. *Things were different in ancient Rome*) or as almost reaching up to it (e.g. *The phone rang a minute ago*). It follows that one and the same situation can often be conceived either as lying in the past time-sphere or as lying in the pre-present (compare *I met Ann just now* with *I have just met Ann*).

Another point worth stressing is that a situation can be viewed as past even when it is represented as included in an adverbially indicated time interval that also includes t_0 , as in *I had a copious breakfast today* or *This year the Grand National was won by the favourite*. In cases like these the speaker has the time of actualization in mind, which is a past time, even though it forms part of a larger interval which stretches up to t_0 . Here, as in other cases, the tense form does not relate the time of the situation to the time indicated by the adverbial, but rather

3

TIME OF ORIENTATION

As we have seen, every tense expresses one or more temporal relations. Any time that functions as the origin of such a temporal relation will be called a 'time of orientation' (abbreviation: TO). Thus, in

(2) John *remained* in the kitchen after he *had finished* his dinner.

4 Tregidgo (1979:191) notes that 'generally speaking, past forms are not chosen unless the past viewpoint is somehow *defined* by an expressed or implied time-reference such as "at that time", "after that"...., etc. With non-past forms the present viewpoint, i.e. the moment of speech, is self-defining, though its exact relationship with the event or state referred to may be further defined by such adverbials as "now", "at the moment", "up to now", "before now",... "tomorrow", etc.'

5 I will stick to the traditional labels 'conditional tense' and 'conditional perfect', even though it is clear that these are misnomers. In their purely temporal (i.e. nonmodal) use, these tenses do not have a conditional meaning at all.

t_0 functions as the TO to which the time of the situation of John remaining in the kitchen is represented as anterior, and the latter is the TO to which the time of the situation of John finishing the dinner is represented as anterior.

4

SITUATION-TIME OF ORIENTATION

In section 2 it was said that the preterite locates a situation in the past time-sphere. However, it is clear from a sentence like *Two minutes ago John was in the library* that it would be incorrect to claim that it is typical of the preterite that it locates a situation as a whole in the past: the above sentence does not exclude the possibility that John is still in the library at t_0 . It is therefore necessary to make a distinction between what I will call the ‘full situation’ and the ‘predicated situation’. The full situation is the complete situation as it actualizes in whatever world is being referred to; the predicated situation is that part of the full situation (possibly all of it) about which a claim is made in the sentence. As is clear from *Two minutes ago John was in the library*, it is the predicated situation rather than the full situation that is located in time by the use of the preterite. (This is not to say that the two cannot coincide. They do when the sentence receives a ‘bounded’ interpretation, as in *I wrote two letters this morning*—see [Chapter 9](#).)

When we say that a situation ‘is located at’ a certain time, we mean that it is simultaneous with that time. As noted by McCoard (1978:92), ‘every event is simultaneous with some time; to happen means to become present at some time.’ (See also Prior 1967:15,⁶ Rigter 1980:414, Bartsch 1988/9:146.) This means that we must distinguish between the ‘time of the full situation’ and the ‘time of the predicated situation’ (i.e. the time at which the predicated situation is located). For reasons to be explained below, I will call the latter time the ‘situation-TO’ (abbreviation: STO).⁷ In *Two minutes ago John was in the library*, the STO is the time of that part of the situation that coincides with the time indicated by *two minutes ago*. The time of the full situation may be much longer—John may have been in the library for hours and may still be there at t_0 —but this is not what the sentence makes a statement about. All that is claimed in the sentence is that two minutes ago it was the case that John was in the library *at that time*.

The term ‘situation-TO’ (STO) to denote the time at which the predicated situation is located is inspired by the fact that this time may serve as the TO to which the time of another predicated situation is related: it is either an actual or a potential TO. It follows that the semantic structure of a tense can be seen as exclusively consisting of TOs and temporal relations holding between them. There are at least two TOs that are involved in the structure of any tense, viz. the STO and t_0 . The former may be related to the latter directly, or there may be one or more intermediate TOs between them.

It should be clear, then, that the term ‘STO’ has to do with how tenses locate situations in time and not (like the ‘time of the full situation’) with actualization. Unlike the time of the full situation, the STO is a TO, i.e. a time that plays a part

in the tense structure of the relevant tense form. This is not to say that there is no relation at all between the STO and the notion of actualization. We can define the STO as the time of that part of the situation to which the speakers claim made in the relevant clause is confined. (The confinement in question depends on the time on which the speaker focuses his or her attention, i.e. the time which Klein (1994) calls 'topic time' and which is referred to as the time receiving the 'temporal focus' in Declerck (1991a). This time may be given contextually or indicated by a temporal adverbial. Thus, in a sentence like *Yesterday it was raining* the speaker focuses his or her attention on yesterday. The assertion made is restricted to this time.)

In Chapter 5 I will return to the distinctions made in this section. The notion of 'STO' (i.e. the time of the predicated situation) will, however, be extensively used from now on.

5

ABSOLUTE SECTORS

Whereas the present time-sphere is automatically divided into three sectors by t_0 , the past time-sphere consists of a single sector, which is defined as lying completely before t_0 . Together with the three present time-sphere sectors, the past sector then constitutes the set of 'absolute' sectors, i.e. the four sectors that are defined in direct relation to t_0 .

6

ABSOLUTE AND RELATIVE TENSES

The English tense system has a special tense for locating a situation in a particular absolute sector. English uses the preterite, the present perfect, the

6 Prior bases his tense logic on the claim that *I was eating my breakfast* means 'It was the case that I am eating my breakfast' and that *I will be eating my breakfast* means 'It will be the case that I am eating my breakfast'. He comments:

The construction I am sketching embodies the truth behind Augustine's suggestion of the 'secret place' where past and future times 'are', and his insistence that wherever they are, they are not there as past or future, but as present. The past is not the present but it *is* the past present, and the future is not the present but it *is* the future present.

(Prior 1967:8)

7 In Declerck (1991a) I used the abbreviation 'TO_{sir}'. In this book I will use the abbreviation 'STO', which will prove handier when we wish to have abbreviations for more complex concepts, such as 'the STO of the HC' (HC-STO) and 'the STO of the WC' (WC-STO).

present tense and the future tense to locate a situation in the past, the pre-present, the present and the post-present, respectively. These are therefore the four tenses that can be used as ‘absolute’ tenses, i.e. as tenses that relate the STO directly to t_0 . All other tenses (e.g. the past perfect, the conditional, etc.) relate an STO to a TO which is not t_0 and are therefore used as ‘relative’ tenses.

7

TEMPORAL DOMAIN

In a complex sentence or in a stretch of discourse (text), the tense forms used often temporally relate the STOs of the various clauses to each other. In that case we can speak of a ‘temporal domain’. A temporal domain is a set of TOs which are temporally related to each other by means of tense forms and at least one of which is an STO. For example:

(3) John *said* that he *was* tired because he *had worked* hard and that he *would go* to sleep early.

The reference here is to a ‘past domain’, i.e. a time interval which lies in the past time-sphere and which comprises the STOs of the four situations referred to. The domain is established by the past tense form *said*, which is therefore an absolute tense form. The other three tense forms in this sentence are relative tense forms: the past tense form *was* represents the time of the situation of John being tired as simultaneous with the saying; the past perfect *had worked* represents its STO as anterior to the time of the situation of John being tired, and the conditional tense form *would go to sleep* represents its STO as posterior to the time of the saying. These relative tense forms thus expand the domain which is established by the absolute tense form.

In (3), the past domain comprises four STOs. However, the set of TOs forming a temporal domain may also be a singleton, i.e. consist of just one STO. This is the case in *He left at five and I will leave at eight*, where both tense forms establish a domain of their own, which is not further expanded—see section 10 below.

8

TEMPORAL SUBORDINATION (BINDING)

An STO which is represented as anterior to, simultaneous with or posterior to a TO belonging to the same domain is ‘temporally subordinated to’ or ‘bound by’ the latter.⁸ In the above example (3), *was tired*, *had worked hard* and *would go to sleep early* refer to situations whose STO is temporally subordinated (temporally bound). The TO to which the STOs of the situations described by *was tired* and *would go to sleep* are temporally subordinated (i.e. the ‘binding’ TO) is the STO of the situation referred to by *said*. The STO of *was tired* in its turn binds the STO of *had worked hard*.

It is important to stress, as Tregidgo (1979) does, that temporal subordination is not the same thing as syntactic subordination (of clauses). The two differ in several respects. To begin with, clauses that are syntactically subordinate may or may not show temporal subordination. Thus, we can compare *He said he would come* with *He said he will come*: while the *that*-clause is temporally subordinated in the former, it creates a domain of its own in the latter (since *will come* is an absolute tense form). Second, temporal subordination is not impossible in clauses that are not syntactically subordinated, e.g. when a sentence like *He had worked hard all day* is the opening sentence of a novel. And third, in a sentence like *The boy who told me about the accident had witnessed it himself* the subordinate clause uses an absolute tense form and the superordinate clause a tense form effecting temporal subordination.

Another important point to be made in this connection is that when we say that a situation is temporally subordinated to another situation, what we really mean is that the STO of the former situation is temporally bound by the STO of the latter. It is not the situation itself but rather the time at which it is located (i.e. its STO) that is temporally related to t_0 or to another TO. As already said, the temporal structure representing the meaning of a tense consists exclusively of TOs and temporal relations holding between them. The TOs in question may be of various kinds, as appears from an example like *Tomorrow they will already have left*. The tense structure of the future perfect here involves the relations 'STO anterior to TO_i ' and ' TO_i posterior to t_0 '. This structure thus involves three TOs: the STO, the temporal zero-point and the TO specified by the temporal adverbial.

As defined here, temporal subordination (or temporal binding) means that the relevant STO is related to a TO other than t_0 , i.e. that a relation is expressed in a domain. If this is the case, the bound STO is represented from the viewpoint of the binding TO. (This explains Allen's (1966:171) observation that in *Percy said that he would come early* the tense form *would come* 'expresses, not an action later than the action referred to by [*said*], but rather *anticipation* of that action: *would come* represents the coming as expected at the time of saying rather than as actualizing.)

9

CENTRAL TIME OF ORIENTATION

The central TO of a domain is the one TO in the domain that is not temporally bound by any other TO in the domain but is directly related to t_0 . In most cases the central TO is the STO of the clause which establishes the domain; this STO then acts as binding TO for the STO of the next situation that is introduced into

8 'Temporal subordination' is the term also used by Allen (1966), Tregidgo (1979) and Wekker (1980).

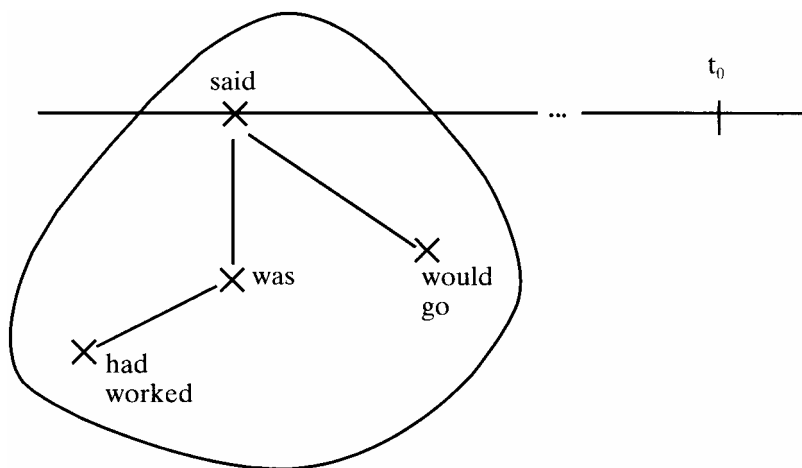


Figure 4.2 The tense structure of (3)

the domain. For example, the central TO in sentence (3) is the STO of *said*. The STOs of the two *that*-clauses are related to this TO in terms of simultaneity (*was*) and posteriority (*would go*), respectively. The STO of the *because*-clause is represented as anterior (*had worked*) to the STO referred to by *was tired*. This means that all the tense forms of (3) locate their STOs in one and the same temporal domain, which can be represented as in Figure 4.2. (When representing a temporal domain by means of a diagram, we will observe the following conventions. The domain is represented by a Venn-diagram because it is a set of times (related to each other by the tense forms). The central TO is the only TO which is placed on the time line, since it is the only TO that is directly related to t_0 . A vertical line is used to represent the relation of simultaneity, whereas a slanting line represents either anteriority or posteriority. An STO that is anterior to its binding TO is located to the left of the latter; an STO that is posterior to its binding TO is located to the right of the latter. All TOs and STOs are represented by a cross (or 'x'), irrespective of whether they are durative or punctual.)

10

SHIFT OF TEMPORAL DOMAIN

In a stretch of discourse the speaker must decide for each new clause whether to incorporate the STO in the existing temporal domain or to have the clause establish a temporal domain of its own. (In the latter case we can speak of a 'shift of domain'.) Compare:

(4)

(a) No doubt you *will read from*, his face what his reaction to the news *is*.

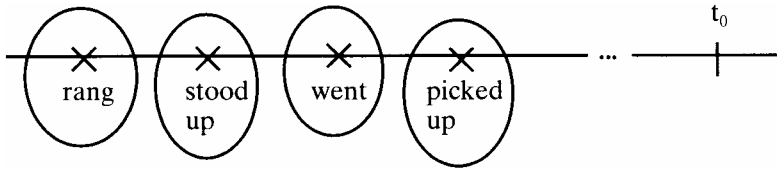


Figure 4.3 The tense structure of (4 b)

- (b) Suddenly the phone *rang*. Jill *stood up* from her chair, *went* over to the telephone and *picked up* the receiver.

In (4 a), the two situations are interpreted as simultaneous with each other and are located within the same post-present domain. The domain is established by the absolute tense form *will read*, whose STO functions as central TO of the domain. The form *is* is a relative tense form representing its STO as simultaneous with this central TO.⁹ In (4 b), by contrast, the situations follow each other, and none of the tense forms relates its STO to any of the other STOs: instead of using relative tense forms expressing anteriority (viz. the past perfect) or posteriority (viz. the conditional tense), the speaker each time uses an absolute preterite form. Each new clause therefore shifts the domain (i.e. establishes a new domain) and each domain consists of a single STO, as shown in Figure 4.3.

The following pair of sentences provide a further illustration:

(5)

- (a) Bill knew Brighton well because he *had been* there as a child,
 (b) Bill knew Brighton well because he *went* there as a child.

In (5 a) the STO of *had been* is temporally subordinated to the STO of *knew*. The two STOs thus belong to the same temporal domain. In (5 b), on the other hand, *went* is an absolute tense form which shifts the domain.

When there is a shift of domain within the same absolute sector (as in (5 b)), the tense forms themselves do not express the temporal relation between the two domains. It follows that such a shift of domain is only pragmatically acceptable if the temporal order of the situations is either irrelevant or recoverable in some other way (e.g. from the use of time adverbials, or from the order in which the situations are reported (as in (4 b)), or from the linguistic context (as in (5 b)), or from pragmatic knowledge (i.e. the extralinguistic context and our general knowledge of the world)).

⁹ As will be explained below, the present tense can be used either as an absolute tense (establishing a present domain) or as a relative tense (expressing simultaneity in a post-present domain).

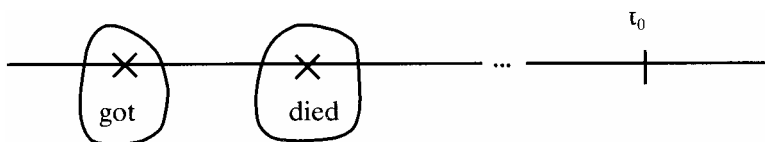


Figure 4.4 The tense structure of (6 a)

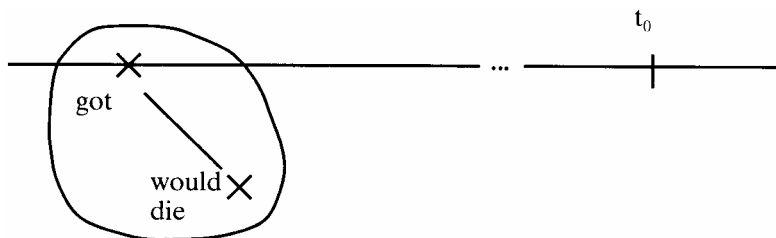


Figure 4.5 The tense structure of (6 b)

The following sentences illustrate the observation that, when there is a shift of domain, the tense forms do not express the temporal relation between the two domains:

(6)

- (a) The soldier got seriously wounded. He *died* shortly afterwards.
- (b) The soldier got seriously wounded. He *would die* shortly afterwards.

In (6 a), where there is a shift of temporal domain (because *died* is an absolute preterite), the time adverbial *shortly afterwards* situates the second domain relative to the first. However, the tense forms (*got wounded*, *died*) do not provide the information that the second domain is posterior to the first; the only information they furnish is that the two domains belong to the past time-sphere (see Figure 4.4). In (6 b) the two clauses locate their STOs in the same domain. The information that the STO of the second clause is posterior to that of the first clause is now provided both by the temporal adverbial and by the tense form of the second clause (*would die*) (see Figure 4.5).

Because a shift of domain means that the tense forms do not relate the relevant STOs to each other, a co-operative speaker will only shift the domain if this does not obscure the temporal relations between the situations, or if these relations are deemed irrelevant. (This follows from the Gricean Maxims of Quantity and Relation.) Thus, out of context we can choose between (7 a) and (7 b). Although the anteriority relation is no longer expressed by the tense form in the latter, it is still inferrable from the presence of the WC. However, the same sentences suggest different readings when we drop the WC: unlike *had felt* in (8 a), *felt* in (8 b) is naturally interpreted in terms of simultaneity.

(7)

- (a) He said he *had felt* sad when it happened,
- (b) He said he *felt* sad when it happened.

(8)

- (a) He said he *had felt* sad.
- (b) He said he *felt* sad.

Because it is typical of a shift of domain that the STO is not related to the STO of any previously mentioned situation, it is not the tense form but the context or pragmatic knowledge that will determine the temporal interpretation of the relevant stretch of discourse. For example:

(9)

- (a) He lived in England but was buried in Scotland.
- (b) He was buried in Scotland, though he lived in England.
- (c) He lived in England, where he had a country house.

For pragmatic reasons, we interpret these sentences in terms of 'A before B', 'A after B' and 'A while B', respectively.

As is clear from (9 c), a shift of domain need not represent a shift in time: in some cases the interpretation must be in terms of simultaneity. The following examples further illustrate this point:

(10)

- (a) He watched the spectacle but did not enjoy it.
- (b) Someone has used my bike and has damaged it (while doing so).
- (c) She will read the letters over and over again, as they will be her only consolation.

In cases like these, the domain established by the tense form of the second clause is interpreted as simultaneous with that established by the tense form of the first clause. In what follows I will call this possibility 'establishing a simultaneous domain'.

11

SHIFT OF TEMPORAL PERSPECTIVE

I will speak of a 'shift of temporal perspective' when the tense system that is characteristic of a particular sector is used in referring to another sector, i.e. if a TO from a given sector is treated as if it belonged to another sector. A typical example of this is the use of the so-called 'historic present' in narrative: situations

that belong to the past time-sphere (or form part of a narrative that is situated in the past) are represented as if they belonged to the present sector. For example:

(11)

- (a) Do you know what John did to me the other day? Well, just as I was leaving for the office, he *comes in* and *tells* me I've *won* on the pools and some big chap *will come* and pay me over 1,000 pounds. I nearly fainted on the spot. And two minutes later he *tells* me it's all a hoax and I *haven't won* anything at all.
- (b) As usual, there *is* somebody waiting to see her, standing by the door. When she *gets* closer she *sees* that it *is* Vic Wilcox: she *didn't recognize* him immediately because he *is* not *wearing* his usual dark business suit, but a short-sleeved knitted shirt and neatly pressed light-weight trousers. (NW 379)

Although handbooks usually speak only of the 'historic present', examples like these make clear that all absolute tenses are involved in this shift of temporal perspective.

There are many different kinds of shifts of temporal perspective that are inherent in the English tense system. In Declerck (1991a:66–74) a whole series of instances are discussed. In the present book I will restrict myself to mentioning just those cases that are relevant to the discussion in later chapters.

There is a shift of perspective from the post-present to the present in sentences like *The train arrives at 5 o'clock* or *I'm leaving tomorrow*: a post-present situation is represented as if it were holding at t_0 . This is a special way of establishing a post-present domain. There is a similar shift (although for a different reason) in the HCs supporting the WCs of the following examples:

(12)

- (a) But a crucial point is how Ford *reacts when* GM, the world's largest auto maker, firms up its proposed deal with Jaguar. (WSJ)
- (b) Mamma, poor darling, has sufficiently roused herself from her grief to be concerned for us. She has a proposition in mind, though it greatly depends upon what she *thinks* of Alix when she at last meets her. (LOB)
- (c) I haven't absolutely decided yet. Depends what he *has* to say for himself when he comes round. (DR-MAUG)

The present tense is also conventionally used in summaries, captions, travel itineraries (in travel brochures), stage directions, jokes, historical writing, etc. (see Leech 1971:12–13, Quirk *et al.* 1985:181–2, Klein 1994:134–6):

(13) The story is of a famous strip cartoonist, an arty individual, whose specialty is the American boy and who adopts a 10-year-old to provide him with fresh idea material. This is when his troubles begin, not to mention a fledgling

artist who he hires, and who turns out to have ideas of his own, with particular respect to the hero's sweetheart-secretary. (BR)

The above uses of the present tense resulting from a shift of perspective will prove special in that together they represent one of the exceptional cases in which an HC in the present tense can support an adverbial WC. A sentence such as *I am still working when she comes in* is ungrammatical as a report of what is going on at t_0 , but is impeccable in a narrative about past events told in the historic present. We will therefore have to discuss this special use of the present tense in [Chapter 6](#). In order to facilitate that discussion, I will introduce the term 'Historic Present System' to refer to the special use of the present tense in examples like (11)–(13).¹⁰ In the Historic Present System, the present tense is used to speak of a past, pre-present or post-present situation *as if* it were actualizing at t_0 . The Historic Present System is therefore a system of metaphorical tense uses.

12 THE EXPRESSION OF DOMAIN-INTERNAL TEMPORAL RELATIONS

Each absolute sector has its own system to express the (domain-internal) relations that are created by the process of temporal subordination.

12.1 The relations in a past time-sphere domain

The system of tenses expressing relations in a past domain is relatively simple.

12.1.1 *Simultaneity in a past domain*

To represent an STO as simultaneous with some TO in a past domain we use the preterite, irrespective of whether the binding TO is the central TO (as in (14 a)) or another TO in the domain (as in (14 b–d)):

(14)

- (a) He said that he *was feeling* hungry.
- (b) He said he had panicked when the milk *boiled over*.
- (c) He said he would do it when he *had* time.
- (d) He had been talking to someone while he *was waiting* for Mary.

[Figure 4.6](#) represents the tense structure of (14 b).

¹⁰ Sperber and Wilson (1986:229) speak of the 'interpretive use' of the present tense.

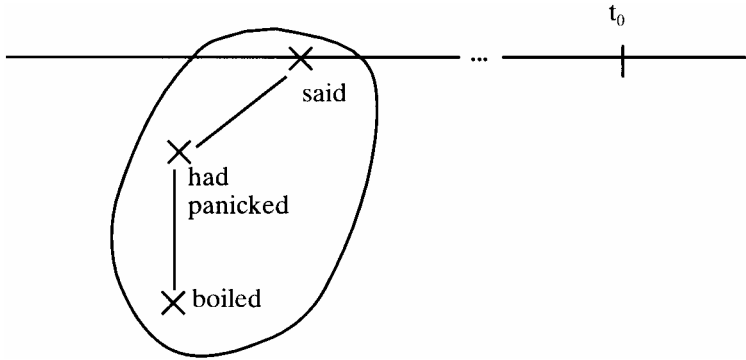


Figure 4.6 The tense structure of (14 b)

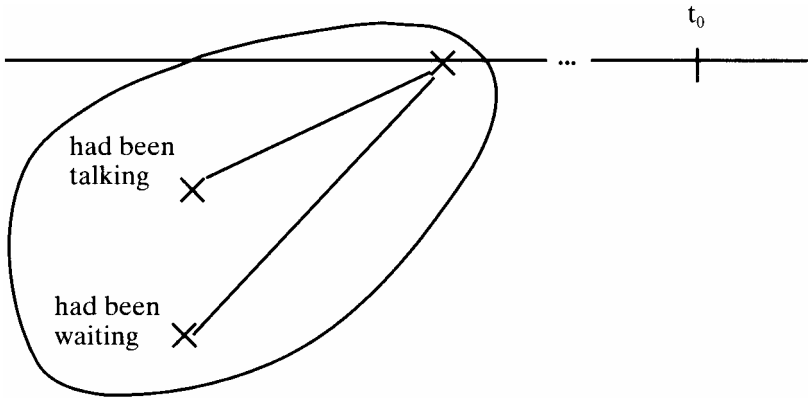


Figure 4.7 Indirect binding

Examples like (14 a–d) make clear that the past tense has a double use: it can be used as an absolute tense form (establishing a past domain) and as a relative one. (For a fuller discussion of this claim, see Declerck (1995b).)

It should be noted that two situations that are simultaneous (in terms of real time) are not necessarily *represented* as simultaneous by the tense form used. Since the speaker has a large measure of freedom in describing situations, he or she may also make use of other possibilities that are available in the English tense system (and which will be discussed in later sections of this chapter). Thus, the speaker of (14 d) might also have said *He had been talking to someone while he had been waiting for Mary*. In this sentence the STO of the *while*-clause is not represented as simultaneous with that of the HC, but is represented as anterior to the (implicit) TO which also binds the STO of the HC (see Figure 4.7). (In section 18 this type of tense subordination will be referred to as ‘indirect binding’.)

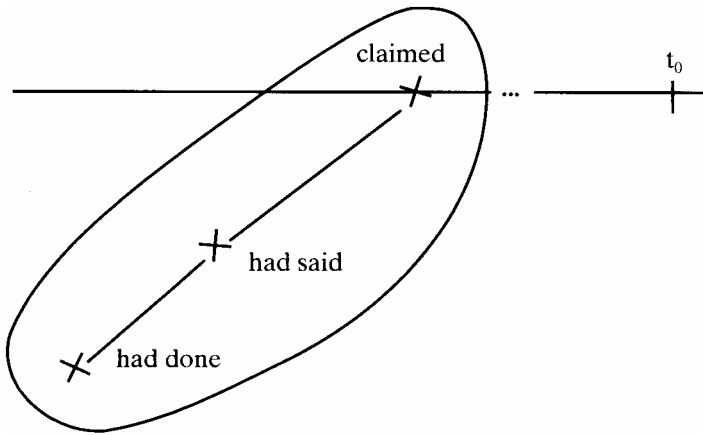


Figure 4.8 The tense structure of (15 c)

12.1.2

Anteriority in a past domain

To represent an STO as anterior to another (central or noncentral) TO in a past domain, the past perfect is used:

(15)

- (a) He thought I *had been living there* for some time.
- (b) He said he would do it after the others *had left*.
- (c) She claimed that he *had said* that he *had done* it all by himself.

The tense structure of (15 c) is shown in Figure 4.8. Here again it should be noted that the temporal relation which exists between two situations in real time is not necessarily expressed by the tense form. This explains why, for example, (16 a) can alternate with (16 b):

(16)

- (a) I spoke to the boy whose father *had died* a week earlier,
- (b) I spoke to the boy whose father *died* a week earlier.

In (16 a) the STO of the subclause is temporally subordinated to that of the HC: that is, *had died* is a relative tense form expressing anteriority in the past domain established by *spoke*. However, there is no temporal subordination in (16 b), where the preterite is used: *died* is an absolute preterite establishing a new domain (i.e. shifting the domain).

It is also worth noting that apart from the past perfect there is another tense that expresses anteriority in a past domain, viz. the conditional perfect (*would+*

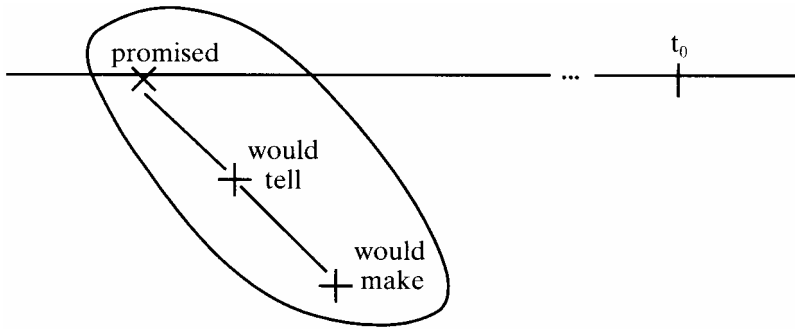


Figure 4.9 The tense structure of (17 c)

perfect infinitive). However, the conditional perfect does more than just express anteriority. It also makes clear that the binding TO to which the relevant STO is anterior is itself posterior to another TO in the past domain. The conditional perfect thus expresses two relations within the past domain. For the time being I will restrict myself to the relative tenses that just express one relation. The conditional perfect will be discussed in section 15.

12.1.3

Posteriority in a past domain

To represent a situation as posterior to some TO in a past domain we use the conditional tense:

(17)

- (a) I thought he *would help* me.
- (b) He had promised that he *would* henceforth *behave* himself.
- (c) He promised that he *would* soon *tell* me when he *would make* his decision.

The tense structure of (17 c) is represented by [Figure 4.9](#).

It should be noted that the conditional tense (*would*+infinitive) is not the only means of expressing posteriority in a past domain. There are other possibilities, such as the use of *was/were going to* or *was/were to*:

(18)

- (a) He said there *was going to be* a storm in a minute.
- (b) The king arrived at 11 a.m. The queen *was not to arrive* until the day after.

As is well known, these alternatives have special connotations and therefore typically appear in different kinds of context. Together with *would*, they constitute a set of forms which are more or less in complementary distribution.¹¹

For ease of reference I will only mention the conditional tense when speaking about the expression of posteriority in a past domain. It should be borne in mind, however, that there are other forms besides this.¹²

12.2

The relations in a pre-present sector domain

A pre-present domain is always established by a present perfect. Grammatical handbooks state that a present perfect locates a situation in a period that starts before t_0 and leads up to it. In our system, the period in question is the pre-present sector. The situation located in this period can either lie entirely before t_0 (e.g. *I have met him once*) or lead up to (and include) t_0 (e.g. *He's been living here for years*). In the former case the present perfect has an 'indefinite' meaning, in the latter it receives a 'continuative' interpretation. (For the sake of simplicity, we will speak of the 'indefinite perfect' and the 'continuative perfect', respectively. However, in doing so we will bear in mind that the labels 'indefinite' and 'continuative' in fact refer to interpretations which are not due to the perfect tense forms alone.) Now, for the expression of temporal relations in a pre-present domain it will make a great difference whether t_0 is or is not included in the STO that functions as central TO. We therefore have to treat the two possibilities separately.

12.2.1

Pre-present domains established by an indefinite perfect

As is well known, an indefinite perfect is normally used only to introduce a situation (i.e. to establish a domain in the pre-present sector), not to go on speaking about it after this has happened. This means that the STO of an indefinite perfect is always the central TO of a pre-present domain. If we wish to relate other STOs to this central TO, we shift the temporal perspective to the past. That is, the pre-present domain is developed as if it were a past domain, so that the system used to express domain-internal relations is that typical of past domains. For example:

(19) Only once has Jim told me that he *was feeling tired*.

11 However, there is no perfect complementary distribution, as more than one form is often possible in a given context.

12 In some cases the preterite is used to refer to a situation which is to be interpreted as posterior to a past TO, as in *We had to hurry, because the ship left at 4.30.* or *He told me he was leaving the next day.* This use of the preterite will be analysed as a shift of temporal perspective, i.e. the tense form expresses posteriority as if it were simultaneity.

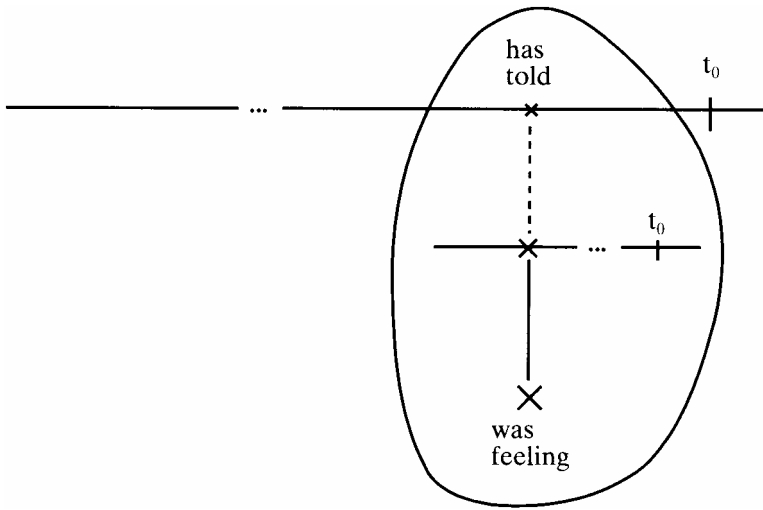


Figure 4.10 The tense structure of (19)

The first clause locates a situation (which does not reach up to t_0) at some indefinite time within a period reaching up to t_0 (i.e. within the pre-present sector). However, once the speaker has done this, and wishes to say more about the situation in question, he or she shifts the temporal perspective. The reason is that in linking the time of Jim's feeling tired to the time of Jim's saying so, the speaker is concerned with the latter time, which lies wholly before t_0 , rather than with t_0 itself. The link with t_0 which is expressed in the head clause (where the speaker is not thinking of the past time-sphere but is concerned with the state of the world at t_0) is no longer relevant in the next part of the discourse. The speaker now concentrates on the time of the telling, which is completely over at t_0 . It follows that the domain which is initially established in the pre-present sector is further developed as if it were a past time-sphere domain. There is thus a shift of temporal perspective from the pre-present sector to the past time-sphere. The STO functioning as central TO is referred to in the present perfect tense, but any other STO introduced into the domain is referred to by means of a past time-sphere tense. This is clear from (19), whose tense structure is represented by Figure 4.10. (The vertical dotted line represents the shift of temporal perspective from the pre-present to the past.) The following sentences also illustrate the shift of perspective that takes place when a pre-present domain that does not include t_0 is expanded:

(20)

- (a) I haven't met anybody yet who *was* not interested in money.
- (b) I've been reading about it while I *was* away. (WTW 75)

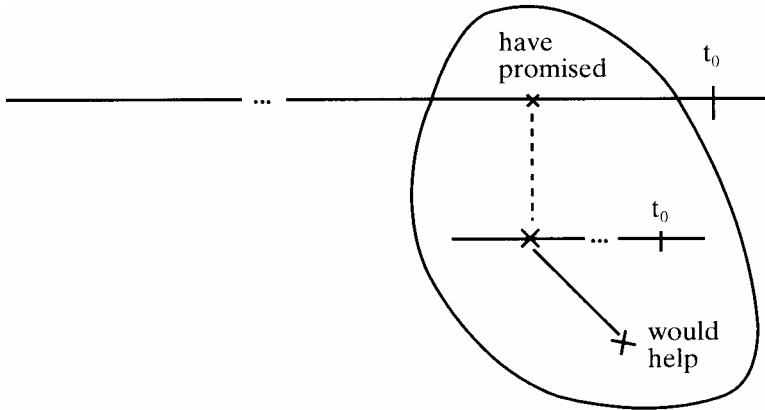


Figure 4.11 The tense structure of (21 a)

- (c) Coke has tended to increase its control when results *were* sluggish in a given country. (WSJ)
- (d) Many a motel owner—when we’ve stopped there again—has remembered us and has said he *preferred* our dogs to most children. (BR)
- (e) Have you found what you *were looking* for?
- (f) Have your written reports and proposals ever been rejected even though you *knew* you *were* right? (from an advertising brochure)

It follows from this shift of temporal perspective from the present time-sphere to the past time-sphere that not only the preterite but also the other tenses typical of the past time-sphere can be found in subclauses relating an STO to the time of a situation described by means of an indefinite perfect:

(21)

- (a) I have never promised that I *would help* you.
- (b) He has told me several times that he *had refused* offers of help.
- (c) Has she ever told you anything after she *had quarrelled* with her husband?

The structure of (21 a) is represented by Figure 4.11.

It should also be noted that apart from expanding the pre-present domain, the tense form of the subclause may under certain conditions also shift the domain. *That*-clauses, for example, easily allow a shift of domain if the speaker wants to relate the STO of the *that*-clause directly to t_0 rather than to the STO of the HC.¹³ This is the case in examples like the following, in which both the HC and the subclause use an indefinite perfect to establish a pre-present domain:

(22)

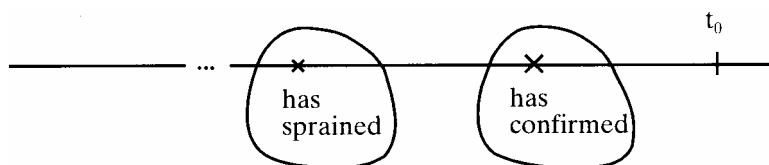


Figure 4.12 The tense structure of (22 a)

- (a) The doctor has already confirmed that Bill *has sprained* his ankle.
- (b) The news agency has reported that the astronauts *have landed*.
- (c) I have heard that he *has left* for Australia.¹⁴

The tense structure of examples like these can be represented as in Figure 4.12.

The present perfects in the subclauses of examples like (22 a–b) are absolute present perfects. Other absolute tense forms, such as the preterite or the future tense, can be found too:

(23)

- (a) The doctor has already confirmed that Bill *will be* unable to walk to school for some time because he *has sprained* his ankle.
 - (b) The doctor has already confirmed that Bill *sprained* his ankle yesterday.
 - (c) There *have been* times in my life when I *required* soothing, and then I *have felt* that a whiff of tobacco *stills* and *softens* one like a kiss of a little child.
- (Poutsma 1926b: 259)

The last example illustrates both temporal subordination and domain shifting. In the first conjunct, the perfect *have been* establishes a pre-present domain and the preterite *required* expresses simultaneity within this domain. Then there is a shift to a new pre-present domain, established by *have felt*.¹⁵ This domain is not further expanded, for the present tense forms *stills* and *softens* again shift the domain, this time to the present sector.

13 The reason why the speaker may wish to relate the STO of the subclause directly to the zero time is that in this way he or she represents the situation in question as still relevant to the structure of the world at the time of speech.

14 The implicature of present result/relevance attaching to the form *has left* in this example is lost if the STO of the *that*-clause is temporally subordinated. This explains the relative unacceptability (out of context) of *I have heard that he had left for Australia*.

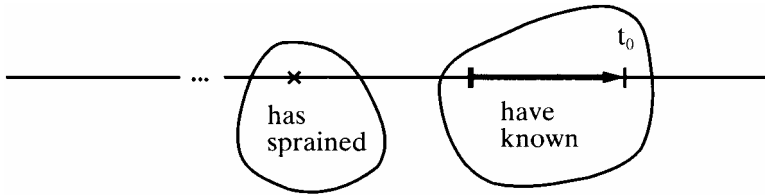


Figure 4.13 The tense structure of (24 a)

12.2.2

Pre-present domains established by a continuative perfect

When the present perfect has continuative meaning, its STO, and hence the domain which it establishes in the pre-present sector, includes t_0 . In that case there is no special system of tense forms to represent domain-internal relations. Since the domain includes t_0 , all relations normally start from t_0 , i.e. they are 'absolute relations', expressed by tense forms that establish a domain in one of the absolute sectors. The only exception is when the situation that reaches up to t_0 is an iterative situation, i.e. involves a number of subsituations that lie completely before t_0 . In that case the pre-present domain may sometimes be developed as if it were a past one.

12.2.2.1

Reference to an anterior situation

A situation that is anterior to a situation that is located in the pre-present sector necessarily lies wholly before t_0 . To refer to it the speaker can therefore make use of the two possibilities which he or she generally has to refer to situations that are over at t_0 : the speaker can use a preterite to locate the situation in the past time-sphere or use an indefinite perfect to locate it (as lying wholly before t_0) in the pre-present sector. For example:

(24)

- (a) I have known for some time that Jim *has sprained* his ankle,
- (b) I have known for some time that he *did* not *do* it.

In such sentences the subclause establishes a domain of its own. That is, there is a shift of domain rather than temporal subordination—see Figure 4.13, which represents the tense structure of (24 a).

15 The presence of the adverb *then* entails that the domain established by *have felt* is actually interpreted as simultaneous with the domain established by the first clause. As noted in section 10, there is nothing unusual about this. It often happens that two independently established domains are felt to cover the same time interval.

12.2.2.2

Reference to a simultaneous situation

It goes without saying that a situation can only be conceived as simultaneous with a situation including t_0 if that situation itself also includes t_0 . Because of this, two tenses can be used to refer to the situation in question, viz. the present perfect (as a continuative perfect) or the present tense. The former will be used if the speaker wants to explicitly represent the situation as starting before t_0 ; if this is not the case, the present tense is more natural. For example:

(25)

- (a) Ever since this morning I have been working while you *have been doing* nothing.
- (b) Jim has known for some time that Joy *has been/is* in Reno. (Berezovsky 1978:91)
- (c) Up to now he has always maintained that he *works* in a bank.
- (d) Since then I've felt I've *missed* some vital experience. (Vermant 1983:73)
- (e) You know, ever since we started this treasure thing, I've had the strangest feeling we're *being followed*, (ibid.)
- (f) All the time I've *been* away, it's been shrinking and shrinking. (Fenn 1987:7)
- (g) Have all these things been fizzling away on this stove while we've *been* at the inquest? Suppose they'd been all burnt up. (PAD 63)

It should be noted that in examples like these the present perfect or present tense in the subclause is not a relative tense. (There is only one relative tense that can express simultaneity in a pre-present domain, viz. the preterite.) Rather, the present perfect and present tense forms in the subclauses of (25 a-g) are absolute tense forms, each of which establishes a domain which is (roughly) simultaneous with the HC-domain (since both domains cover a timespan which reaches up to t_0).

If the HC refers to an iterative situation, which involves subsituations that lie completely before t_0 , the subclause situation can be conceived as simultaneous with these subsituations rather than as holding at t_0 . In that case the pre-present domain is developed as if it were a past one, which means that simultaneity is expressed by the past tense:

(26) 'You don't think it's on the small side?'—'It looks fine to me.'—'I've been thinking lately it *was* rather small.' (CP 167)

12.2.2.3

Reference to a posterior situation

Since a continuative perfect establishing the central TO of a domain represents this TO as including t_0 , any situation that is posterior to the central TO must also

be posterior to t_0 . To refer to such a situation we therefore use the future tense (i.e. the absolute tense used for establishing a post-present domain):

(27)

- (a) Ever since this morning he has repeated that he *will move* to London.
- (b) Since then, his main fear has been that his blindfold *will slip* down accidentally. (SW 275)

In examples like these the future tense does not expand the pre-present domain but establishes a post-present domain of its own.

If the HC refers to an iterative situation, the pre-present domain can again be developed as if it were a past one:

(28)

- (a) He has been telling me for months that he *was going to return* the books to me, but he still has not done it.
- (b) It's a beautiful place. My friend has been working all the time I have been in here, just so's I *would have* somewhere nice to come out to. (DR-NORM)

12.3

The present sector

The present tense can be used to locate a situation at t_0 . The STO is then the central TO of a present domain. The central TO of a present domain by definition includes t_0 or coincides with it. It follows that any temporal relation starting from the central TO is in fact a relation that starts from t_0 , i.e. an 'absolute' relation of the type that shifts the domain. This means that it is not possible to express anteriority or posteriority in a present domain by means of a finite verb form. Since the central TO includes t_0 , reference to an anterior or posterior situation by means of a finite verb form will automatically mean that the situation is located in one of the other absolute sectors. Needless to say, the verb form in question is then an absolute tense form (which creates a domain of its own). (However, things are different when a nonfinite verb form is used, as in *He seems to have been ill*. As already said, a nonfinite verb form cannot establish a domain; it expresses no more than a single temporal relation with a contextually given TO (which is usually the HC-STO or t_0). In the above example the perfect infinitive thus expresses anteriority in the present domain.)

As far as simultaneous situations are concerned (as in *John says that he is ill*), there are in principle two possibilities. We may assume that, like the preterite, the present tense can be used not only as an absolute tense but also as a relative one expressing simultaneity in a present domain. Alternatively, we may say that not only *says* but also *is* in the above example establishes a present domain, and that these two domains are interpreted as simultaneous because both STOs are simultaneous with t_0 . In what follows I will adopt the former analysis.

However, there is nothing crucial depending on this choice, and the principles that will be formulated in the next chapters could easily be adapted to accommodate the latter analysis.

It follows from the above remarks that the system of tense forms to relate an STO to the central TO of a present domain is as follows:

(a) To refer to a simultaneous situation we use the present tense:

(29)

(a) I am working, while he *is doing* nothing.

(b) I am just saying to the others that I *think* John *does not mean* what he *is saying*.

(b) To refer to an anterior situation we use either the past tense or the present perfect, depending on whether we want to locate the situation in the past time-sphere or in the pre-present sector:

(30)

(a) I am just explaining that I *did* it last night.

(b) I am just explaining that I *have not been* able to do it.

As noted above, these *that*-clauses involve an absolute tense form establishing a new domain. If this domain is expanded (i.e. if the STO of the *that*-clause serves as binding TO for another STO), the tense to express this relation will be in accordance with the systems typical of past and pre-present domains, respectively:

(31)

(a) He says he was attacked by a man who *wanted* to steal his wallet,

(b) He says he has been attacked by a man who *wanted* to steal his wallet.

(c) To refer .to a posterior situation we use the future tense (which is the absolute tense that is normally used to refer to the post-present) or some other expression establishing a post-present domain:¹⁶

(32)

(a) I know John *will be* in London tomorrow.

(b) Why don't you admit you *are leaving* the country?

(c) I think it's *going to rain*.

To relate another situation to the bound post-present STO we will use the tenses that are typically used to represent relations in a post-present domain (see below).

12.4

The relations in the post-present sector

When a post-present domain is expanded, there is a shift of temporal perspective: the central TO is treated as if it were t_0 . This opens up all sorts of possibilities, for t_0 is the time from which the four absolute sectors are defined. Something similar happens when a post-present domain is expanded: since the central TO is a 'pseudo- t_0 ', it is a point from which four different 'pseudo-absolute' sectors are defined, and the systems of expressing domain-internal relations in these pseudo-absolute sectors are exactly the same as those observed above in connection with the absolute sectors (which are directly related to t_0). This gives the following results.

12.4.1

Anteriority in a post-present domain

As we have seen, a situation that is anterior to t_0 (in the sense of 'lying completely before t_0 ') is located either in the past time-sphere or in the pre-present sector. In the same way, a situation that is to be represented as anterior to the central TO of a post-present domain is located either in the pseudo-past time-sphere or in the pseudo-pre-present sector which are defined relative to the pseudo- t_0 . This means that we will use either the preterite or the present perfect.

(a) We use the preterite if we want to locate the situation at a time which is past with respect to the post-present pseudo- t_0 :

(33)

(a) (*said while planning someone's murder*) If we carry out this plan tonight, the police will believe that he *was killed yesterday*.

(b) The police will find out that you *were staying* here today, and not in London.

16 In spite of the fact that *be going to* and *will/shall* are not always interchangeable, they do have the same basic temporal meaning. After investigating the use of the future tense and the *go*-future in various languages, Fleischman (1982:97) concludes that her findings 'militate strongly in favor of regarding the *go*-paradigm as a legitimate future-tense form'. This conclusion is confirmed by the findings reported in Bybee, Pagliuca and Perkins (1991:30). Haegeman (1989:291) similarly argues 'that at the level of sentence meaning *be going to* and *shall/will* are equivalent, and that the difference between them is to be found in the constraints they impose on the processing in context of the utterance in which they occur'.

As for the use of the present tense with future time reference (e.g. *I'm leaving tomorrow*), it was noted in section 11 that this is an instance of a 'shift of temporal perspective', i.e. the speaker represents the future as if it were the present. However, this kind of present tense does refer to the future and therefore establishes a post-present domain.

- (c) From next year onwards, any employees that *didn't work* hard enough will be fired at the end of the month.

It should be noted that in sentences like (33 a-c) the STO that is represented as anterior to the post-present binding TO (pseudo- t_0) may either precede t_0 (as in (33 a)), or include t_0 (as in (33 b)), or follow t_0 (as in (33 c)). However, the relation between the STO and t_0 is never expressed by the tense form: the latter only expresses the relation between the STO and the pseudo- t_0 . The position of the STO relative to t_0 is actually irrelevant to this system.

It follows that in examples like these the use of the preterite does not entail a shift of domain, because the preterite does not relate the STO of the subclause to t_0 . The STO in question is temporally related to the central TO of a post-present domain, which is treated as if it were t_0 . This means that the past tense is used as a pseudo-absolute tense, which actually serves to express anteriority in the post-present domain.

The pseudo-past STO can serve as binding TO for other STOs that are introduced into the domain. The latter STOs are then referred to by means of the tense system that is typical of the past time-sphere. That is, the preterite is used for simultaneity, the past perfect for anteriority, and the conditional tense for posteriority:

(34)

- (a) (*said when planning someone's murder*) The police will think that he was killed when he *came* home after he *had attended* the meeting at his club. They will believe that he was murdered by the syndicate because he *had said* he *would* soon leave America,
 (b) I will lie and say that when I reached the station the train *had left*. (Schopf 1984:299)

The tense structure of the first sentence of (34 a) is represented by [Figure 4.14](#). In examples like (34 a-b), the post-present domain contains a pseudo-past subdomain, which is expanded as if it were a true past domain.

(b) When an STO is located in the time-interval leading up to the central TO of the post-present domain, this time-interval is treated as if it were the pre-present sector. This means that the present perfect is used to locate the STO in it:

(35)

- (a) Don't follow him. He is too clever. He will soon find out that you *have been following* him.
 (b) What will happen after the others *have left*?
 (c) John is coming when he *has eaten*. (Wachtel 1982:340)
 (d) From next month onwards, any bread that *has not been sold* by the end of the day will be given to the orphanage.

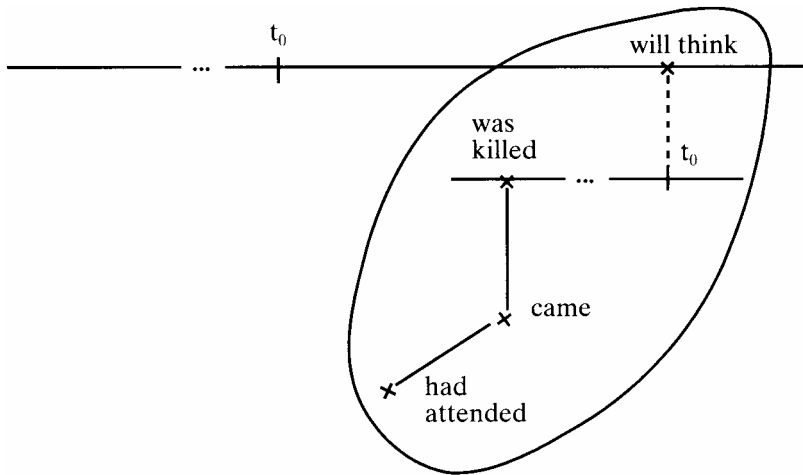


Figure 4.14 The tense structure of the first sentence of (34 a)

The pseudo-pre-present STO can serve as binding TO for other STOs that are introduced into the domain. The latter STOs are then referred to by means of the tense system that is typical of the pre-present sector. For example, if the present perfect is of the 'indefinite' type, its STO will be treated as if it were a past TO. This means that the pseudo-pre-present subdomain created by the present perfect within the post-present domain will be treated as if it were a past domain:

(36)

- (a) (It is wrong not to talk to him about your feelings. You should tell him he makes you unhappy. If he does not adapt his behaviour, you must threaten to leave him.) I am sure he will remember then that you have told him several times before that you *were* unhappy,
- (b) (Her brother is going to tell her that he intends to change his will. In these circumstances we had better carry out our plan to kill her at once.) The police will surely enquire if anybody has ever heard her say that her brother *had told* her that he *would change* his will. (So we must make certain that she gets no chance of telling anybody.)

The tense structure of (36 b) is represented by [Figure 4.15](#).

12.4.2

Simultaneity in a post-present domain

An STO that is simultaneous with the central TO of a post-present domain is represented as if it were simultaneous with t_0 . This means that the present tense is used.

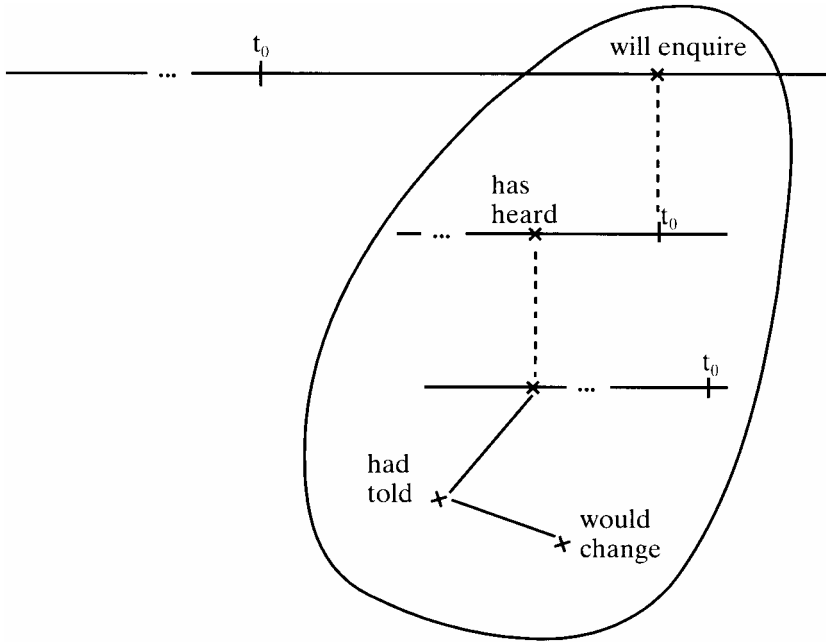


Figure 4.15 The tense structure of (36 b)

(37) (If you leave the country) the police will never find out where you *are*.
The tense structure of this sentence is represented by Figure 4.16.

Because the default use of the present tense is to locate an STO at t_0 rather than at a post-present pseudo- t_0 , this use of the present tense requires a disambiguating context.

As will be noted below, the use of a present tense to express simultaneity in a post-present domain is restricted to some kinds of subclause (e.g. complement clauses, conditional clauses, restrictive relative clauses, etc.). In unembedded clauses and in the other types of subclause (e.g. nonrestrictive relative clauses) the post-present domain must be ‘re-established’ by the use of another future tense form. Hence the difference between (38 a) and (38 b):

- (38)
- (a) You will be met by a man who *is wearing* a red tie.
 - (b) You will be met by a man. He *will be wearing* a red tie.

Not only the central TO of a post-present domain but also any STO that is represented as simultaneous with it is treated as a pseudo- t_0 . This means that we will use one of the four pseudo-absolute tenses to relate another STO to it:

- (39)

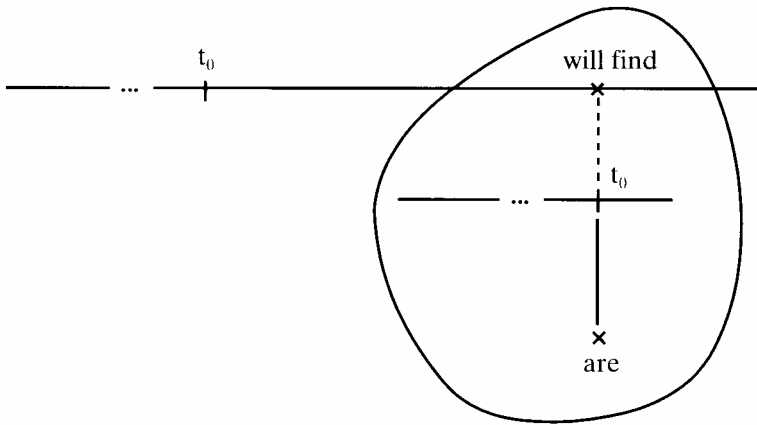


Figure 4.16 The tense structure of (37)

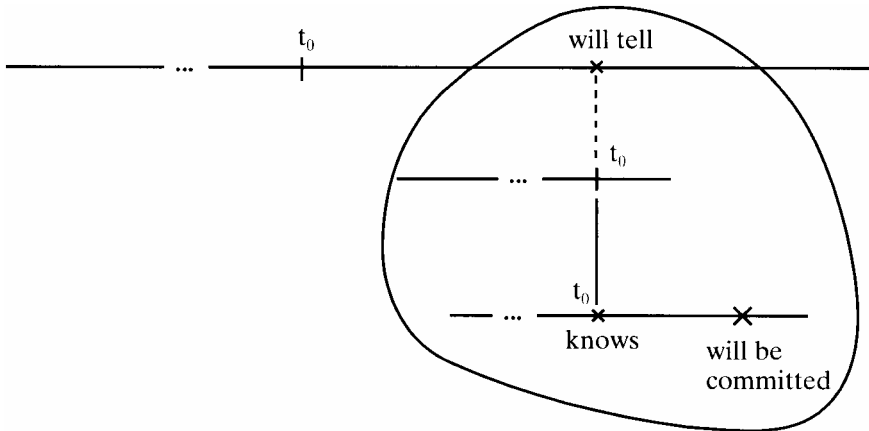


Figure 4.17 The tense structure of (39 d)

- (a) Everybody will see that you are doing nothing while your wife *is doing* all the work.
- (b) They will find out that Jack thinks that he *was born* in London.
- (c) (Do not inform Jack, or) he will go and tell the police that he knows why the murder *has been committed*.
- (d) (Do not inform Jack, or) he will go and tell the police that he knows that a murder *will be committed*.

The tense structure of (39 d) is represented by [Figure 4.17](#).

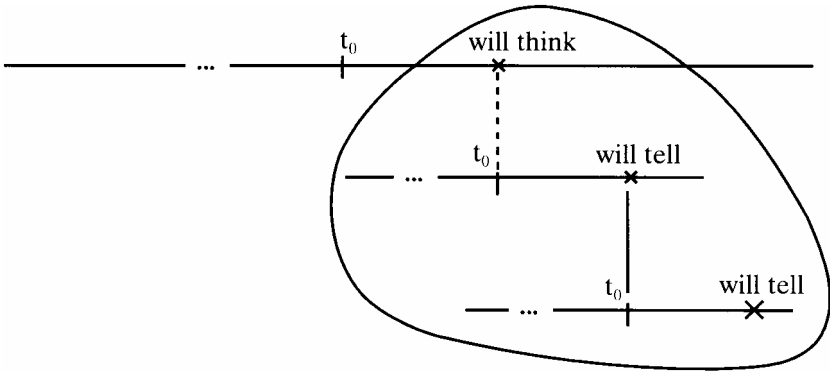


Figure 4.18 The tense structure of (41 d)

12.4.3

Posteriority in a post-present domain

To represent an STO as posterior to the central TO we use the future tense, which locates the STO in the pseudo-post-present and creates a pseudo-post-present subdomain within the post-present domain:

(40) He will say that he *will* never *leave* her.

In the same way as an STO that is posterior to t_0 is treated as if it were t_0 , an STO that is posterior to such a pseudo- t_0 is also treated as a pseudo- t_0 when another STO is related to it. This means that the bound STO is again located in one of the four pseudo-absolute sectors:

(41)

- (a) She will think that John will tell the others that he *was* here today.
- (b) She will think that John will tell the others that he *has not told* them the truth yet.
- (c) She will think that John will tell the others that he *is* dissatisfied with their behaviour.
- (d) She will think that John will tell the others that he *will tell* them the truth later.

Figure 4.18 represents the tense structure of (41 d).

If another STO is temporally subordinated to the STO of the most deeply embedded clause of (41 d), the latter STO is again treated as if it were t_0 , etc.

To close off this section on temporal subordination, I would like to point out that the above theory neatly accounts for an interesting difference that we may observe between (42 a–b) and (43 a–b):¹⁷

(42)

- (a) John *had left* at five o'clock.
- (b) John *had left* when Bill *arrived*.

(43)

- (a) John *will have left* at five o'clock.
- (b) John *will have left* when Bill *arrives*.
- (c) (According to the plan, John will no longer be there at midnight.) He *will have left* earlier, viz. when Bill *arrived*.

Sentence (42 a) is ambiguous between two readings, which we can paraphrase as 'It was the case that John had left—the time of leaving was five o'clock' and 'At five o'clock it was the case that John had already left'. (The latter interpretation is strongly invited if we give *at five o'clock* initial position in (42 a), or when we add *already*.) Sentence (42 b) is ambiguous in exactly the same way. Sentence (43 a) is ambiguous too: *at five o'clock* again indicates either the time of John's leaving or the TO to which John's leaving is anterior. However, when we replace *at five o'clock* by a *when*-clause, we now see that we cannot use the same tense form for both readings. If the *when*-clause is to indicate the time to which John's leaving is anterior, it must use the present tense *{arrives}*. If it is to indicate the time of John's leaving, it must use the past tense *{arrived}*.

The theory of temporal subordination we have developed accounts for this difference between (42 b) and (43 b-c). In (42 b) both STOs are located within the same past time-sphere domain. The past perfect *had left* represents John's leaving as anterior to some TO. Since the past tense can be used to express simultaneity with any TO in the past domain, it is not clear from the verb form *arrived* whether Bill's arrival is to be interpreted as simultaneous with the STO of the HC (i.e. the time of John's leaving) or as simultaneous with the TO to which John's leaving is anterior. Hence the ambiguity of (42 b). In (43 b-c) there is no such ambiguity because the reference is now to a post-present domain. In a post-present domain different verb forms are used to express simultaneity. To express simultaneity with the central TO, the present tense is used. This is the case in (43 b). To express simultaneity with a TO that is anterior to the central TO (and which is therefore a pseudo-past TO), the past tense is used. This is the case in (43 c), where the future perfect *will have left* represents John's leaving as anterior to a post-present TO and the past tense *arrived* represents Bill's arrival as simultaneous with John's leaving. (That the past tense must be used for simultaneity follows from the fact that in a post-present domain the expression of

17 Some of these sentences use a future perfect in the HC. This is a tense which has not been discussed yet. It will be investigated in section 14. However, this presents no problem for the observation that is made here, since the point that is made concerns the use of the tenses in the WCs of these examples.

anteriority involves a shift of temporal perspective to the past time-sphere.) So, both the ambiguity of (42 b) and the nonambiguity of (43 b-c) are predictable from our theory.

The above explanation also accounts for the different tense forms in the following pairs:

(44)

(a) I will thank you to wipe your feet when you *enter* the house.

(b) I will now thank you for wiping your feet when you *entered* the house.

(45) I hope you will not forget to call me when the phone *rings*.—If I remember to, then will you never forget my calling you when the phone *rang*?

13

SUBDOMAINS AND RECURSIVITY

It should be clear from the previous section that some of the rules involved in the English tense system apply recursively. This is true, for example, of the rules for expanding a past domain. Once a past domain has been established, a relative tense that expresses a relation in this domain can be said to create a subdomain within the past domain. Any STO introduced into a past domain is therefore potentially the central TO of a past subdomain, which is developed in exactly the same way as the overall domain. This accounts for the fact (noted in section 12.1) that the tense used for expressing a particular relation in a past domain is always the same, irrespective of the location of the binding TO in the domain. For example:

(46) John said that Bill had told him that he would resign if he didn't get his way.

As shown in [Figure 4.19](#), each of the tense forms here creates a past domain or subdomain. Each of the temporal relations in the domain is a relation between the central TO of a subdomain and the central TO of the (sub)domain into which it is temporally embedded.

Recursivity is also to be observed in post-present domains. The rule stipulating that the central TO of a post-present domain is treated as if it were t_0 applies recursively in the sense that a TO represented as simultaneous with or posterior to that central TO is also treated as if it were t_0 , etc.

14

TWO SYSTEMS TO REFER TO THE FUTURE

In some types of subclasses the speaker may in principle choose between temporal subordination and establishing a simultaneous domain. Consider:

(47)

(a) When your father comes back, he will not understand what *is going on*.

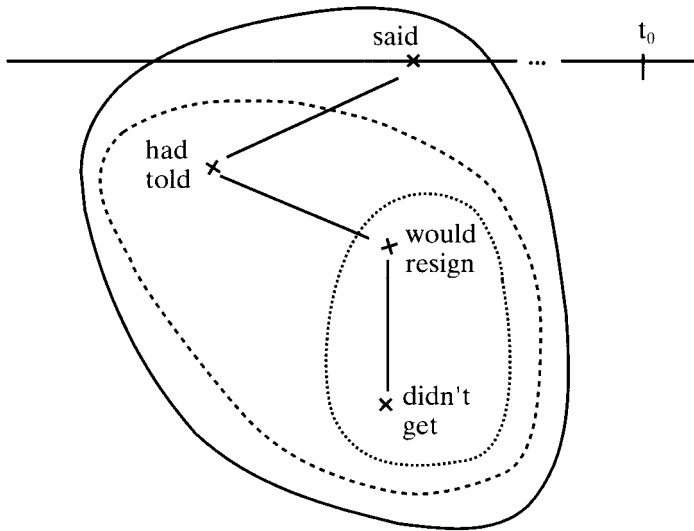


Figure 4.19 The tense structure of (46)

- (b) The servants will no doubt hear everything that *is said*.
- (c) You will be met by a woman whose hair *is dyed* black.
- (d) I'll get there faster than you *do*.

In these examples the relevant tense forms can be interpreted as expressing simultaneity in the post-present domain established by the HC, i.e. as relative tense forms. As noted above, temporal subordination in a post-present domain involves a shift of perspective: the central TO is treated as if it were t_0 . This means that the present tense is used to express simultaneity with the central TO. The present tense is thus used as a 'pseudo-absolute' tense. However, sentences like (47 a-d) are ambiguous, because the present tense in the relative clause can also be interpreted as a (true) absolute tense (i.e. as locating the STO of the relative clause at t_0). If the speaker wants to avoid this ambiguity, he or she can rule out the latter interpretation by using a future tense (establishing a simultaneous domain) in the relative clause:

(48)

- (a) When your father comes back, he will not understand what *will be going on*.
- (b) The servants will no doubt hear everything that *will be said*.
- (c) You will be met by a woman whose hair *will be dyed* black.
- (d) I'll get there faster than you *will*.

An important conclusion to be drawn from these examples is that there are two systems to locate an STO in the post-present sector, which I call the 'Present

Perspective System' and the 'Future Perspective System', respectively. The Present Perspective System consists of tenses which are used to express a relation in an already established post-present domain. Present Perspective System forms are therefore relative tense forms. As far as their form is concerned, Present Perspective System forms are often pseudo-absolute forms, because the binding TO is often a TO that is treated as if it were t_0 . This is the case when the binding TO is the central TO, or a TO simultaneous or posterior to the central TO, or a TO simultaneous or posterior to a TO which is simultaneous or posterior to the central TO, etc. (see section 12.4). Other Present Perspective System forms are not pseudo-absolute forms. Thus, in *After the interview they will check whether it was true what you told them* the form *was* is a pseudo-absolute tense form representing its STO as anterior to the central TO (which is treated as if it were t_0). This *was* creates a pseudo-past subdomain which is developed as if it were a true past domain. The form *told* expresses simultaneity within this subdomain. Since both past tense forms express a relation in the post-present domain, both of them are Present Perspective System forms. However, only the first of them is a pseudo-absolute form.

By contrast, the Future Perspective System consists of tenses that establish a post-present domain. It comprises the future tense (as absolute tense) as well as two tenses that not only establish a post-present domain but also indicate a relation in it: the future perfect and the tense that is built with *will be going to*. For example:

(49)

- (a) There will be major festivities next summer. All the people will be singing and dancing in the streets. Their country *will then have been founded* ten years ago.
- (b) We'd better not call on him at six. He *will be going to leave* then.

The first two sentences of (49 a) use the Future Perspective System to establish two post-present domains which are interpreted as simultaneous with each other. The third sentence refers to a situation which is interpreted as anterior to the one referred to in the previous sentence. Since the third sentence is an unembedded one, it cannot use the Present Perspective System to express this relation of anteriority: as we will see below, the Present Perspective System cannot be used in clauses that are syntactically independent. The sentence in question therefore has to use the future perfect. This is a Future Perspective System form which not only establishes a post-present domain (by means of *will*) but also represents the STO as anterior to the central TO of the domain in question (by means of *have...-en*). The future perfect thus combines the functions of absolute and relative tense. We can call it an 'absolute-relative' tense.¹⁸

An absolute-relative tense differs from a purely absolute one in that it relates its STO to the central TO of a new domain and not to t_0 . It therefore fails to make explicit the temporal relation that holds between the STO in question and t_0 , and

can therefore be used irrespective of whether the new situation holds before, at or after t_0 :

(50)

- (a) If there is a strike tomorrow, *we'll have worked* in vain yesterday.¹⁹
- (b) If there is a strike tomorrow, *we'll have worked* in vain today.
- (c) If there is a strike the day after tomorrow, *we'll have worked* in vain tomorrow.

(51) By next Sunday I'll be sick of exams: *I'll have had four* exams last week and another four in the coming week. (Leech 1971:54)

In the preceding paragraphs we have defined the Present Perspective System and the Future Perspective System as two different systems to locate STOs in the post-present sector. The Present Perspective System is the system of tenses that is used to express a relation in a post-present domain without establishing the domain in question. The Future Perspective System, by contrast, consists of tenses that establish a post-present domain and possibly express a relation in it.

The different function of the two systems entails that they have a different distribution. Only the Future Perspective System can be used in syntactically independent clauses and in subclauses whose STO is not represented as temporally dependent on that of the HC, such as NRCs (nonrestrictive relative clauses):²⁰

(52)

- (a) You *{will hear/*hear}* about it tomorrow.
- (b) You *{will have heard/*have heard}* about it by tomorrow.

18 I am using the term differently from Comrie (1986:272). Comrie applies the label 'absolute-relative tense' to the past perfect, because the meaning of this tense 'combines absolute time reference (one time point is located prior to the here-and-now) with relative time reference (the action referred to by the verb in the pluperfect is located prior to this contextually established reference point)'. I do not think this is a felicitous use of the term 'absolute-relative tense'. If we accept this criterion, any tense that is not a (pure) absolute tense is an absolute-relative one. Since all those tenses which I treat as (pure) relative tenses relate an STO to a TO which is itself related (directly or indirectly) to the temporal zero-point, all of them must be considered absolute-relative tenses if we adopt Comrie's criterion. This is unfortunate, for it blurs the difference between tenses like the future perfect which both establish a domain and indicate a relation in it and tenses like the past perfect which express a single temporal relation in a domain.

19 Imagine the following setting for this sentence: yesterday it was Saturday, but the workers of a particular firm worked all the same because they were behind schedule and wanted to catch up. Today, however, they hear on the radio that there may be a strike tomorrow in one of their supply companies. If the strike goes through, they will soon be unable to continue working and will be behind schedule again. Under these circumstances, one of the workers might remark *If there's a strike tomorrow, we'll have worked in vain yesterday*. (For a similar example, see Comrie 1985:73.)

(53)

- (a) I will ask John, who *{will know/*knows}* the answer tomorrow,
- (b) I will ask John, who *{will have heard/*has heard}* the answer by then.

By contrast, only the Present Perspective System can be used in conditional clauses and adverbial time clauses.²¹ Compare:

(54)

- (a) By the end of this year we *will have been living with* them for twelve months. (Future Perspective System)
- (b) We will know them better when we *have been living with* them for twelve months. (Present Perspective System)

(55)

- (a) He *won't write* to her until he has received a letter from her.
- (b) He *will have received* a letter from her before he *writes* to her.

(56)

- (a) The shopkeeper *will leave* when/after he *{has locked up/*will have locked up}*.
- (b) The shopkeeper *will have locked up* when/before he *{leaves/*will leave}*.

(57)

- (a) John *will be* in trouble.
- (b) If John *{is/*will be}* in trouble, I will help him.

There are also subclauses (e.g. RRCs) in which either system may be found:

(58)

- (a) And afterwards I will tell him that I will buy a car with the money he *{has given/will have given}* me.
- (b) You will live to see the day when China *{is/will be}* an economic superpower.

20 Note that the use of the present tense in sentences like *I am leaving tomorrow* or *The train leaves in an hour* does not run counter to this. These present tense forms are not Present Perspective System forms. They result from a shift of perspective and also function as absolute tense forms establishing a post-present domain (see section 11).

A more detailed discussion of the distribution of the Present Perspective System and the Future Perspective System is presented in Declerck and Depraetere (1995).

15

THE CONDITIONAL PERFECT TENSE

The conditional perfect resembles the future perfect in that it expresses a double relation. Consider:

(59) Scott said he *would have finished* the work before the end of the week.

The conditional perfect locates its STO as anterior to some other TO in a past domain (by the use of *have...-en*), and at the same time it makes clear (by the use of *would*) that the latter TO is posterior to the central TO (or to some other TO) in the past domain. This double relation is similar to what we have observed in connection with the future perfect. There is one difference, however. The future perfect locates its STO as anterior to a TO that is directly related to t_0 (viz. the central TO of a post-present domain). For this reason we have called the future perfect an ‘absolute-relative tense’ and have said that it establishes a post-present domain. We cannot make similar remarks in connection with the conditional perfect. The binding TO to which the STO is represented as anterior is here no longer a TO that is directly related to t_0 (i.e. the central TO of a domain). It is a TO which is itself temporally subordinated. For this reason the conditional perfect cannot be said to establish the domain (though it does ‘re-affirm’ it in the sense that it makes reference to TOs that must necessarily belong to a past domain). The conditional perfect is therefore a ‘doubly relative’ tense rather than an ‘absolute-relative’ one.

For the rest, however, the conditional perfect is very similar to the future perfect. This becomes clear when we consider its distribution. The conditional perfect alternates with the past perfect in the same way as the future perfect does with the present perfect. (The latter two tenses can be used to represent an STO as anterior to a post-present TO. The difference is that the future perfect is a Future Perspective System tense, whereas the present perfect (in this use) is a Present Perspective System tense.) Like the future perfect, the conditional perfect is the appropriate tense in independent clauses and in subclauses whose STO is not represented as temporally dependent on that of the HC (e.g. NRCs), whereas the past perfect is used in subclauses whose STO is represented as temporally dependent on that of the HC (e.g. conditional clauses):

21 There are a few exceptional types of conditional sentence in which the *if*-clause is not temporally subordinated to the HC and therefore uses the Future Perspective System. These types are investigated in detail in Declerck (1991a:192–222). The (very) exceptional use of the Future Perspective System in adverbial WCs will be treated in Chapter 8. In Chapter 10 we will see that the Future Perspective System is the normal system in narrative WCs.

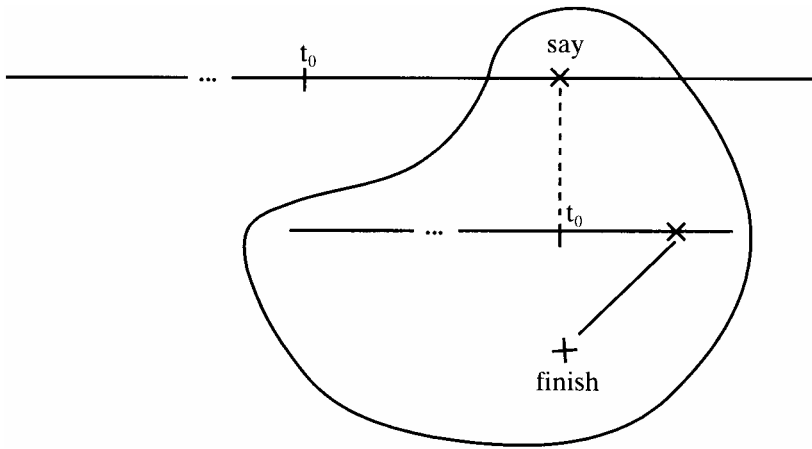


Figure 4.20 The tense structure of (61)

(60)

- (a) I said I would tell everything to Phil, who *{would have returned/*had returned}* by then.
- (b) He whispered that he would tell me all about it if I *{gave/*would give}* him a fiver.
- (c) He threatened that he would tell the truth to anybody that *{asked/*would ask}* for it.
- (d) He assured me that he would never do anything that I *{didn't approve/*wouldn't approve}* of.

A final remark to be made is that the future perfect can sometimes also be used as a 'doubly relative' tense (like the conditional perfect) rather than as an 'absolute-relative' one. This is the case when the origin of the posteriority relation is not t_0 but a post-present pseudo- t_0 , as in (61):

(61) He will say that he will have finished before five o'clock.

As shown in Figure 4.20, *will say* here creates a post-present domain and *will have finished* expresses a double relation within the domain: it represents the time of finishing as anterior to a TO which is itself posterior to the time indicated by *will say*. (As noted above, the latter time is treated as if it were t_0 .) In other words, in the same way as the four absolute tenses can be used as 'pseudo-absolute' tenses to express relations in a post-present domain, the future perfect can be used as a 'pseudo-absolute-relative tense'. In that case the origin of the posteriority relation is not t_0 but a post-present pseudo- t_0 .

16

DIFFERENT WAYS OF ESTABLISHING A DOMAIN

A domain may be established either directly or indirectly. It is established directly by the use of an absolute or absolute-relative tense form. It is established indirectly if a (purely) relative tense is used out of context or in a context that does not establish the domain to which the relative tense refers. For example:

(62) I know that the manager *had left* the office.

The form *know* establishes a present domain, while the relative tense form *had left* locates its STO in a past domain. Since there is no absolute past tense establishing it, the latter domain is referred to for the first time. This means that it is the form *had been* which, in a sense, establishes the domain. By locating its STO in a past domain, it asserts the existence of this domain. This is an indirect way of establishing a domain. The STO referred to is not the central TO of the domain, and need not even be bound by the central TO. All that the past perfect expresses is that the STO is anterior to some TO in a past domain. It thus establishes the domain indirectly in that it conveys the information that both the STO and the binding TO must belong to one and the same past time-sphere domain.

Needless to say, this way of establishing a domain requires a context containing information about the temporal location of the binding TO. Out of context, sentences like (62) can receive no full temporal interpretation.

17

IMPLICIT TIME OF ORIENTATION

As noted in section 7, a temporal domain consists either of a single STO or of a set of TOs, at least one of which is an STO (i.e. the time of a 'predicated' situation referred to by a tense form). If the domain contains a TO that is not an STO, the TO in question may be temporally specified by a time adverbial or by the context, or it may be temporally unspecified. In the latter case we can speak of an 'implicit TO'. For example:

(63)

- (a) At five o'clock, John *had* already *left*.
- (b) We must hurry up or the train *will have left*.
- (c) Mary is still angry because she *had not been warned*.
- (d) Those missiles *will have cost* a fortune to develop.

In all four examples, the relevant STO is represented as anterior to a TO which is not an STO. In (63 a), the TO in question is specified by *at five o'clock*. In (63 b) the TO is interpreted as being the time of our reaching the platform. In (63 c), the TO must also be recoverable from the context. In these three cases the TO in question must be identifiable for the sentence to be interpretable. However, this

is no longer the case in (63 d). We can interpret this sentence without knowing the precise temporal location of the binding TO (which is the central TO of the post-present domain). The binding TO thus remains implicit: we know that it is a TO that forms part of the structure of the tense used, but its precise temporal location remains vague because it is not the time of a situation referred to and it is not specified by the context or by an adverbial.

There is also an implicit TO in sentences like the following:

(64)

- (a) I *was going to ski* this afternoon (but this storm makes it impossible),
- (b) When Sybil *had* finally *got* out of bed, her husband *had left* for the office.

In (64 a) the STO is represented as posterior to a TO which remains unidentified. In sentence (64 b) the two STOs are not related to each other, but both are represented as anterior to the same implicit TO. What is expressed is that there was a time at which it was the case both that Sybil had got out of bed and that her husband had left for the office. The time in question remains implicit because it is not an STO and is not specified by an adverb or by the con-text.²²

There is also an implicit TO in the tense structure of adverbial time clauses introduced by *after/before/since/until/etc.* These conjunctions are interpreted as ‘after/before/since/until/etc, the time that’. In these paraphrases the implicit TO is made explicit by the NP *the time*.²³ The tense of the time clause usually relates its STO to this implicit TO rather than to the STO of the HC. This accounts for the seemingly deviant use of the tenses in such temporal clauses, where conjunctions expressing anteriority (*after*) or posteriority (*before, until, by*) are often followed by a verb form expressing simultaneity rather than by a verb form expressing anteriority or posteriority:

(65)

- (a) I will do it after I {*get/*will get/have got/*will have got*} your payment.
- (b) John will leave before Mary {*arrives/*will arrive*}.
- (c) I will stay here until she {*comes/*will come*} back

In (65 a), the STO of the *after*-clause may be represented either as anterior to the STO of the HC (by using *have got*) or as simultaneous with the TO that is implicit in the meaning of *after* (=‘after the time that’). In (65 b–c), the STO of the time clause can only be represented as simultaneous with the implicit TO (by the use of the present tense as Present Perspective System form). Representing it as posterior to the STO of the HC (by the use of the future tense as Present Perspective System form) or as posterior to t_0 (by the use of the future tense as Future Perspective System form) yields an ungrammatical result.

18

DIRECT AND INDIRECT BINDING

When the STO of a subclause is temporally subordinated to another STO, the binding STO is usually the STO of its HC (i.e. the clause on which the subclause is syntactically and semantically dependent). This form of binding I call ‘direct binding’. However, most types of subclause also allow their STO to be temporally subordinated to the STO of a clause other than their HC. In that case we can speak of ‘indirect binding’. For instance, the relative clause is bound directly in (66 a) and indirectly in (66 b):

(66)

- (a) She expected he would do it on a day when she herself *was* absent,
- (b) She expected he would do it on a day when she herself *would be* absent.

In these examples, the situation referred to in the relative clause is interpreted as simultaneous with that of its HC (i.e. the *that*-clause) and posterior to that of the matrix (i.e. the highest clause in the syntactic structure). Since a tense form can relate an STO to only one TO at a time, only one of these two relations can be expressed by the tense form. In (66 a), *was* represents its STO as simultaneous with the STO of its HC, thus effecting direct binding. In (66 b), *would be* effects indirect binding: it represents its STO as posterior to the STO of the matrix (*expected*). (The information that the STO of the relative clause is to be interpreted as simultaneous with that of its HC is now no longer expressed by the tense form.)²⁴ The tense structures of (66 a–b) are therefore as represented by [Figures 4.21](#) and [4.22](#), respectively. (The wavy line in [Figure 4.22](#) represents the simultaneity relation not expressed by the tense form.)

22 Speaking of ‘the time in question’ is a simplification. In [Chapters 4–5](#) we will see that the times of the two situations are related to different TOs, but that these two TOs are interpreted as simultaneous with each other because of *when*.

23 The conjunctions in question have actually developed from structures resembling their paraphrases, i.e. from phrases of the kind ‘preposition+cataphoric pronoun or temporal noun+ relative clause’. Thus, in Old English *after* was not yet used on its own as a conjunction. Instead a prepositional phrase of the form ‘after then that’ (realized as *after þam þat/þe* or something similar) was used (see Mitchell 1987:346ff., Visser 1970:868). In Middle English these phrases were still used, though the phrase *after tyme* (which literally means ‘after the time that’) was also occasionally used (see the *Middle English Dictionary*, Part A.2. p. 137). In later times these prepositional phrases were reduced to *after that*, which finally developed into *after*. Similarly, the conjunction *before* has developed from a phrase of the form ‘before the time that’ (variously realized in Old English as *toforan þam timan þe*, *foran to þam timan þe* and *toforan þam þe*—see Mitchell 1987:379). The only conjunction that has fully retained its prepositional form is *by the time that*. At some time this structure too was reduced to *by that* (see Poutsma 1929: 672), but for some reason this evolution was reversed: the form *by that* eventually dropped out of use and the full phrase *by the time that* became widespread again.

If we translate these structures in terms of subdomains, we can say that direct binding means that the relative tense form used creates a subdomain within the domain or subdomain created by the tense form of its HC, whereas indirect binding means that the relative tense form used creates a subdomain which does not form part of the subdomain created by the tense form of its HC.

The following sentences illustrate the use of the past perfect for indirect binding. In all of them, the past tense (effecting direct binding) could be used instead:²⁵

(67)

(a) There had been a lad amongst Morse's fellow pupils in the sixth form who *had possessed* a virtually photographic memory—a memory which Morse had much admired. (WTW 10)

(i) Bill promised that he would ring me up the next day even though he {*would be/*was*} extremely busy that day.

(ii) Bill promised that he would ring me up the next day if he {*was not/*would not be*} too busy.

(i) He wondered if she had had her bath. There had been quite enough time for her to *have had it*, but would she go out into the cold immediately after having had it? (LOD 57)

(b) ...whose youngest daughter, Sarah, had been killed by an articulated lorry as she *had cycled down*. Cumnor Hill on her way to school...(WTW 40)

(c) He said that John had waited outside while Mary *had locked up*. (Huddleston 1969:792)

There are a further couple of things to be noted. First, it will be shown in [Chapter 5](#) below that direct binding must be defined slightly differently where WCs are concerned, since a WC-STO is never related directly to the STO of its HC. Even when this would seem to be the case, as in *He left when I arrived*, the temporal structure realized is more complicated, since *when* introduces a bit of temporal structure which mediates between the two STOs. I will not go into this any further here but refer the reader to the discussion in [Chapter 5](#).

24 Indirect binding is the rule in some types of subclause, but is ruled out in others. Compare:

25 There is a similar use of the perfect infinitive in infinitival clauses:

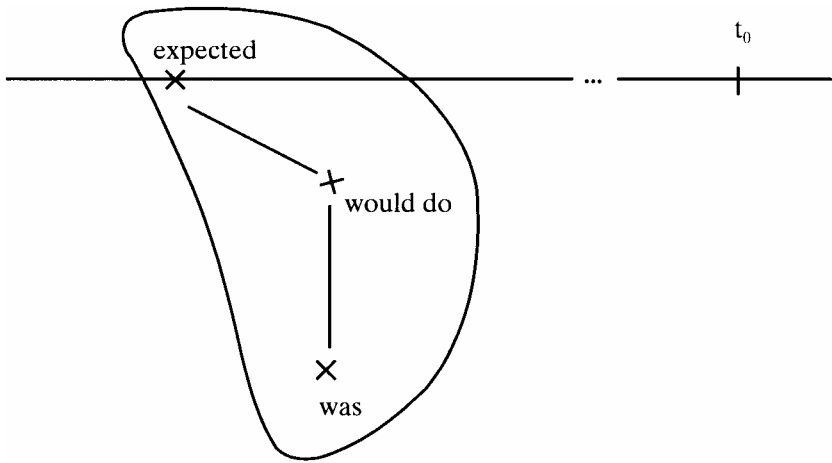


Figure 4.21 The tense structure of (66 a)

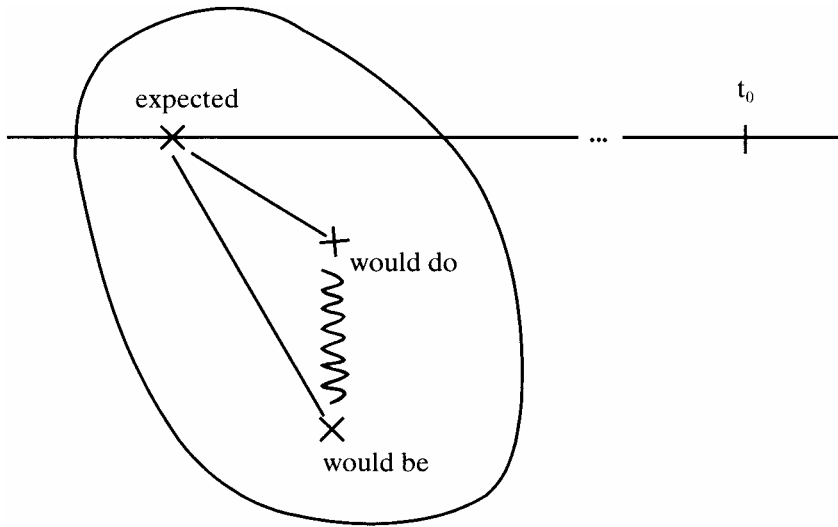


Figure 4.22 The tense structure of (66 b)

It should also be noted that the choice between direct and indirect binding may be the past time-sphere counterpart of the choice between (direct) binding and a shift of domain within the present time-sphere. Sentences (68 a-b) run parallel to (69 a-b):

(68)

- (a) Usually, John had been abroad when I *needed* him.
- (b) Usually, John had been abroad when I *had needed* him.

(69)

- (a) Usually, John has been abroad when I *needed* him.
- (b) Usually, John has been abroad when I *have needed* him.

In (68 a) and (69 a) the WC is bound directly (in terms of simultaneity). In (68 b) it is bound indirectly, whereas in (69 b) *have needed establishes* a (simultaneous) domain.

Another point to be made is that indirect binding may be ungrammatical in certain contexts, but obligatory in others, witness the following examples:

(70)

- (a) He knew that John would stay there until Bill {*came/*would come*} back.
- (b) I said I would go to John, who {*would be/*was*} back by then.
- (c) (I expected that when she was older) she would also pray to the Lord every night to thank Him for what he {*had given/would have given*} her during the day.

(71)

- (a) I hoped that John would go away after he {*had got/*would have got*} his way.
- (b) What we hoped was that we would receive aid from John, who {*would have been informed/*had been informed*} by then.

In (70 a) and (71 a) the STO of the time clause must be bound directly; in (70 b) and (71 b) the STO of the nonrestrictive relative clause must be bound indirectly; in (70 c) the restrictive relative clause allows the two possibilities. This means that the speaker cannot always choose freely between direct and indirect binding: the choice depends in the first place on the kind of clause describing the situation whose STO is bound. As a matter of fact, only few of the types of subclause that allow direct binding also allow indirect binding, and they do so under very strict conditions only (see section 1 of [Chapter 7](#)). Indirect binding is clearly the marked possibility.

In (70)–(71) the italicized past tense and past perfect forms represent direct binding, while the italicized conditional tense and conditional perfect forms represent indirect binding. The choice between these forms of binding is the past time-sphere counterpart of the choice between the Present Perspective System and the Future Perspective System in a post-present domain. Thus, (70)–(71) run completely parallel to (72)–(73):

(72)

- (a) I know that John will stay there until Bill {*comes/*will come*} back
- (b) I think that I will go to John, who {*will be/*is*} back by then.

- (c) (I expect that when she is older) she will also pray to the Lord every night to thank Him for what he *{has given/will have given}* her during the day.

(73)

- (a) I hope that John will go away after he *{has got/*will have got}* his way.
 (b) What we hope is that we will receive aid from John, who *{will have been informed/*has been informed}* by then.

In (72 a) and (73 a) the time clause must use the Present Perspective System; in (72 b) and (73 b) the NRC must use the Future Perspective System; in (72 c) the RRC allows the two possibilities.

As appears from the above examples (70)–(73), we can distinguish between three types of clause on the basis of the distributional properties of the tense forms, (a) Some clauses referring to the post-present use the Present Perspective System and cannot use the Future Perspective System. The past counterparts of these clauses must be bound directly, (b) Some clauses referring to the post-present use the Future Perspective System and cannot use the Present Perspective System. The past counterparts of these clauses must be bound indirectly, (c) Some clauses referring to the post-present can use either the Present Perspective System or the Future Perspective System. The past counterparts of these clauses may be bound either directly or indirectly.

In the preceding paragraphs I have introduced the concept of indirect binding in connection with past domains. However, indirect binding can also be observed in post-present domains. Consider:

(74)

- (a) After your journey you will admit that you have often felt unhappy when you *were* alone in your cabin, (direct binding)
 (b) After your journey you will admit that you have often felt unhappy when you *have been* alone in your cabin, (indirect binding)

In (74 a), the WC is bound directly because its tense form (*were*) represents the WC-STO as simultaneous with the STO of its HC (*have felt*). In (74 b), the WC is bound indirectly: *have been* represents the WC-STO as anterior to the STO of the matrix (*will admit*), which is treated as if it were t_0 and which also binds the HC-STO (*have felt*).

19

CONCLUSION

The purpose of this chapter has been to sketch a model of the English tense system which provides us with the necessary descriptive tools for analysing the use of tenses in concrete sentences. In the following chapters the concepts

that have been defined will be applied to sentences involving various types of WC: canonical WCs (Chapters 5–9), narrative WCs (Chapter 10) and other types of WC (Chapter 11).

5

WHEN-CLAUSES AND TEMPORAL STRUCTURE

1

THE TEMPORAL INTERPRETATION OF A CLAUSE

The temporal interpretation of a clause is determined not only by the tense used but also by the time adverbial(s) (if any), the context and such factors as the (non) progressive aspect expressed by the verb form, the (non)durative and (a)telic Aktionsart (lexical aspect) expressed by the verb phrase, etc. In [Chapter 9](#) I will investigate how these elements together determine the temporal interpretation of the clause. In the present chapter I will concentrate on the role of tense forms and time adverbials. Together, these create temporal structures which to a large extent determine the temporal interpretation of the clauses in which they occur. Such a temporal structure consists of various temporal constituents (i.e. time intervals) and temporal relations holding between them. In the previous chapter, which was concerned with the English tense system, I have examined the constituents and relations that form part of the semantic structure of the tenses. In this section I will consider all the constituents and relations that are relevant to the temporal interpretation of a sentence, including those that form no part of the semantic structure of the tenses. In doing so I will start from the illustrative example (1).

(1) At five o'clock John was in the kitchen.

1.1

Temporal constituents

1.1.1

'Time established (by adverbial or context)'

One time interval belonging to the temporal structure expressed in (1) is the time indicated by *at five o'clock*.¹ I will refer to such a time (established by a time-specifying adverbial) as the TE ('time (that is) established'). A TE can be

established not only by an adverbial in the relevant clause but also by the context.

The use of the past tense or future tense normally requires that the TE be known to the hearer: out of context, a sentence like *John was in the kitchen* will automatically raise the question *When?* As long as the hearer does not know the answer to this, he or she cannot know which particular situation (i.e. which of the possibly many instances of John being in the kitchen) is referred to.

When there are several time adverbials, the time intervals indicated are as a rule interpreted as including each other, so that the adverbials ultimately establish a single TE (see Declerck 1991a: 284–92). Thus, in *John left at three o'clock in the morning on Christmas Day, 1989* the four TEs established by the four time adverbials are related in terms of inclusion, which means that they all contribute to the specification of a single time, viz. the time when John left.

1.1.2

'Time of the Full Situation' vs 'situation-TO'

Sentence (1) does not tell us exactly how long John was in the kitchen. It just tells us that at five o'clock it was the case that John was in the kitchen. That is, it just refers to that part of the situation that is simultaneous with five o'clock. It follows that when we speak of 'the situation', we must know which of the following two ideas we have in mind:

- (a) We may be thinking of the situation as it actually took place. In this sense the situation corresponds with the time that John actually was in the kitchen. In what follows I will use the term 'Full Situation' to refer to this. The Full Situation is the complete situation as it actually takes place in the world that is being referred to.
- (b) We may also be thinking of that part of the Full Situation (possibly all of it) about which a claim is made in the sentence. As noted in section 4 of [Chapter 4](#), I will use the term 'Predicated Situation' to refer to this.² The Predicated Situation is the situation as it is represented and temporally located by the sentence, i.e. that portion of the Full Situation (possibly all of it) about which a statement is made or a question asked. In (1), it is that part of the Full Situation that is simultaneous with five o'clock.

From now on, when I use the term 'situation' by itself, it should be understood that what I have in mind is the Predicated Situation.

Any Predicated Situation takes up an interval of time (which may be punctual or durative). This time of the Predicated Situation is what I have called the

¹ Note that the term 'interval' is used here to denote points of time as well as longer time-spans.

‘situation-TO’ (STO). It should be carefully distinguished from the ‘time (of actualization) of the Full Situation’ (TFS). In what follows, the phrase ‘time of the situation’ should always be interpreted in the sense of ‘time of the Predicated Situation’, i.e. ‘STO’.

In sum, a distinction will be made between the following concepts:

Full Situation: the situation as it actualizes in the world referred to (which may be either the real world or an alternative (e.g. future) one).

TFS: the time of actualization of the Full Situation.

Predicated Situation: the situation as it is predicated, i.e. that part of the Full Situation about which a statement is made or a question asked.

STO: the time of the Predicated Situation.

While all four concepts may play a role in the temporal interpretation of sentences (see [Chapter 9](#) below), only the notion of STO is strictly relevant to the study of tense. A tense structure is a structure consisting of times (TOs) and temporal relations. An STO is such a time, a TFS is not.

1.2

Temporal relations

1.2.1

The relation between the TFS and the STO

Since the Predicated Situation may be either the Full Situation or a portion of it, the temporal relation between the TFS and the STO can be defined in terms of inclusion: the TFS includes the STO, either properly or otherwise. In the latter case the STO coincides with the TFS.

1.2.2

The relation between the TE and the STO

If the time adverbial specifies the time of the situation, there is a similar relationship of inclusion between the TE and the STO: the TE includes the STO, either properly (i.e. the STO coincides with a portion of the TE) or otherwise (i.e. the STO and the TE are simultaneous: they coincide completely).³ For example, the TE coincides with the STO in (2 a–b) and properly includes it in (2 c):⁴

² In Declerck (1991a) the term ‘time of the situation’ (TS) is used for what is here called ‘Predicated Situation’. The label ‘TS’ is actually a misnomer, for the Predicated Situation is not the time of the situation but the situation itself (or that part of it about which a claim is made in the sentence)—see below. Capital initials will henceforth be used for ‘Full Situation’ and ‘Predicated Situation’ in order to make clear that they are used in the sense defined in this section.

(2)

- (a) At five o'clock I was waiting for the bus.
- (b) I waited for him from two o'clock till four.
- (c) He left yesterday.

It follows that when the TE is punctual (nondurative), the STO must also be punctual. This is the case in (1) and (2 a). (In (1) the STO is just that part of the TFS that coincides with the punctual TE—see also section 3.3 of Chapter 9.) If the TE is durative, the STO either coincides with the TE (as in (2 b)) or is properly included in the TE (as in (2 c)). In some cases either of these interpretations is possible:

(3) John was in the kitchen this afternoon.

This sentence is true in each of the following cases: (a) John was in the kitchen all afternoon, but not at any other time (in this case the TE coincides with the STO, and the latter is the TFS); (b) John was in the kitchen at some time in the course of the afternoon (in this case the TE properly includes the STO and the latter coincides with the TFS); (c) John was in the kitchen all afternoon and also at some time preceding or/and following the afternoon (in this case the TE coincides with the STO and the latter is a proper subpart of the TFS).⁵

1.2.3

Simultaneity as expressed by tense forms

The distinction between the TFS and the STO renders it possible to define the simultaneity relation expressed by a tense form as a relation of coincidence, not overlap. If we interpret *was* in *Bill saw that Joan was angry* as a relative past tense expressing simultaneity, we take the STO in question to be just that part of the TFS that coincides with the HC-STO. Joan may have been angry before and/or after Bill saw that she was, but this is not part of the semantics of the sentence.

The coincidence relation in question is a unidirectional one. Saying that an STO is represented as simultaneous with another STO means that the former depends for its temporal interpretation on the latter, but not vice versa. Thus, in

3 As we will see below, it is possible that the relation of inclusion does not hold between the TE and the STO but between the TE and another TO, to which the STO is temporally related. However, let us disregard this possibility for the time being.

4 Because of this inclusion relation, adverbials that establish a TE (i.e. specify time rather than duration or frequency) are often called 'frame adverbials' (see e.g. Bennett and Partee 1978:22). Unlike some other linguists, I will use the term 'frame' to refer to TEs that properly include the STO as well as to TEs that coincide with the STO. For a similar use of 'frame' to mean 'true frame' as well as 'filled frame', see Hamann (1989:41) and Binnick (1991:307).

He said he was hungry it is the STO of the *that*-clause that derives its temporal specification from the simultaneity relation with the STO of the HC, not the other way round.

1.3

Temporal structure vs tense structure

The relation (of proper inclusion or coincidence) that holds between the TE and the STO is not expressed by the tense used in the sentence. The absolute past tense forms in (1) and (3) express just one relation, viz. that between the STO and t_0 : the preterite makes clear that the STO is anterior to t_0 and lies in the past time-sphere. Generally speaking, tense forms do not express the temporal relations that hold between the TE and the STO and between the STO and the TFS.

The diagrams that have been given in [Chapter 4](#) represent only the temporal relations that are signalled by the tenses. Every tense form realizes a structure in which the STO is related to t_0 (which is usually the time of speech) either directly or via one or more other TOs. Such an intermediate TO may be the STO of another clause or an implicit TO or a TO which is specified by a time adverbial (i.e. which coincides with, or is included in, a TE) or is recoverable from the context. These various TOs (viz. t_0 , the STO and possibly one or more intermediate TOs), together with the relations between them, constitute the tense structure of a verb form. This structure does not involve the elements Predicated Situation, Full Situation, TFS and TE, nor any of the relations that hold between the Predicated Situation and the Full Situation, between the STO and the TFS and between the TE and the STO. The reason is that none of these relations is expressed by a tense form. The diagrams that have been given up to now have only represented the structures of the relevant tense forms: they have been ‘tense diagrams’ rather than time diagrams representing the full temporal structure of a sentence.

It should be clear, then, that when we say that a tense form relates a situation to a TO, what we mean is that it relates the STO to the TO in question. A tense structure consists exclusively of TOs and relations holding between them. The notions ‘situation’ (whether Predicated Situation or Full Situation), ‘TFS’ and ‘TE’ are not directly relevant to the semantic structure of the tenses.⁶

⁵ When *this afternoon* presents the only new information (i.e. when the sentence is used in answer to *When was John in the kitchen?*) sentence (3) implicates that it was only this afternoon that John was in the kitchen. (This implicature follows from the Maxim of Quantity.) But there is no such implicature when *this afternoon* represents old information (e.g. if (3) is used in answer to *Where was John this afternoon?*).

1.4

Possible relations between the TE and the STO

Up to now we have assumed that a time adverbial always specifies (i.e. includes) the STO of the clause which it modifies. However, a TE may also specify another TO in the tense structure of the clause. In fact, the TE may be related to the STO of the clause containing the time adverbial in three different ways.

1.4.1

Time adverbial used as 'STO-adverbial'

The time adverbial may specify the time of the situation (i.e. the STO) directly. As noted above, this means that there is a relation of inclusion (i.e. either proper inclusion or coincidence) between the TE and the STO.

Whether the relation is one of proper inclusion or coincidence depends in part on whether the time adverbial represents the TE as homogeneous or as heterogeneous. A time adverbial represents a time interval as homogeneous if it is an expression that can refer not only to the interval as a whole but also to portions (points or other subintervals) of it. For example, the adverbial *in 1983* can be used not only to refer to the complete timespan which began on 1 January 1983 and ended on 31 December 1983 but also to talk about any day in that period. Thus, in *In 1983 I still lived in Paris* the adverbial presumably refers to the twelve-month period as a whole, while in *My father died in an accident in 1983* we interpret it as referring to a particular day in that period. By contrast, an adverbial is heterogeneous (i.e. represents a TE as heterogeneous) if it can only refer to the TE as a whole, not to any smaller portion of it. For example:

(4)

(a) From 1983 to 1986 I lived in Paris.

(b) *My father died in an accident from 1983 to 1986.

If the adverbial is a heterogeneous one, the TE coincides with the STO.⁷ If it is a homogeneous adverbial, the TE includes (properly or otherwise) the STO. In both cases we can say that the TE 'specifies' the STO.

Let us call an adverbial which specifies the STO of the clause which it modifies an 'STO-adverbial'. The inclusion relation holding between the TE and the STO can be represented in the ways shown in [Figure 5.1](#).

6 Of course, a TE is indirectly relevant to the use of the tenses, since most time adverbials are compatible with a limited number of tenses only. (For example, *last week* cannot collocate with a present perfect or future tense.) However, a TE is not one of the TOs involved in the structure of any tense, and the relation between the TE and the included STO is not expressed by any tense form.

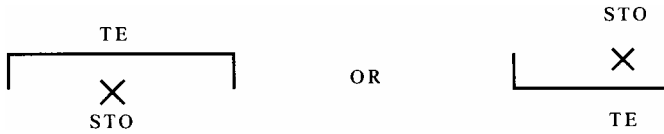


Figure 5.1 The inclusion relation between the TE and the STO

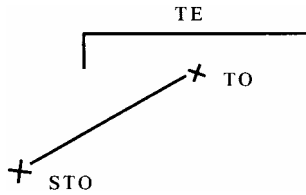


Figure 5.2 The temporal structure of (5)

1.4.2

Time adverbial used as 'TO-adverbial'

Apart from specifying the STO of the clause that it modifies, the adverbial may also specify (i.e. include) another TO in the structure of the tense of the HC.⁸ For example, in (5) the TE specifies the TO to which the STO (the time when John left the house) is anterior (see Figure 5.2):

(5) At five o'clock John had already left the house. Let us call an adverbial that indicates a TO other than the STO a 'TO-adverbial'. An adverbial that is preposed is very often a TO-adverbial (see Hornstein 1977:532, Dinsmore 1982:225, Sharwood Smith 1982:68–71).⁹ The following are some further examples:

(6)

- (a) When last we left him, FBI Agent Nick Mancuso had solved a murder mystery, unraveled a Washington political scandal, and racked up some pretty good ratings numbers in the miniseries 'Favorite Son. (WSJ)
- (b) However, locals in Baltimore, New Orleans and Mobile, Ala., still hadn't reached agreements when their previous local contracts expired. (WSJ)

7 This explains the unacceptability of (4 b), since a durative TE cannot coincide with a punctual (nondurative) STO.

8 Any TO can in principle be specified, but there are a number of restrictions—see Declerck (1991a: 358ff.). For example, a past time adverb cannot refer to the temporal zero-point.

1.4.3

Time adverbial used as 'multiple TO-adverbial'

If the adverbial represents the TE as homogeneous, the TE may also include several, or all, the TOs in the structure of the tense.

(7)

(a) Yesterday John *had* already *left* when we arrived,

(b) Today John *had* already *left* when we arrived.

In (7 a) the TE established by *yesterday* includes both the HC-STO (i.e. the STO of the head clause) and the past TO (specified by the WC) to which the HCSTO is anterior; in (7 b) it includes the same two TOs as well as t_0 .

An adverbial that indicates more than one TO can be called a 'multiple TO-adverbial'.

2

THE TEMPORAL STRUCTURE OF SENTENCES WITH A CANONICAL *WHEN*-CLAUSE

2.1

The use of canonical WCs

Canonical WCs differ from time-specifying adverbs and phrases like *then* or *some time ago* in that they do not name a TE directly but relate the times of two situations to each other. However, in doing so they do establish a TE, and therefore function as STO-adverbials, TO-adverbials or multiple TO-adverbials:

(i) When I arrived, Gerald had not left the office,

(ii) When I arrived, had Gerald left the office?

However, he also points out that contrastive stress on anything except the time adverbial can still reverse the reading in favour of the other interpretation:

(iii) When I arrived, Gerald had not **LEFT** the office: he had in fact also **ARRIVED** then.

(8)

9 Sharwood Smith (1982:68) notes that the tendency to interpret a preposed time adverbial as (what I call) TO-adverbial is especially strong when the sentence is negative or interrogative:

- (a) I left when John arrived. (STO-adverbial)
- (b) When John arrived, I had already left. (TO-adverbial)¹⁰
- (c) I had left when John arrived. (STO-adverbial or TO-adverbial)
- (d) When I spent that day in hospital I had not got anything to eat yet at midday, (multiple TO-adverbial)

2.2

The meaning of *when*

In [Chapter 3](#), evidence has been presented that the temporal conjunction *when* is really a free relative adverb which is interpreted as ‘at a/the time at which’. This means that a canonical WC is semantically similar to an Adv-RRC (i.e. a restrictive relative clause depending on a temporal noun in adverbial function—see section 3.3 of [Chapter 2](#)). In the same way as *what* means ‘that which’, *when* is semantically equivalent to ‘then when’ (with *then* as a cataphoric pronominal adverb depending for its interpretation on the modifying WC).

As in [Chapter 2](#), I will use the abbreviation ‘NP-RRC’ for an RRC depending on a temporal NP, as in *the time when I was young*. If the NP in question forms part of an adverbial, e.g. *at the time when I was young*, the RRC is called an ‘Adv-RRC’. In order to distinguish between the RRC and the adverbial as a whole, I will refer to the latter as an ‘Adv+RRC’. Thus, *at the time when I was young* is an Adv+RRC, in which *when I was young* is an Adv-RRC. Similarly, *the time when I was young* is an NP+RRC, in which the WC is an NP-RRC.

Since a canonical WC is semantically similar to an Adv+RRC, and since an Adv+RRC usually consists of a temporal preposition plus an NP+RRC, I will start my quest for the semantic structure of WCs by examining that of NP+RRCs. Consider:

(9)

- (a) John will already have arrived next Tuesday.
- (b) Tuesday will be the day when John has already arrived.
- (c) Tuesday will be when John has already arrived.

In (9 a), *next Tuesday* establishes a TE which includes the implicit TO to which the STO (the time of John’s arrival) is anterior. In (9 b) too, the time of John’s arrival is anterior to an implicit TO included in the TE, but because the situation is now referred to in a relative clause, the TE is lexicalized as a relative adverb, viz. *when*. (The fact that *when* means ‘at which’ confirms that it functions as TE in the relative clause: in this paraphrase, *at* represents the inclusion relation and *which* (which is coreferential with *day*) represents the time interval functioning as TE.) Sentence (9 c) differs from (9 b) only in that the sequence ‘antecedent NP +relative *when*’ is replaced by the free relative *when*. The semantic (temporal) structure expressed is exactly the same: in the relative clause, *when* establishes a TE which includes the implicit TO binding the STO of the relative clause.

Consider now:

(10)

- (a) Bill will leave at a time when John has already arrived,
- (b) Bill will leave when John has already arrived.

In (10 a), the Adv+RRC *at a time when John has already arrived* establishes the TE which includes the HC-STO. In (10 b), the WC *when John has already arrived* does exactly the same thing. In both cases *when* has an adverbial function in the clause which it introduces: as in (9 b–c), *when* establishes a TE in the WC itself; this TE includes the implicit TO binding the STO of the WC. In (10 a), the antecedent of *when* is *[at] a time*. Whereas *when* functions as TE in the WC, *at a time* functions as TE in the HC. Since one of the functions of a relative is to express coreferentiality between the antecedent and the wh-constituent of the relative clause, *when* identifies the two TEs with one another. What happens in (10 b), which differs from (10 a) only in that the antecedent is not overtly expressed but contained in the free relative, is quite similar. Here too the WC as a whole establishes a TE which includes the HC-STO, while *when* establishes a TE in the WC itself and, as a relative, represents the latter TE as coreferential with the former.

In sum, the following relations form part of the semantic structure of (10 a–b):

HC-STO included in TE₁ established by WC

WC-STO anterior to implicit TO

implicit TO included in TE₂ established by *when*

TE₁=TE₂

This can be represented as in Figure 5.3, which can be simplified to the representation given in Figure 5.4 (in which the symbols representing the inclusion relation of the TEs are fused into one more complex symbol). (In these diagrams, the symbol x is used to represent any kind of TO, whether it is durative or not.)

For ease of reference, the following terms and abbreviations will be introduced. I will call the TE of the HC and the TE of the WC the ‘HC-TE’ and the ‘WC-TE’, respectively.¹¹ When concentrating on the fact that these two TEs are identical, I will use the term ‘common TE’ (abbreviated as ‘CTE’ in the figures) or ‘common frame’ to refer to either of them. In the case of an Adv+RRC, the common TE is the time interval lexicalized by the antecedent of the

10 McCawley (1981:348) writes that the time referred to by a WC used as (what I call) TO-adverbial ‘serves as a “reference point” for the main clause, in the sense that the choice of time adverbs and auxiliary verbs and their interpretation depends on relations to that “reference time”; for example, *earlier* in *When John married Sue, he had met Cynthia five years earlier* means “earlier than [reference time]”, and *already* in *When John married Sue, he had already read “War and Peace” three times* means “in the interval ending at [reference time]”.’

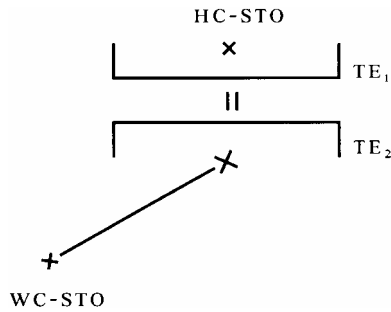


Figure 5.3 The temporal structure of (10 a–b)

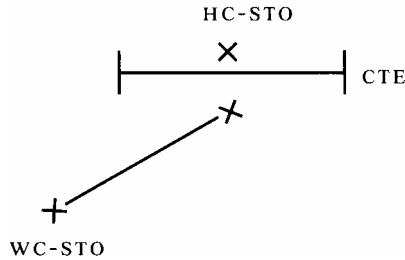


Figure 5.4 Simplified version of Figure 5.3

RRC. (For example, in *John visited her on the day that he went to London*, the common TE is the interval referred to by *the day*.) In the case of a canonical WC, the common TE remains what I will call ‘tacit’, i.e. there is no NP naming the interval in question, so that its length is unspecified.

The TO which is specified by (i.e. included in) a TE will be called the ‘included TO’ (abbreviated as ‘ITO’ in the figures). As noted above, the included TO may be either the STO or an implicit TO binding the STO. Thus, in (10 b) the HC-TE includes the HC-STO, whereas the WC-TE includes an implicit TO to which the WC-STO is anterior. Using the terminology introduced above, we can say that in this sentence the WC as a whole functions as STO-adverbial with respect to the HC, whereas *when* functions as TO-adverbial in the WC itself.

In sum, the semantic structure of *when* is as represented by Figure 5.5.

2.3

Additional evidence

The above analysis is in keeping with the following observations.

11 Throughout this book ‘head clause’ is to be understood as the clause into which the WC is syntactically embedded, irrespective of whether it is a subordinate clause or an independent one.

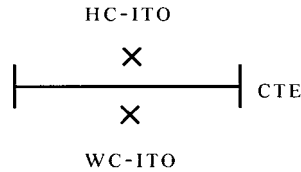


Figure 5.5 The semantic structure of *when*

2.3.1

The analysis presented here accords perfectly with the fact that *when* is interpreted as ‘at the time at which’. It accounts for the presence of each constituent in this paraphrase:

The first *at* expresses the inclusion relation between the HC-TE and the HC-ITO (the TO in the tense structure of the HC that is included in the HC-TE). The NP *the time* indicates the HC-TE.

The second *at* expresses the inclusion relation between the WC-TE and the WC-ITO.

The pronoun *which* indicates the WC-TE and, as a relative, identifies the WC-TE with the HC-TE.

2.3.2

The analysis explains why canonical WCs referring to the post-present use the Present Perspective System rather than the Future Perspective System. The use of the present tense in *I will do it when I {have/*will have} time* is usually treated as a kind of anomaly.¹² The observation that the WC-situation is interpreted as lying in the post-present has induced most scholars to claim that a verb form expressing futurity would be a more logical choice. (This claim is corroborated by the fact that cognate languages like German or Dutch actually allow the use of the future tense (for indirect binding) in canonical WCs.) For that reason some transformationalists have treated the present tense forms in WCs as derived from future tense forms by means of so-called ‘will-deletion’.¹³ However, the use of a simultaneity form appears quite logical once it is seen that the WC-STO is not related to t_0 but rather to the WC-ITO, with which it is simultaneous.

2.3.3

The analysis explains why the use of a tense form expressing simultaneity in the WC does not necessarily lead to the interpretation that the WC-STO is simultaneous with the HC-STO. Consider:

(11)

- (a) John will leave on the day that Bill arrives,
- (b) John will leave when Bill arrives.

In both cases the WC uses the present tense (as Present Perspective System form) to represent the WC-STO as simultaneous, not with the HC-STO but with an implicit TO which is properly included in the WC-TE. This WC-TE coincides with the HC-TE, which properly includes the HC-STO. Since the common TE is durative whereas the two STOs are punctual, (11 a-b) are interpreted as expressing no more than that John's leaving and Bill's arrival will happen within the common TE: they need not happen at the same moment.

The observation that the two STOs are not related to each other, except indirectly (i.e. both are included in the common TE or are related to a TO included in the common TE) thus accounts for the fact that WCs would often seem to express 'sloppy simultaneity' (Declerck 1991a: 41–5). We can speak of sloppy simultaneity when a tense form which is normally used for expressing simultaneity is used with reference to an STO which is not really simultaneous with the binding TO. A clear illustration of such a use is provided by examples like the following, where the relevant verb form is a nonfinite form whose basic temporal meaning is the expression of simultaneity, viz. a present participle:

(12)

- (a) *Opening* the drawer he took out a booklet.
- (b) *Raising* the lid of the well she pointed to the green water.
- (c) The lorry skidded off the road, narrowly *missing* a couple of cottages, and ended up in a field.

12 For example, Reichenbach (1947:296) states that the use of Present Perspective System forms in WCs is an 'anomaly' and that it 'would be more correct' to use Future Perspective System forms:

Consider the sentence: 'I shall take your photograph when you come.' The form 'when you shall come' would be more correct, but we prefer to use here the present tense instead of the future....The neglect [of the future] is possible because the word 'when' refers the reference point of the second clause clearly to a future event. A similar anomaly is found in the sentence, 'We shall hear the record when we have dined', where the present perfect is used instead of the future perfect 'when we shall have dined'.

(Reichenbach 1947:296)

13 This analysis is accepted by, amongst others, Fodor (1968:13), Kittredge (1969:15), Ross (1970), Sampson (1971:588), Vasudeva (1971:167) and Wekker (1980:99). Ejerhed Braroe (1974) points out some problems for this *will*-deletion hypothesis.

It would seem that a similar use of sloppy simultaneity forms is to be observed in sentences like the following, where the WC each time uses a tense form expressing simultaneity, in spite of the fact that the WC-STO is not really interpreted as simultaneous with the HC-STO:

(13)

- (a) When John's car breaks down, he will probably buy a new one.
- (b) When John goes on holiday he will give the key of his house to a neighbour.

However, the sloppiness of the simultaneity reading is now not due to the tense form of the WC, but to the semantics of *when*. The speaker here has a 'tacit' (i.e. unlexicalized—see section 2.2) common frame (common TE) in mind which includes both the HC-STO and the implicit TO with which the WC-STO is represented as simultaneous, but, for pragmatic reasons, the two STOs are not interpreted as W-simultaneous with each other. This means that it is not the tense form of the WC that expresses sloppy simultaneity: the tense form expresses true simultaneity between the WC-STO and the WC-ITO. In WCs, sloppy simultaneity is what in Chapter 6 I will call sloppy 'W-simultaneity' (i.e. simultaneity in the real world): it is the fact that the HC-STO is not interpreted as actually coinciding with the WC-STO in spite of the fact that the WC is used as STO-adverbial and uses a tense form expressing simultaneity. (In Chapter 9 we will see that the unmarked interpretation in this case is for the common TE to coincide with the WC-STO. Since the common TE includes the HC-STO, the HC-STO is interpreted as W-simultaneous with (because included in) the WC-STO. By contrast, a sloppy W-simultaneity interpretation is a marked reading in which the common TE does not coincide with the WC-STO.)

As noted by Stump (1985:155–6), the fact that *when* is often used to link two situations that are not strictly simultaneous does not alter the fact that *when* basically expresses simultaneity ('at the time at which').¹⁴ The point is simply that there may be pragmatic reasons for using *when* even if the situations do not really overlap: it is sometimes advisable for a co-operative speaker not to speak too precisely. Stump (1985:155) puts it this way:

Given two events e_1 , e_2 describable by sentences []₁ and []₂, respectively, speakers may describe this pair of events by means of a sentence []₁ *when* []₂ even if e_1 and e_2 are not simultaneous, provided that the temporal difference between them is negligible—that is, provided there is no salient event intermediate between e_1 and e_2 which makes it important to distinguish them temporally.

(Stump 1985:155)

It is in keeping with this pragmatic principle that the sloppy W-simultaneity use of *when* is incompatible with the use of *just*, which implies that the speaker is

being precise about the relative times of the situations: (**Just*) *when I asked him to help me, he refused*.

Since the common frame expressed by *when* is a tacit TE, the speaker may in principle conceive it as having any length he or she likes. Still, it is clear that there must be pragmatic restrictions on the possibility of representing two non-simultaneous situations as falling within the same interval of time if the interval in question is not specified. In accordance with the Gricean Maxims, the hearer will interpret the interval as the shortest interval that is in keeping with the pragmatics of the sentence and its context. Thus, in the sentence *When John got up, he put on his best clothes*, the common TE will be taken to be a sub-interval of a particular morning. It will not be interpreted as being, say, a particular week—an interpretation which would allow the possibility that the two situations actualized on different days. Moreover, an interpretation in terms of sequence will only be selected if the reading in which the HC-STO is W-simultaneous with the WC-STO is ruled out, or rendered implausible, by the context or by pragmatic knowledge. As noted above, the unmarked interpretation is for the common TE to coincide with the WC-STO, hence for the HC-STO to be included (properly or otherwise) in the WC-STO.

2.3.4

Since the common TE (which is both HC-TE and WC-TE) is not a period of indefinite length but a pragmatically restricted interval, and since the HC-TE cannot be shorter than the HC-STO (as it includes the latter, properly or otherwise), the HC-TE may have the effect of picking out from the HC-TFS a limited time interval which serves as HC-STO: it does so whenever the HC-TFS is not represented as heterogeneous (bounded).¹⁵ Thus, irrespective of how long Bill actually was at home, sentence (14) makes a statement only about that portion of the HC-TFS that coincides with the time (common TE) when it was clear that a storm was going to break:

(14) Bill was at home when the storm was going to break (and was wise enough to close the windows before it did).

It should be noted that the WC of (14) could not have this function of specifying the HC-STO (i.e. of picking out the HC-STO from the HC-TFS) if its STO were related directly to the HC-STO (in terms of posteriority). In (14), the situation referred to in the HC is a state, and states do not have an inherent initial or terminal phase (see Schopf 1984). If the WC-STO were represented as posterior to the HC-STO, this would impart a right bound to the HC-situation, but would not otherwise restrict it. In actual fact, the HC-STO in (14) is interpreted as restricted both to the right and to the left: it is a limited time interval. This

14 I therefore disagree with Richards *et al.* (1989:44), who distinguish between two ‘meanings’ of *when*, viz. the ‘case sense’ and the ‘cotemporal sense’.

restriction is effected by the WC. This clause identifies (and hence restricts) the HC-STO by providing the HC-TE. (By including the HC-STO, the HC-TE singles out the HC-STO from the temporally unrestricted HC-TFS.)

2.3.5

The analysis explains why it sometimes seems irrelevant which of the two situations is processed as HC-situation and which as WC-situation. Compare:

(15)

- (a) Josephine Baker was 68 years old when she died,
- (b) Josephine Baker died when she was 68 years old.

Since in both cases both STOs are represented as included in a common frame, there is no clear difference in temporal interpretation between these two sentences. Which of them will be used in a particular context will be determined by factors that have to do with communication structure (such as topic continuity), not by considerations that have to do with temporal interpretation.¹⁶

2.4

Direct and indirect binding

In the temporal structure discussed in sections 2.2 and 2.3, the WC-STO is bound by the WC-ITO. Since this is the unmarked way for the WC-STO to be bound, this kind of binding can be considered as ‘direct binding’, even though it deviates from the basic definition of direct binding given in section 18 of [Chapter 4](#) (viz. a subclause is bound directly if its STO is temporally related to the STO of its HC). If the WC-STO is bound directly, it is related to the WC-ITO in terms of anteriority, simultaneity or posteriority:

(16)

- (a) It happened when we *were* abroad.
- (b) It happened when we *had left* for Spain.
- (c) It happened when we *were going to leave* for Spain.

Figures [5.6–5.8](#) represent the temporal structures of these sentences, respectively.

Although most adverbial WCs are of the above type (with the WC-STO temporally bound by the WC-ITO by means of a relative tense form), this is not the only possibility. Under certain conditions (see [Chapter 7](#)) an adverbial WC

¹⁶ A timespan is represented as bounded if it is referred to as a whole, i.e. from beginning to end. (For more details, see [Chapter 9](#) below.)

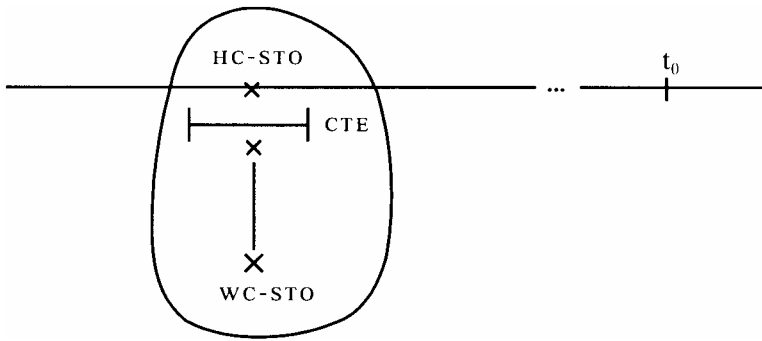


Figure 5.6 The temporal structure of (16 a)

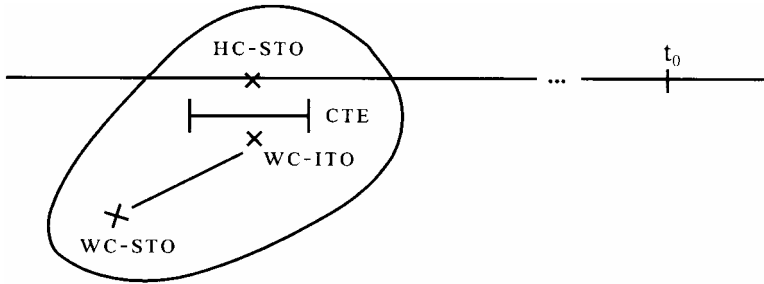


Figure 5.7 The temporal structure of (16 b)

allows indirect binding, in which case the WC-STO is related to the TO which also binds the HC-STO:

(17) When he *had first visited* the place he had been accompanied by his wife.

- (i) When I was quite young, Fred hit me with a shovel,
- (ii) When Fred hit me with a shovel, I was quite young.

The temporal structure of this sentence is shown in Figure 5.9. Structures like these will be mentioned in Chapter 6 and investigated more closely in Chapter 7. A general remark concerning indirect binding is that it is easily possible with a past perfect in the WC, but not with a tense form involving *would* or *was going to*. Thus, (19 a–b) are not valid alternatives to (18 a–b):

(18)

(a) He said he would help her when she was in trouble,

16 Ritchie (1979:95) makes the same point when he writes that (i) and (ii) are not synonymous, but that ‘the time relationships expressed in them are the same’:

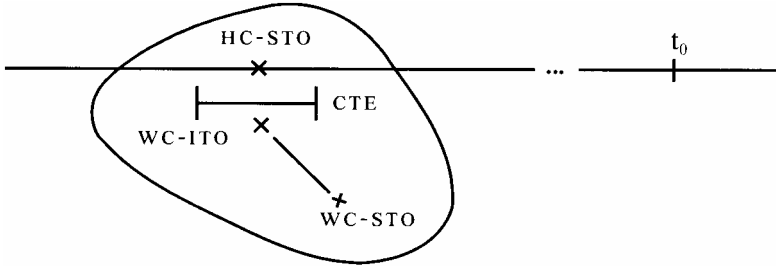


Figure 5.8 The temporal structure of (16 c)

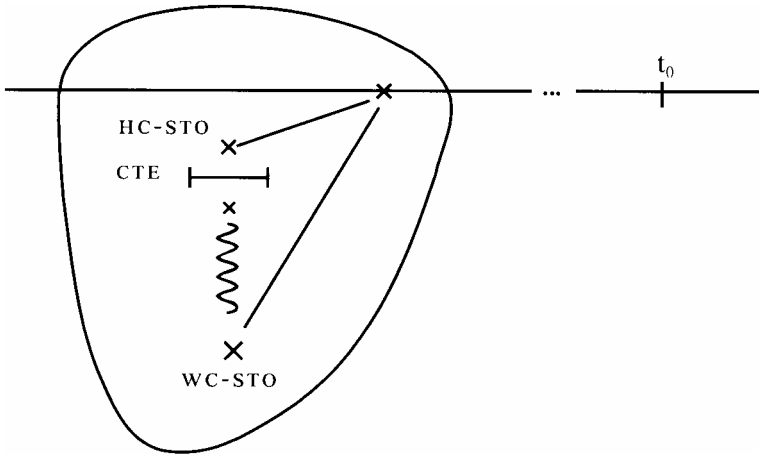


Figure 5.9 The temporal structure of (17)

(b) He was going to resign when he was sixty.

(19)

(a) *He said he would help her when she would be in trouble,

(b) *He was going to resign when he was going to be sixty.

2.5

WCs and other time adverbials

2.5.1

As noted before, a clause may contain several time adverbials, in which case the various TEs are related in terms of inclusion. Thus, in *He left after lunch yesterday* the TE established by *yesterday* properly includes the TE established

by *after lunch*, which itself functions as the TE that includes the STO. In sentences like these, one of the time adverbials may be a WC:

(20)

- (a) He left after lunch when his mother was not watching him.
- (b) He left this morning when he had finished his homework.
- (c) George Foster (...) was killed yesterday when he fell from an electric pylon.
(Edgren 1971:147)
- (d) The next day, when Hal returned from school, there was the bird in a wooden cage with bars in front. (LOB)

2.5.2

When the WC itself contains a time adverbial, the TE established by the latter includes the WC-TE (expressed by *when*) in terms of proper inclusion or coincidence. (It follows that it also includes the HC-STO (or whichever TO functions as HC-ITO).)

(21)

- (a) He was merely 51 when he died in 1950.
- (b) He seemed agitated when he left at 5.15 p.m.

Because of this relation between the two TEs, it is not uncommon for the time adverbial to follow *when* immediately:

(22)

- (a) When, in late afternoon on the last day in June, he saw two people top the ridge to the south and walk toward the house, he quit work immediately and strode to his rifle. (BR)
- (b) When, at five o'clock, I still hadn't received any news from him, I notified the police.

Note that the time adverbial inside the WC may itself be a WC:

(23) It's only that he maintains he cannot raise his arm. When it was raised up quickly by a doctor when he wasn't expecting it, he let out such a scream that the wretched doctor thought he had torn the arm right off! (LOB)

2.6

The relation between the HC-STO and the HC-TE

As stated above, the HC-ITO (i.e. the TO included in the HC-TE) may be either the HC-STO or another TO in the tense structure of the HC. In addition, the HC-

TE may include several TOs from this structure. It follows that the HC-STO may be related to the HC-TE in three different ways.

2.6.1

If the WC is used as STO-adverbial, the HC-ITO is the HC-STO, i.e. the HC-TE includes the HC-STO (properly or otherwise).

(24)

- (a) John left when he had finished his work.
- (b) John left when I was in the kitchen.

These sentences have the temporal structure shown in Figures 5.7 and 5.6, respectively. As is clear from these diagrams, the WC-STO is not directly related to the HC-STO: the WC-STO is related to the WC-ITO, which is included in the common frame (common TE), which also includes the HC-STO.

2.6.2

If the WC is used as TO-adverbial, the HC-STO is related to the HC-ITO in terms of anteriority or posteriority.

(25)

- (a) Mary *had* already *married when* she was going to have a baby.
- (b) When I arrived, John *was* just *going to leave*.

The temporal structures of these sentences are represented by Figures 5.10 and 5.11, respectively. The temporal structure of (25 a) involves the following temporal relations:

- HC-STO anterior to HC-ITO
- HC-ITO included in HC-TE
- WC-STO posterior to WC-ITO
- WC-ITO included in WC-TE
- HC-TE=WC-TE

We can therefore say that the function of *when* in sentences like these is to relate a TO from the tense structure of the HC with a TO from the tense structure of the WC. *When* relates the two TOs by representing them as included within a common TE.

2.6.3

When the WC is used as 'multiple TO-adverbial', the common frame which it establishes includes more than one TO from the tense structure of the HC. For example:

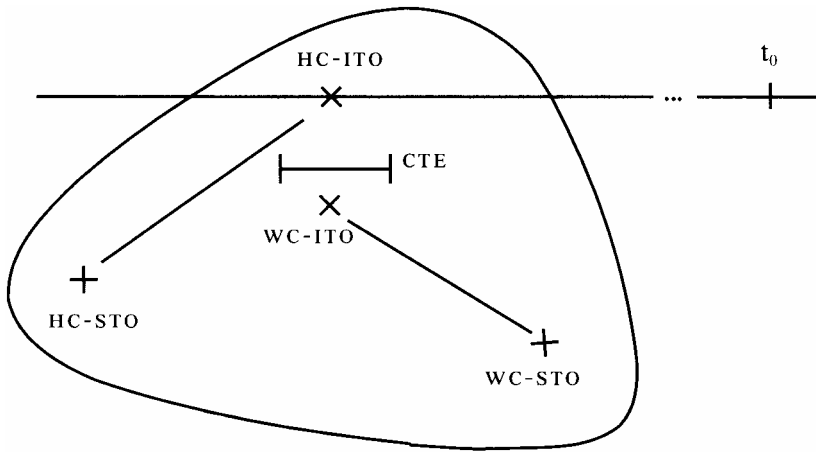


Figure 5.10 The temporal structure of (25 a)

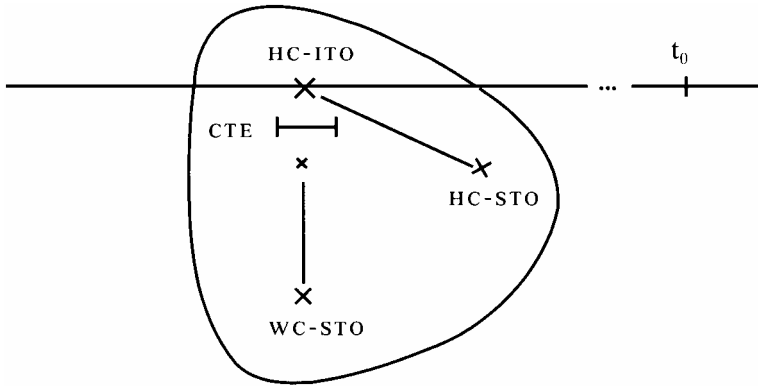


Figure 5.11 The temporal structure of (25 b)

(26) When he visited London, he had already spent all his money at 2 p.m. Here both the HC-STO and the HC-ITO to which the HC-STO is represented as anterior (and which is specified by *at 2 p.m.*) are included in the HC-TE (which is the timespan identified by the WC).

2.7

Temporal configurations

Since the WC-STO may be related to the WC-ITO in three different ways, and since the WC can be used either as STO-adverbial or as TO-adverbial, there are at least nine possible combinations of tense forms in HC and WC.

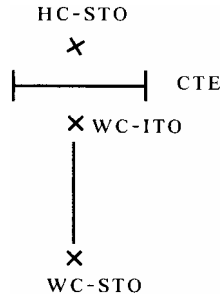


Figure 5.12 Configuration 1

2.7.1 Configuration 1

In this configuration (represented by Figure 5.12) the HC-STO is the HC-ITO, while the WC-STO is represented as simultaneous with the WC-ITO:

(27)

- (a) When I arrived, Bill was still in bed.
- (b) When we arrive the shops will probably still be closed.

The analysis offered here involves the claim that the form *arrived* in (27 a) is a relative past tense, not an absolute one. This is based on the assumption that WCs locating their STO in a past domain realize the same kind of temporal structure as WCs locating their STO in a post-present domain. As there is no doubt that *arrive* is a relative tense form (viz. a Present Perspective System form) in (27 b), I will assume that *arrived* is also a relative tense form in (27 a). (Note, however, that this assumption, according to which the WC-STO is not the WC-ITO but is represented as simultaneous with the WC-ITO, has no drastic consequences: since simultaneity is defined in terms of coincidence (see section 1.2.3), the assumption is irrelevant to the interpretation of the WC.)

2.7.2 Configuration 2

In this configuration (represented by Figure 5.13) the HC-STO is the HC-ITO, while the WC-STO is represented as anterior to the WC-ITO:

(28)

- (a) When John had finished eating I was still doing the washing-up,
- (b) When John has finished eating I will still be doing the washing-up.

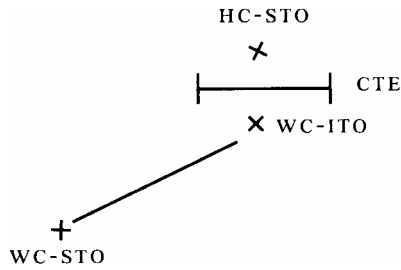


Figure 5.13 Configuration 2

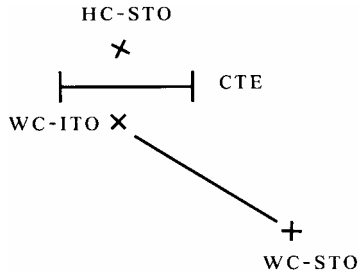


Figure 5.14 Configuration 3

2.7.3

Configuration 3

In this configuration (represented by [Figure 5.14](#)) the HC-STO is the HC-ITO, while the WC-STO is represented as posterior to the WC-ITO:¹⁷

(29)

- (a) When the police were going to intervene, I left the pub.
- (b) When there is going to be a storm it will be time to seek shelter.

2.7.4

Configuration 4

In this configuration (represented by [Figure 5.15](#)) the HC-STO is represented as anterior to the HC-ITO, while the WC-STO is represented as simultaneous with the WC-ITO:

¹⁷ Note that *is going to* in (29 b) is a Present Perspective System form, not a Future Perspective System form. It does not establish a new domain but indicates posteriority in the domain established by the HC. (As we will see in Chapter 6, canonical WCs never use the Future Perspective System in Present-day English. The question why this should be so is discussed in Declerck and Depraetere (1995).)

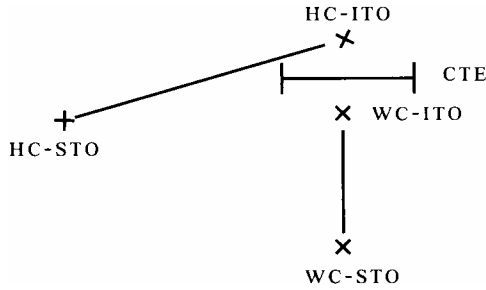


Figure 5.15 Configuration 4

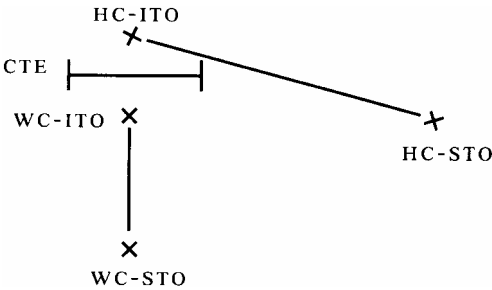


Figure 5.16 Configuration 5

(30)

- (a) When I arrived, Bill had just left.
- (b) When we arrive the gates will probably have been closed.

2.7.5
Configuration 5

In this configuration (represented by [Figure 5.16](#)) the HC-STO is represented as posterior to the HC-ITO, while the WC-STO is represented as simultaneous with the WC-ITO:

(31)

- (a) When I arrived in Kinshasa, there was going to be trouble in Shaba,
- (b) When we reach the shop, they will already be going to put up the shutters.

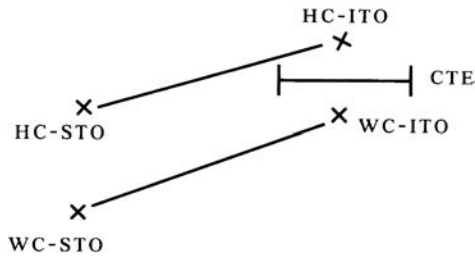


Figure 5.17 Configuration 6

2.7.6

Configuration 6

In this configuration (represented by [Figure 5.17](#)) the HC-STO is represented as anterior to the HC-ITO, while the WC-STO is represented as anterior to the WC-ITO:

(32)

- (a) When John had finished eating I had almost finished doing the washing-up.
- (b) When John has finished eating I will almost have finished doing the washing-up.

2.7.7

Configuration 7

In this configuration (represented by [Figure 5.18](#)) the HC-STO is represented as posterior to the HC-ITO, while the WC-STO is represented as anterior to the WC-ITO:

(33)

- (a) When John had finished eating he was not going to clear away the table (but his wife made him do it).
- (b) When John has finished working in the garden it will no doubt be going to rain.

2.7.8

Configuration 8

In this configuration (represented by [Figure 5.19](#)) the HC-STO is represented as anterior to the HC-ITO, while the WC-STO is represented as posterior to the WC-ITO:

(34)

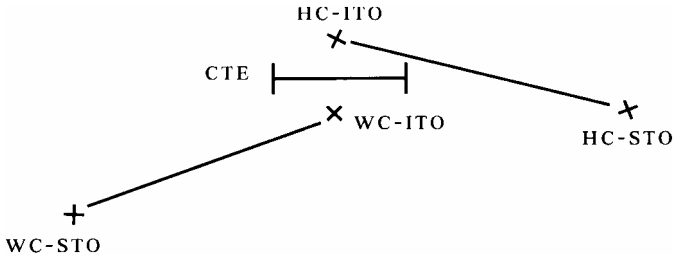


Figure 5.18 Configuration 7

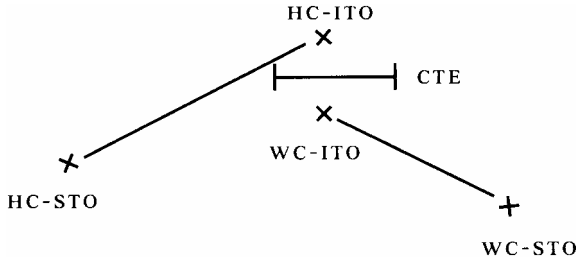


Figure 5.19 Configuration 8

- (a) When the police were going to intervene I had already deemed it safe to leave the pub.
- (b) When the police are finally going to question John, he will have disappeared.

2.7.9

Configuration 9

In this configuration (represented by [Figure 5.20](#)) the HC-STO is represented as posterior to the HC-ITO, while the WC-STO is represented as posterior to the WC-ITO:

(35)

- (a) When the police were going to intervene, the rioters were clearly going to use violence. (In the end, however, both parties could be restrained from using violence.)
- (b) When he is going to commit suicide, he will also be going to kill his wife and children.

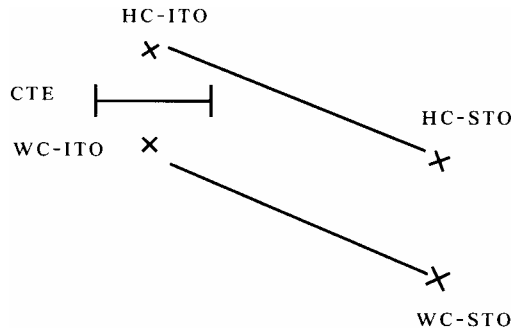


Figure 5.20 Configuration 9

2.7.10

Further remarks

Though all of the above nine configurations are fully grammatical, some of them (especially those involving posteriority) may sound rather awkward. This is because we tend to use simpler structures wherever possible and because, when the HC-STO is anterior to the HC-ITO, it is often more natural to use *by the time that* rather than *when*. Another thing worth noting is that in configurations 1–3, the WC is used as STO-adverbial. In configurations 4–9, it is used as TO-adverbial. The latter six configurations could be adapted in such a way that the common frame includes not only the HC-ITO binding the HC-STO but also the HC-STO itself. In that case the WC would be used as multiple TO-adverbial. When, in [Chapter 6](#), we examine the use of tenses to express the nine configurations in the four absolute sectors, we will disregard the latter possibility, because the use of the tenses in the six resulting configurations is the same as in configurations 4–9.

As appears from the examples, the WC cannot normally use *will/would when* the WC-STO is to be represented as posterior to the WC-ITO (viz. in configurations 3, 8 and 9). It must use a form of *be going to* (or a similar phrase like *be about to*, *be on the point of*, etc.). The same restriction applies to the HC if the HC-STO is to be represented as posterior to the HC-ITO (viz. in configurations 5, 7 and 9). This means that it is a general rule that a tense form expressing posteriority in one of the above nine configurations must involve an auxiliary with ‘prospective’ (Jespersen 1932:361–2) meaning, i.e. an auxiliary which is not used to make a prediction but rather to represent a future situation as anticipated, i.e. as ‘resulting from, determined by, or contingent upon present circumstances’ (Fleischman 1982:19).¹⁸ The reason for this restriction is that in the relevant configurations it is not the STO of the clause expressing posteriority (i.e. the STO represented as posterior) that is included in the common frame but rather the time to which the STO is represented as posterior, i.e. the time when the posterior situation is anticipated. This means that the posteriority is always of

the prospective type. When a form with prospective meaning is used, a TE can include the time of anticipation rather than the anticipated STO. The same is not normally possible when *will/would* is used. Compare:

(36)

- (a) I expected that she would be in hospital that week because she {*would/was going to*} have her baby then.
- (b) She often felt sick because she {*was then going to/*would then*} have a baby.

In (36 a) *then* specifies the STO of the posterior situation; this is possible irrespective of whether the verb form has prospective meaning or not. In (36 b), by contrast, *then* specifies the included TO to which the STO is posterior. This configuration requires a prospective verb form. Since a WC specifies a TE in the same way as *then* does, the same is true in configurations with a WC when the included TO specified by the common TE is the TO to which the relevant STO is posterior.

There is a similar restriction on the tense forms expressing anteriority. In those configurations in which the WC-STO is represented as anterior to the WC-ITO, the WC has to use a perfect tense form. This requirement is not immediately clear when we consider past domains (since the past perfect is the only tense that can express anteriority in a past domain), but it becomes evident when we consider post-present domains. Compare:

(37)

- (a) If we do it this way, the police will never find out that it {*was done/has been done*}.
- (b) John will arrive when the others {*have left/*left*}.

Whereas both the past tense and the present perfect can be used as Present Perspective System tense expressing anteriority in (37 a), only the latter can be used in the WC of (37 b). The reason is that if the WC expresses anteriority, the time indicated by *at which* in the paraphrase *at the time at which* is not the time of the WC-situation itself (i.e. the WC-STO) but a time when it is true that the WC-situation has already actualized. In order to express this idea of 'time of the WC-situation having actualized' we obviously need a perfect tense form.

18 Because of its prospective meaning, *be going to* differs from *will* in that it presupposes that all the necessary conditions for the actualization of the future situation are satisfied (see Binnick 1972:7).

2.8

Canonical WCs vs Adv-RRCs

As noted above, the STO of a canonical WC is related to the tacit common TE in the same way as the STO of an Adv-RRC (e.g. *at the time that...*) is related to the common TE specified by the temporal noun. This analysis predicts that the rules governing the choice of tenses in adverbial WCs are essentially the same as those governing the choice of tenses in Adv-RRCs. To check whether this prediction is borne out, I will systematically give examples of both Adv+RRCs and adverbial WCs in [Chapter 6](#), in which I investigate how tense forms can be used to express the temporal relations making up the nine possible configurations in each of the four absolute sectors.

3

CONSTRAINTS ON THE USE OF CANONICAL

Canonical WCs (i.e. WCs establishing a TE) may be added without any restriction to HCs referring to the past or to the post-present, but they can only exceptionally be added to HCs referring to the present or the pre-present. Moreover, a WC cannot normally be added to an HC whose tense form expresses simultaneity. In this section I will have a closer look at these constraints.

3.1

Constraint on WCs with HC referring to t_0

When a situation is located at t_0 , there is as a rule no need for an adverbial indication of time, since t_0 is the most salient time in the system of temporal reference. For this reason, single-event clauses in the present tense generally sound awkward if we add a time adverbial to them:

(38)

- (a) ?I am [now] waiting at five o'clock.
- (b) ?I am [now] waiting for John before I go home.
- (c) ?I am [now] changing clothes after I have come home from work.

The addition of a canonical WC similarly results in unacceptability:

(39)

- (a) *John is [now] sitting in the library when it is five o'clock.
- (b) *I am [now] changing clothes when I have come home from work.

It appears, then, that, like the adverbial *then*, a canonical WC identifies a time which is 'not now', and is therefore as a rule incompatible with an HC whose

STO coincides with, or includes, t_0 . This constraint is probably due to the fact that the time of utterance is a time that is by definition given and does not need to be specified by an adverbial. That *when* is similar to *then* in this respect is not surprising, since we have seen that the meaning of *when* can be paraphrased as ‘then when’. (An interesting observation in this connection is that in Dutch the word *toen*, which is etymologically related to English *then* and which can be used both as an adverb (‘then’) and as a conjunction (‘when’), can combine with the past tense but not with the present tense, even when the latter is used metaphorically to refer to the past, as in stretches of historic present (see Janssen 1988:117). In combination with nonpast tenses, *then* and *when* translate as *dan* and *wanneer/als*, respectively. The latter resemble *toen* in that they also have ‘not now’ as part of their meaning, but differ from it in that they may refer to the future as well as the past. Another observation that is in keeping with the ‘not now’ meaning of *when* is that we cannot replace *It’s now that I want it* with **It’s now when I want it*, although *It was yesterday that he left* is interchangeable with *It was yesterday when he left*.)

The inability of a canonical WC to specify a time which includes t_0 also rules out the co-occurrence of a such a WC with an HC in the present perfect if that perfect receives a continuative interpretation, i.e. if the HC-situation is seen as continuing at t_0 :

(40) *She has been sitting in the library when I’ve been in here.

Since the WC specifies the time of the HC-situation, it follows from this constraint that the WC cannot normally involve a present tense or continuative perfect either. This is also clear from the above examples.

However, there are special cases in which the use of a tense form with present time reference in HC and WC is quite acceptable.

3.1.1

A HC in the present tense can support a canonical WC if the use of the present tense in the HC is an instance of what in section 11 of [Chapter 4](#) I have called the ‘Historic Present System’, i.e. if the present tense represents a shift of temporal perspective, as in stretches of historic present, summaries and stage directions. In the Historic Present System, an HC in the present tense can support any kind of adverbial time clause:

(41)

- (a) Last night I am sitting in front of the telly, watching *Match of the Day*, when suddenly this bloke throws a stone at our window. And after he’s done that he flings the flower-pots off the sill and tramples the tulips down!
- (b) (*summary*) When he is sixty-four, Cameron retires and moves to Leeds, where he will continue to live until he dies.
- (c) (*stage direction*) When Gordon *has shut* the door behind him, Joan picks up the receiver.

- (d) (*stage direction*) When Gordon *is going to lock* the door, Joan bursts out crying.

The main characteristic of such sentences is that they may constitute a temporal structure whose central TO is t_0 . In section 12.3 of Chapter 4 we saw that when we use a present perfect or a future tense form to represent a situation as anterior or posterior to a present situation, these tense forms do not expand the present domain but shift the domain, since they are absolute tenses: any tense form that represents a situation as anterior or posterior to t_0 is an absolute tense form. For this reason we cannot use a tense form to express anteriority or posteriority in a present domain. However, sentences like (41 a-d) would seem to form an exception to this. In (41 a), the TO that could have been the central TO of a past domain is located at t_0 . In this way a past domain is developed as if it were a present one. The present time-sphere tenses are thus used to develop a pseudo-present domain, in which time clauses can appear without any restriction. As is clear from the examples, all the usual configurations may be realized in doing so.

3.1.2

The second type of sentence in which present time-sphere tenses are used in a special way are sentences receiving a habitual-repetitive interpretation.¹⁹ Like (41 a-c) and unlike (39 a-b), habitual sentences can easily involve a time clause, provided the HC in the present tense refers to a habit involving an indefinite number of instances of a situation that do not actualize simultaneously but follow each other in time (usually with gaps between them):

(42)

- (a) I always wait for John before I go home.
- (b) Only when/after I have come home from work do I change my clothes.
- (c) John always consults me when he is going to make an important decision.
- (d) It's nice living high up—you can see all over the town, and we can hear the big burr of the Town Hall clock when it's *going to strike*. (LOB)
- (e) Bill works on his thesis when he is on his own at night.

The reason why these are acceptable is that the HC has a double aspect of meaning. On the one hand, there is a reference to a habit. This habit is located in time by the present tense in the HC, which represents the habit as holding

¹⁹ In English, WCs may be semelfactive as well as habitual-repetitive. (In the latter case we can also use *whenever*.) In German, this semantic distinction is marked lexically: in past tense sentences, *when* translates as *als* on a single-event reading and as *wenn* on a habitual-repetitive reading. The distinction may also be marked syntactically: on the latter reading the *wenn*-clause alternates with a time clause which has no overt conjunction and shows subject-verb inversion (see Metschkowa-Atanassowa 1983:87):

- (i) Kam er spät nach Hause, dann war seine Frau ihm nicht böse. ‘Came he late home, then his wife was not angry with him.’ = ‘When he came home late, his wife was not angry with him.’

at t_0 . On the other hand, the habit involves a number of instances.²⁰ Each of these instances can be described in terms of the same sentence as is used to refer to the habit as a whole. Each instance therefore realizes one of the nine configurations referred to in section 2.7. Since none of the instances need actually hold at t_0 , the WC (which specifies the times of the instances) does not refer to t_0 . Its function is to help to make clear the temporal structure (configuration) of the instances making up the habit, not to specify the time of the HC-situation as a whole. For this reason the WC can co-occur with an HC in the present tense.

3.1.3

The third exception to the rule that an HC in the present tense cannot support a canonical WC is when the WC does not really answer the question *when?* but helps to define a kind of situation, one instance of which actualizes at t_0 . For example:

(43)

- (a) You see? This time John isn’t at home when we need him.
 (b) Let’s all—think—what we might be doing—instead of sitting here when the rest have all gone home. (DR-NICH)

The first example is paraphrasable as ‘This is an instance of John-not-being-at-home-when-we-need-him’: the WC helps to describe the kind of situation which actualizes at t_0 rather than specifying the time of actualization. Not only canonical WCs but also other time adverbials can collocate with an HC in the present tense on this kind of reading, which I will refer to as the ‘single-instance reading’:

(44)

- (a) You see: *I am at my office at 8 a.m.* Don’t ever say again that I am invariably late in the morning,
 (b) I feel guilty because *I am still sitting here at 11 a.m.*

3.1.4

A variant of the above type of example is that in which *when* is interpreted as ‘at a time like this when’:

(45)

- (a) Where’s Tom? Why isn’t he at home when his wife has fallen ill?

- (b) (*The girls dance in the window*) Is it fair to dance and sing, when death's bells ring, eh? (DR-SEL)
- (c) What do you mean, he's in America? When his father celebrates his ninetieth birthday he should be here, not in America.
- (d) He thinks government officials are terrified to let a recession start when government, corporate and personal debt levels are so high. (WSJ)
- (e) He doesn't want any trouble with the senior staff, particularly now when we're getting ready to move into the new Lab. (DEW 33)

Like (43 a-b), these examples receive a single-instance interpretation. But unlike the WC in (43 a-b), the function of the WC is now explanatory rather than time-specifying.²¹

3.1.5

Just/particularly when = '*precisely now that*'

In the following examples, it is the presence of an intensifier (*just/particularly*) that appears to render the use of *when* with reference to the present possible, by inducing a reading on which the WC is explanatory rather than time-specifying:

(46)

- (a) Much of the political right feels spooked about environmental issues because it perceives all environmentalism to be corrupted by socialist command and controllers. *Just when* it seems someone is about to get somewhere with intelligent environmentalism, 10 other people mount podiums and declare humanity a disease on the face of the earth. (WSJ)
- (b) He doesn't want any trouble with the senior staff, *particularly now when* we're getting ready to move into the new Lab. (DEW 33)

3.1.6

Further remarks

It is worth stressing, finally, that the constraint that (apart from the above five exceptions) a WC cannot depend on an HC referring to t_0 holds only for canonical WCs, i.e. adverbial WCs that establish a TE and which have the function of specifying a TO from the tense structure of the HC. WCs that belong to a different type or that function differently are not subject to the constraint. This is true of adversative WCs, WCs with a causative connotation, focalizing WCs expressing the epistemic time of evaluation, WCs where *when* means 'in a/this

20 The instances may have to do with the fact that a situation is discontinuous (i.e. actualizes intermittently), as in (42 e), or with the fact that there are several actualizations of a situation of the same kind.

case where', WCs that are the premodifying clause of a premodified reduced *it*-cleft or a similar specificational structure, WCs expressing a closed condition and any other type of WC that does not have a purely temporal function. The following sentences illustrate the respective possibilities. (More illustrations will be given in [Chapter 11](#).)

(47)

- (a) Why do you remember now what I said then, when I can't remember myself? (DR-BARN)
- (b) What makes you think you are either?—There's nothing else I can think—when the only life I know is that of a girl who has been dead more than fifteen years. (LOB)
- (c) But when I consider the fate which overtakes our little children, when I consider the depth of man's misery, I cannot go into my hospital, and face it. (DR-SEL)
- (d) They're mentioning rope when there's been a hanging in the family. (WSJ)
- (e) When I'm telling you this, it's not because I want to hurt you.
- (f) When they are buying back stock at 10 times earnings, they are suggesting that the rate of return on competing internal projects is below returns on the stock. (WSJ)
- (g) You too, Miriam. When I talk about Alec, I mean you, too. (DR-TAYL)

Another point worth making is that sentences expressing a single-instance reading and sentences receiving a habitual-repetitive interpretation have in common that they express 'instantiation'. The presence of a time adverbial in such sentences does not serve to locate a situation in time but forms part of the description of the situation itself, and therefore of any instance of the situation. On a single-instance reading one such instance is located in time; on a habitual-repetitive reading a habit with repeated instantiation is located in time. In both cases HC and WC express a temporal configuration representing the temporal structure of a single instance. Thus, the sentence *I usually talk with him when something has happened* expresses a present habit involving a number of instances each of which realizes configuration 2 (in which the HC-STO is the HC-ITO and the WC-STO is represented as anterior to the WC-ITO).

21 Note that, although the time referred to (viz. the temporal zero-point) is maximally definite, we cannot replace *when* by *at this time when* or *at the time when* in these examples. The reason is that the WC is seen as potentially repetitive, i.e. as forming part of the description of an instance of what may possibly be a more general pattern.

3.2

Constraint on WCs with HC expressing simultaneity

The second constraint on canonical WCs is that they are as a rule incompatible with an HC whose tense form expresses simultaneity. In the following example, *was feeling* cannot be interpreted as a relative past tense (representing its STO as simultaneous with the HC-STO). It can only be interpreted as an absolute past tense (locating its situation at a past time different from the HC-STO):²²

(48) He said he was feeling sick when he was in the restaurant.

The reason is that an STO cannot be temporally specified in two different ways. If it derives its temporal specification from the fact that the tense form represents it as simultaneous with another TO, then it cannot at the same time derive its temporal specification from a WC.

Here again, sentences expressing instantiation form an exception. In the following habitual-repetitive sentence, the habit expressed by *He often felt sick* is represented as simultaneous with the STO of *said*:

(49) He said he often felt sick when he was in the restaurant. Similarly, a clause with a tense form expressing simultaneity can support a WC if *when* is interpreted as ‘at a time (like this) when’:

(50) She asked why Tom wasn’t at home when she needed him.

3.3

Constraint on using an indefinite perfect in HC and/or WC

If the HC uses a present perfect which receives an indefinite interpretation, it does not normally collocate with any kind of adverbial time clause. This is a constraint that is specific to English: to refer to a single situation which is over at t_0 we can use the present perfect only if the time of actualization remains indefinite (apart from the fact that it is represented as lying in a period leading up to t_0). If the time of actualization is specified, the past tense must be used. Thus, in *I helped John when he was in trouble* we cannot replace the past tense in the HC by a present perfect on a single-event reading. The present perfect cannot be used in the WC either, because the present perfect is not one of the tenses that can be used to develop a past domain. Sentences like the following are ungrammatical:

(51) *I went to see John when his only daughter has died.

However, there are a couple of exceptions to the rule that an indefinite present perfect can appear neither in the HC nor in the WC. To begin with, examples in which the HC or the WC uses an indefinite perfect are grammatical in the Historic Present System:

(52)

²² I am disregarding the reading in which *when he was in the restaurant* specifies the time of *he said*.

- (a) (*summary*) John has already left the house when the police arrive,
- (b) (*stage direction*) When the lights go out, Joan has left the stage.

In examples like these, the WC is used as TO-adverbial. Examples in which it is used as STO-adverbial appear to be less acceptable:

(53) (*summary*) (John is very angry now.) He {*was insulted*/**has been insulted*} by Mary when he wanted to help her.

The second exception concerns habitual-repetitive sentences:

(54)

- (a) When we need him at the office he *has* usually *gone* abroad,
- (b) In most cases, he *has* not *got up* yet when I call at his house.

In these examples, the WC is used as TO-adverbial. Similar examples can be found in which it is used as STO-adverbial. In that case the WC can also use the present perfect:

(55)

- (a) Indeed, analysts say that payouts *have* sometimes *risen* most sharply when prices were already on their way down from cyclical peaks. (WSJ)
- (b) Coke *has tended* to increase its control when results were sluggish in a given country. (WSJ)
- (c) I've *spent* hours looking at things like this, when you've not *been* around. (DR-PIN)
- (d) From time to time in Denmark, there *has been* a move to increase sales, especially when the international weekly and monthly journals *have emphasized* the health-giving properties of yoghurt. (LOB)

The third exception is that an HC with an indefinite perfect can also support a WC if it receives a reading which I will refer to as the 'existential perfect interpretation'. An indefinite perfect conveys an existential perfect interpretation if it is used to express that a particular kind of situation has actualized once, several times, or not at all in a period up to t_0 :

(56)

- (a) Have you (ever) worked on Christmas Day?
- (b) You've never been working at 11 p.m.!—Not true! I *HAVE been working* at 11 p.m. Quite often, in fact. Ask the others.

Sentence (56 a) is interpreted as 'Has it happened (at least once) that you worked on Christmas Day?' Sentence (56 b) similarly means 'It has (on occasion) happened that I was working at 11 p.m.' (see Declerck 1991b: 108–9). Similar examples can be found involving WCs:

(57)

- (a) You've never helped me when I was in trouble.—That is not true. I *HAVE helped* you (at times) when you were in trouble. In fact, several times.
- (b) *Has* she ever *notified* the police when she was going to leave the country?
- (c) Bah, what was a contradiction in one's life? Every woman *has had* the experience of saying no when she meant yes, and saying yes when she meant no. (BR)
- (d) ...the pair of them were devoted to each other. I've *seen* her greet him when he came back from a day's fishing and had left her back home, and towards evening she'd come down the lake and on the beach and down to the sea to wait for him. (TOM 184)

Like the single-instance reading and the habitual-repetitive reading, the existential perfect interpretation is an 'instantiation reading. It differs from the former two only in that the number of instances remains completely unspecified. Whereas the single-instance reading refers to one instance and a habitual—repetitive reading to several, the existential perfect interpretation leaves open the possibility of one, several or zero instances within the relevant period.

It should also be noted that in examples like these the WC normally uses the past tense, not the present perfect.

A fourth exception to the rule that an HC with an indefinite perfect cannot support a WC is when the WC is one of several time adverbials and there is an adverbial like *so far* which explicitly refers to a period including t_0 . In this case too the WC uses the past tense:

(58) So far I *have looked* after her children only when she was in hospital and when she went to the United States to attend her sister's funeral. But in the future I may have to do so more often.

A final exception, again with the present perfect in the HC and the past tense in the WC, is when the WC is not fully integrated into the HC. This is the case if it is added as a kind of afterthought, or if it is in nonrestrictive apposition to a time adverbial in the HC:²³

(59)

- (a) I *have already* met him—when I *lived* in Brighton.
- (b) She's been trying to get out of bed to telephone you all the evening, but *has* only just now, when we *were* out of the room...(FORG 115)
- (c) The conceptual base of the current program is flawed and the program is not likely to work. The conceptual base—a criminal-justice approach—is the same that I *have worked through* before, in the Nixon administration when I *was* budget director and secretary of the treasury with jurisdiction over the Customs. (WSJ)
- (d) Another reason for the intensity of the trade problems is that Beijing has extended the current clampdown on imports beyond the usual target of consumer products to include steel, chemical fertilizers and plastics. These *have been* among the country's leading imports, particularly last year when

there *were* shortages that led many traders to buy heavily and pay dearly.
(WSJ)

4

CONCLUSION

In the first section of this chapter I have defined some notions that prove essential to the analysis, the most important of which are ‘situation-TO’ (STO), time of the Full Situation (TFS) and time established (TE). I have shown that the latter two may play a role in the temporal structure and interpretation of a sentence, but not in their tense structure properly speaking. A tense structure consists of TOs (minimally an STO and t_0) and temporal relations holding between them. The TE includes the STO or another TO binding the STO. We speak of STO-adverbial and TO-adverbial accordingly.

In the second section I have concentrated on sentences whose TE is a canonical WC or Adv-RRC. I have argued that *when* defines a common frame (common TE) which includes both a TO from the tense structure of the HC (the HC-ITO) and a TO from the tense structure of the WC (the WC-ITO). Since the HC-ITO may be either the HC-STO or another TO binding the HC-STO in terms of anteriority or posteriority, and since the WC-STO may be represented as anterior, simultaneous or posterior to the WC-ITO, the result is nine possible temporal configurations.

In section 3, finally, I have pointed out some constraints on the use of canonical WCs and summed up the exceptional cases in which the constraints do not apply. The constraints in question concern the incompatibility of a canonical WC with an HC using a present tense form, a relative tense form expressing simultaneity, or a present perfect receiving an indefinite interpretation.

23 Not only WCs but any kind of adverbial specifying past time can be added to an HC in the present perfect under these conditions (see Huddleston 1969:801).

CANONICAL *WHEN-CLAUSES* AND THE EXPRESSION OF TEMPORAL RELATIONS

In this chapter I will explore the system of tenses used to express temporal relations in sentences involving an HC and a canonical WC. I will also verify the hypothesis that this system is exactly the same as in sentences involving an Adv+RRC. To this end I will illustrate each possibility that is examined not only with one or more examples involving a canonical WC but also with an example involving an Adv+RRC. (However, for ease of reference I will continue to talk of ‘WCs’. It must be understood that, unless indicated otherwise, the claims made for the canonical WCs also apply to the corresponding Adv-RRCs.)

The possibilities examined are those predicted by the analysis of WCs offered in [Chapter 5](#) and the model of the English temporal system presented in [Chapter 4](#). I will examine, for each of the nine tense configurations, which tenses are used in the HC and in the WC (or Adv+RRC) when the configuration in question is realized in a past, pre-present, present or post-present domain. The purpose of this investigation is not so much to extend the analysis by introducing new claims as to offer empirical evidence that the claims made in the previous chapters are correct. (If the reader is already satisfied that this is the case, he or she can skip this chapter and go to [Chapter 7](#) at once.)

Since not all temporal relations that exist in reality need be expressed by the tense system, we must make a distinction between a relation that exists in the real world (or in the possible world referred to) and one that is represented by a tense form. For that reason I will use the terms ‘W-simultaneous’, ‘W-anterior’ and ‘W-posterior’ to refer to relations that exist in the real world (or in the possible world referred to), irrespective of whether they are represented by the tense forms or not.

When describing the system of tense forms used in HC and WC we have to consider quite a lot of possibilities. This follows from (a) the fact that the domain involving the HC-STO and the WC-STO may lie in one of four possible absolute sectors, (b) the fact that the HC-ITO may or may not be the central TO of the domain in question, and (c) the fact that there are nine possible temporal structures (configurations) involving a HC-STO and a WC-STO.

1

THE HC-STO BELONGS TO A PAST DOMAIN

1.1

Configuration 1

In this configuration, in which the HC-ITO is the HC-STO and the WC-STO is simultaneous with the WC-ITO, the WC uses the past tense for simultaneity, irrespective of whether the HC is in the past tense, the past perfect, the conditional tense or the conditional perfect:

(1)

- (a) { When/at the time } he *lived* here he usually wore a shabby suit.
- (b) Perhaps this year, dancing with her, he would get that strange feeling he *got* that time when he *crashed down* on the tiny drip Hunter in the rugger match. (LOB)

(2)

- (a) In the days when England *was* Catholic it *had been* a priest's house. (SHF 225)
- (b) Frensham, who *had risen* from his chair at the far end of the room when Wexford *entered* it, had received prior warning of his coming. (NMDT 137)

(3)

- (a) She *would ask* him for an explanation {when/on the day that} he *came* back from Oxford.
- (b) In a year he would be back, with a motor car and a sack of gold, and he would pour the gold on the great kitchen table in front of all of them. When he *told* them that he had come back to marry Ginevra, they *would go down* on their knees to him in gratitude. (LOB)

(4)

- (a) { When/by the time } the others *came* back he *would have left*.
- (b) When the burglary *was detected* he *would already have left* the country.

A couple of things should be noted here. First, examples realizing this configuration cannot normally use a relative past tense in the HC. As noted in section 3.2 of [Chapter 5](#), an HC with a tense form expressing simultaneity is incompatible with a canonical WC, except in a couple of special cases (e.g. on a habitual-repetitive interpretation). Second, the use of the preterite to express simultaneity in the above examples is an instance of direct binding. However,

under certain conditions (to be discussed in [Chapter 7](#)) indirect binding is possible too:

(5)

- (a) He had said that to Colin in the days when he *had had* to open his heart to someone. (TSM 16)
- (b) The house had been like this when he and Jean *had* first *come* here. (NMDT 68)
- (c) Twelve years ago, when he and Jean *had* first *penetrated* as far as this, two bronze figures holding vases aloft had stood on either side of the overgrown drive. (NMDT 69)
- (d) For many days, when six years earlier she *had* first *started* working at the Bodleian, she had been conscious of the beautiful setting there. (TWID 65)
- (e) His distinguished neighbour had never been alone when he *had encountered* her in the corridor. (LOB)
- (f) When she *had* first *considered* committing suicide, the car had seemed a very real possibility. (LBW 72)

In these examples the WC-STO is W-simultaneous with the WC-ITO, but (unlike the past tense, which could have been used too) the past perfect does not express this relation. It represents the WC-STO as anterior to the TO which also binds the HC-STO (see [Figure 5.9](#)).

As noted in [Chapter 5](#), indirect binding is not normally possible if the HC-STO is posterior to its binding TO:

(6)

- (a) She would ask him for an explanation {when/on the day that} he {*came*/**would come*} back from Oxford.
- (b) I was afraid you wouldn't be there when I {*got*/**would get*} back. (DR-MAUG)
- (c) Without a backward glance, Vera tiptoed downstairs to wait. When it {*came*/**would come*} to the bit, every second would count. (LOB)

However, there are exceptional examples (with an indefinite antecedent NP) in which an Adv-RRC has to use the conditional tense. Compare:

(7)

- (a) She heaved a sigh, then laughed at herself for being so silly and selfpitying. It was her own fault for inviting Robert on a day when Lois *would be* there, and, instead of standing about, feeling sorry for herself, she ought to be doing something to help poor Bertie. (LOB)
- (b) It was her own fault for inviting Robert on a day when Lois *was* there.

For lack of a tense form expressing posteriority in (7 b), Robert's visit is not interpreted as posterior to the relevant past TO. In (7 a), by contrast, the use of *would* in the WC makes clear that the time of Roberts coming lies in the future. This use of the conditional tense is an instance of indirect binding. *Inviting* is interpreted as *inviting to come*, and it is the time of this coming that functions as implicit HC-STO (and HC-ITO). The WC-STO is not bound by the WC-ITO (with which it is interpreted as W-simultaneous) but by the STO of *inviting* (to which the implicit HC-STO is also W-posterior).

1.2 Configuration 2

In this configuration, in which the HC-STO is the HC-ITO and the WC-STO is anterior to the WC-ITO, the WC uses the past perfect, irrespective of the tense of the HC.

(8)

- (a) He *died* {just when/on the very day that} I *had* finally *found out* where he lived.
- (b) The poor fellow *had died* {just when/on the very day that} I *had* finally *found out* where he lived.
- (c) I didn't know at the time that he *would die* {just when/on the very day that} I *had* finally *found out* where he lived.

It should be noted that sentences like (8 b) are actually ambiguous because the past perfect in the WC may also be an instance of indirect binding (in which case the configuration realized is config. 1). That is, (8 b) may be interpreted not only as (8 b') but also as (8 b''):

(8)

- (b') The poor fellow *had died*; he *died* {just when/on the very day that} I *had* finally *found out* where he lived.
- (b'') The poor fellow *had died*; he *died* {just when/on the very day that} I finally) *found out* where he lived.

Another thing to be noted is that the conditional perfect (*would have found out*) cannot be used in the WC of (8 c). As noted above, WCs do not normally allow indirect binding by means of *would* or *would have*.

1.3 Configuration 3

In this configuration, the HC-STO is the HC-ITO and the WC-STO is posterior to the WC-ITO. As noted in [Chapter 5](#), we cannot use *will* or *would* to express

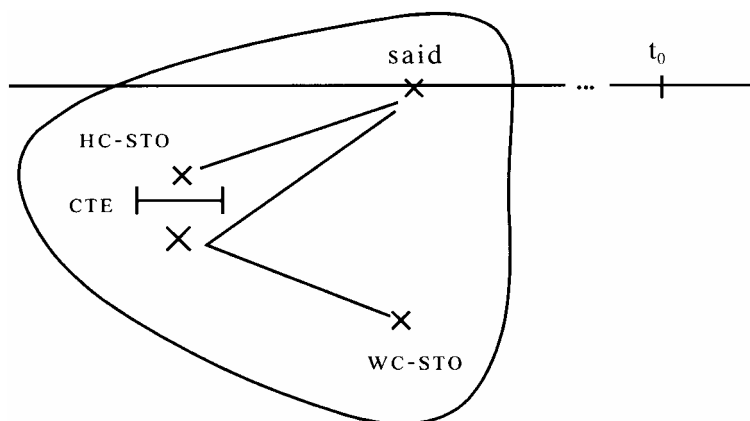


Figure 6.1 The temporal structure of (10)

posteriority in a WC: a form with prospective meaning, such as *be going to*, must be used instead. It follows that if the speaker is to express configuration 3 and the HC-STO belongs to a past domain, he or she must use the past tense of *be going to*, *be about to* or a similar semi-auxiliary in the WC, irrespective of the tense of the HC:

(9)

- (a) I *bought* it {when/at the time that} I *was going to get* that salary increase (which in fact I never got).
- (b) I dreamed that I had a lot of chocolate caramels, but I *woke up* just when I *was going to eat* them.
- (c) He said he *had bought* it {when/at the time that} he *was going to get* that salary increase (which in fact he never got).
- (d) When he *was going to get married* John *had bought* only one new piece of furniture, and that was a bed. (TSM 70)
- (e) (She promised that) she *would marry* him {when/on the day that} he *was going to get* a salary increase.

In the last example, the WC is interpreted as ‘when it was the case that (or: when it was a fact that) he was going to get a salary increase’.

If the HC-STO is itself represented as anterior to another TO in the past domain, the WC-STO may also be bound indirectly, i.e. *had been going to* can be used instead of *was going to*:

(10) He said he *had bought* it {when/at the time that} he *had been going to get* that salary increase (which in fact he never got).

The temporal structure of this sentence is represented by Figure 6.1.

1.4

Configurations 4, 6 and 8

In these configurations, the HC-STO is anterior to the HC-ITO and the WC-STO is simultaneous, anterior or posterior (respectively) to the WC-ITO. To express these relations in a past domain we will use the past perfect or the conditional perfect in the HC, and the usual past time-sphere tenses in the WC:

(11)

- (a) {When/at the time} he *was living* here he *had* already *retired*. (config. 4)
- (b) I expected that he *would* already *have retired* {when/by the time that} he *came* to live in our village, (config. 4)

(12)

- (a) {When/by the time} the police *had* finally *found out* about him, he *had* already *left* the country, (config. 6)
- (b) When he'd *gone* the rounds he *hadn't sold* a single bottle. (LOB) (config. 6)
1
- (c) The police expected that the spy *would* already *have left the country* {when/by the time that} they *had* finally *found out* who he was. (config. 6)

(13)

- (a) {When/at the time that} she *was going to accept that* job in Chile, she *had* not *met* Jim yet. (config. 8)
- (b) I knew that {when/at the time that} she *was going to have* a baby she *had* not *finished* high school yet. (config. 8)

When the HC-ITO is itself anterior to a TO in the past domain, the WC can be bound indirectly (in configs 4 and 8):

(14)

- (a) Her own salary was each year—sometimes twice a year—increased, and when three years ago she *had* finally *left* the company she had amassed a nice little nest-egg of savings. (DOJ 13) (config. 4)
- (b) I knew that she had not finished high school yet {when/at the time that} she *had been going to have* a baby, (config. 8)

1 Sentences like these are ambiguous, because the past perfect in the WC can also be read as an instance of indirect binding (in which case the WC-STO is interpreted as W-simultaneous with the WC-ITO but is represented as anterior to another past TO).

1.5

Configurations 5, 7 and 9

In these configurations, the HC-STO is posterior to the HC-ITO and the WC-STO is simultaneous, anterior or posterior (respectively) to the WC-ITO. When one of these configurations is realized in a past domain, the HC uses *was going to* (if the HC-ITO is the central TO of the domain), or *had been going to* (if the HC-ITO is anterior to another TO), or *would be going to* (if the HC-ITO is posterior to another TO). In all cases the WC uses the preterite for simultaneity, the past perfect for anteriority and *was going to* for posteriority:

(15)

- (a) And when I *was* eighteen, son, I *was going to change* the course of history—
be another William Butler Yeats. (DR-PIN) (config. 5)
- (b) I remembered that {when/at the time} the child finally *returned*, we *had
been going to call* in the police, (config. 5)
- (c) I expected that {when/by the time that} she *came* to stay with us she *would
be going to have* a baby, (config. 5)

(16)

- (a) {When/by the time} he *had finished* high school he *was going to join* the
Navy, (config. 7)
- (b) I remembered that {when/by the time} he *had finished* high school he *had
been going to join* the Navy, (config. 7)
- (c) I expected that {when/by the time} he *had finished* high school he *would be
going to join* the Navy, (config. 7)

(17)

- (a) {When/at the time} he *was going to commit* suicide he *was also going to kill*
his wife and children, (config. 9)
- (b) I remembered that {when/at the time that} she *was going to commit* suicide
she *had been going to have* a baby, (config. 9)
- (c) I predicted that {when/at the time that} she *was going to have* a baby she
would be going to live on her own. (config. 9)

The temporal structure of (16 b) is represented by Figure 6.2. If the HC-ITO is itself anterior to a TO in the past domain, the WC can be bound indirectly:

(18)

- (a) I remembered that {when/at the time} the child *had* finally *returned*, we had
been going to call in the police,

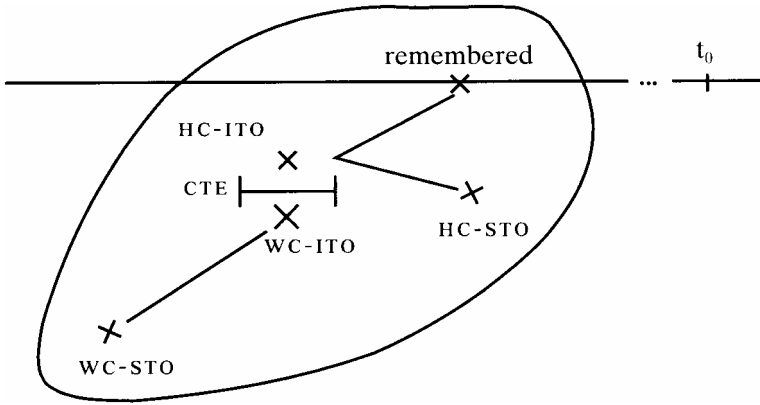


Figure 6.2 The temporal structure of (16 b)

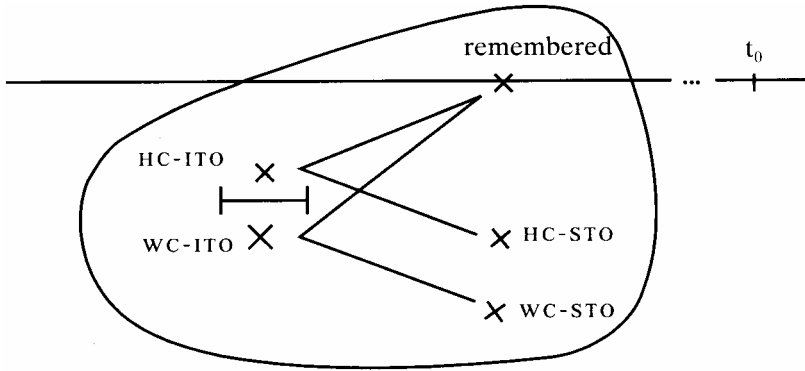


Figure 6.3 The temporal structure of (18 b)

- (b) I remembered that {when/at the time that} she *had been going to commit* suicide she had been going to have a baby.

The temporal structure of (18 b) is shown in [Figure 6.3](#).

To close off this discussion of the expression of temporal relations within a past domain, it may be interesting to note that sentences with a past perfect in both HC and WC may yield various interpretations. McCoard (1978:201) notes that the sentence

(19) John had left the room when Mary had thrown the ashtray, is ambiguous between the following readings:

- (a) 'John left the room when Mary threw the ashtray; all this happened before some other event'. This is the reading we get if we have configuration 1 with

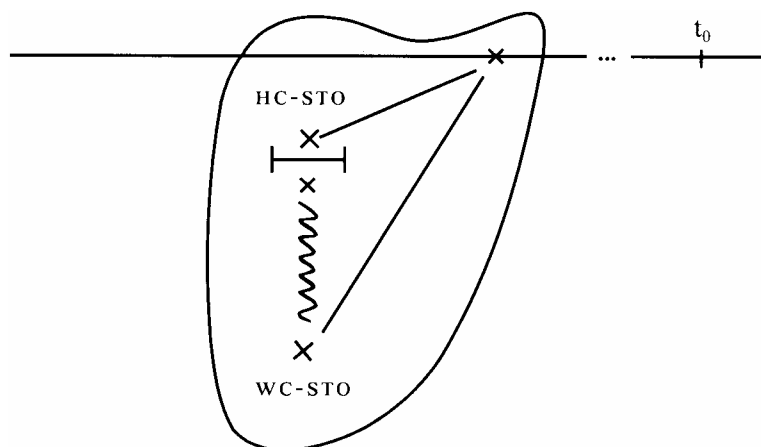


Figure 6.4 The temporal structure of (19) on reading (a)

the HC-ITO anterior to a past TO and with indirect binding in the WC, as shown in Figure 6.4.

- (b) 'John had already left the room when Mary threw the ashtray; all this was before some other event'. This is the reading we get if we have configuration 4 with the HC-ITO anterior to a past TO and with indirect binding in the WC, as shown in Figure 6.5.
- (c) 'John left the room after Mary had thrown the ashtray; all this was before some other event'. This is the reading we get if we have configuration 2 with the HC-ITO anterior to a past TO, as shown in Figure 6.6.
- (d) 'John had already left the room at a time when Mary had already thrown the ashtray'. This is the reading we get if we have configuration 6. In this case the HC-ITO may be the central TO of the domain or may be anterior to it. In the latter case the structure realized is as shown in Figure 6.7.

2

THE HC-STO BELONGS TO A PRE-PRESENT DOMAIN

If the HC-STO belongs to a pre-present domain, there are two possibilities as far as the creation of the domain is concerned. Either the HC establishes the domain itself, or its STO is introduced into a pre-present domain established by a superordinate clause. I will begin by briefly discussing the latter possibility.

If the HC does not establish the domain, there are again two possibilities, depending on whether the present perfect in the superordinate clause establishing the domain receives an indefinite or a continuative interpretation. In the former case, the pre-present domain is expanded as if it were a past one. This means that

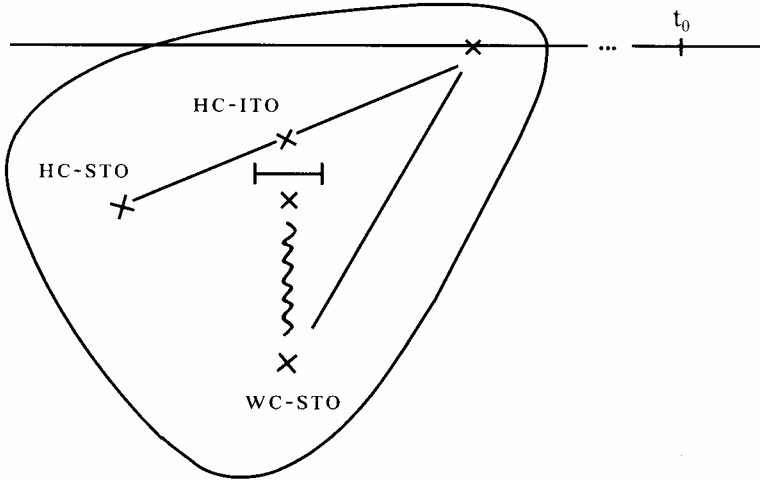


Figure 6.5 The temporal structure of (19) on reading (b)

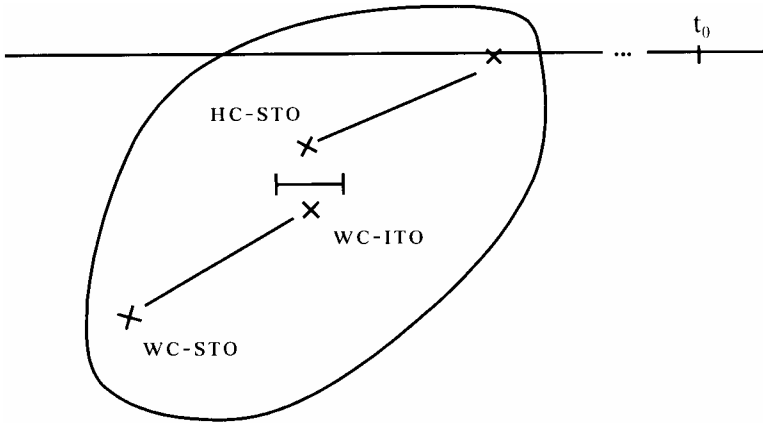


Figure 6.6 The temporal structure of (19) on reading (c)

the (temporally subordinated) HC supporting the WC will use one of the past time-sphere tenses, so that the relevant configuration will be expressed by one of the combinations of tenses discussed in section 1. For example:

(20) Only once has she told me that she *had been beaten* by her father (on a day) when he *came* home drunk.

Has told establishes a pre-present domain which does not include t_0 and which is therefore expanded as if it were a past one. The WC and its HC realize configuration 1 (in which the HC-ITO is the HC-STO and the WC-STO is simultaneous with the WC-ITO) and the HC-STO (*had been beaten*) is anterior to the central TO (*has told*). Predictably, we use the past perfect in the HC and

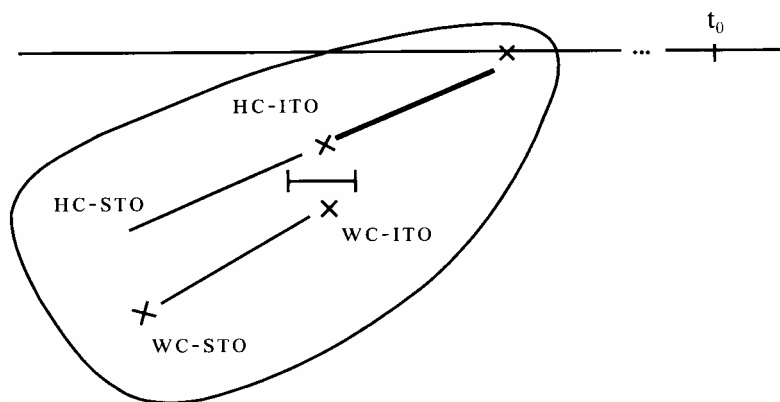


Figure 6.7 The temporal structure of (19) on reading (d)

the preterite in the WC. (Since the HC-ITO is anterior to the central TO, the WC may also be bound indirectly, by means of a past perfect:

(21) Only once has she told me that she *had been* beaten by her father (on a day) when he *had come* home drunk.)

The second possibility that is available if it is not the HC that establishes the pre-present domain is that the present perfect which does establish it is interpreted continuatively. In this case the pre-present domain is interpreted as including t_0 . As noted in section 12.2.2.2 of [Chapter 4](#), it follows that the HC-STO is related to t_0 , i.e. is located in the past, pre-present or post-present sector,² where it is the central TO of a newly established domain. The WC is then introduced into that domain in accordance with the normal rules governing the expression of simultaneity in a domain. For example:

(22)

- (a) I have known for some time that he *was* ill when he *left*.
- (b) I have known for some time that he *will be* seventy when he *resigns*.

In examples like these, the *that-clause* establishes a domain of its own (because its STO is related to t_0) and the WC-STO is temporally subordinated.

In sum, when the HC (supporting the WC) depends on a clause establishing a pre-present domain that includes t_0 , it establishes a domain of its own, which is then expanded in accordance with the usual rules for expanding a domain.

In the rest of this section I will concentrate on the cases in which the HC itself establishes a pre-present domain. Again, we must distinguish two possibilities, depending on whether the present perfect is interpreted continuatively or indefinitely.

2 As we have seen in section 3.1 of [Chapter 5](#), the HC-STO cannot be located in the present sector i

2.1

The HC uses a continuative present perfect

As noted in section 3.1 of [Chapter 5](#), a WC cannot normally combine with an HC with a continuative perfect, because a HC-STO that includes t_0 cannot normally be temporally specified by a WC:

- (23) *My friend has been working when I have been/was/am in here. Instead of using a WC, we can often use a WC introduced by *while* or *all the time that*
(24)

- (a) My friend has been working {while/*when/all the time} I *have been* in here.
(b) All the time I've *been* away, it's been shrinking and shrinking. (Fenn 1987:7)
(c) You haven't been listening while I've *been talking* to you, have you?

In these examples both clauses use a continuative perfect. This means that the WC is not temporally subordinated but establishes a pre-present domain (which also includes t_0 and is interpreted as W-simultaneous with that of the HC). In the following example too we use *all the time that* or *while*:

- (25) I've been unable to use my bike {all the time that/while} you *have been going to repair* it.

The tense form used in the time clause (*have been going to repair*) is an absolute-relative tense form: it both establishes a pre-present domain and expresses posteriority in it.

As noted in section 3.1 of [Chapter 5](#), there are a couple of exceptions to the rule that an HC with a continuative perfect cannot combine with a WC. One concerns the Historic Present System (used in historic speech, summaries, stage directions, etc.), another concerns habitual-repetitive sentences. However, in neither of these cases does the WC specify the time of the HC-STO directly (as it does in (24)–(25), where the WC is used as STO-adverbial): in all the examples that can be found the WC is used as TO-adverbial, viz. it specifies a HC-ITO which is not the HC-STO, but to which the HC-STO is anterior.

The following illustrate the possible configurations in the Historic Present System:

- (26)

- (a) (*summary*) When the police find his body he has already been dead for several days, (config. 4)
(b) (*summary*) When the police have finally found his body, he has been dead for two weeks, (config. 6)
(c) (*summary*) When he has already been dead for a week, the police have known about it for only a couple of days, (config. 6)

- (d) (*summary*) When she is going to have a baby, the girl has been married for only a couple of weeks, (config. 8)

In the Historic Present System, a past TO is treated as if it were t_0 . The tenses that are possible in the WC are those that express a relation with this pseudo- t_0 . In (26 a) the WC-STO is located at the pseudo- t_0 by means of the present tense. In (26 b–c) the WC-STO is located within or throughout a period leading up to the pseudo- t_0 by means of an indefinite and a continuative perfect, respectively. In (26 d) the WC-STO is represented as posterior to the pseudo- t_0 . Since a continuative perfect represents a particular kind of anteriority relation (viz. ‘before and up to’), we can say that in each of the examples the HC-STO is anterior to the HC-ITO. It follows that, depending on the relation between the WC-STO and the WC-ITO, the configuration realized is 4, 6 or 8.

Habitual-repetitive sentences form the second exception to the rule that an HC with a continuative perfect cannot combine with a WC. Consider:

- (27) As a rule, he has already been at work for four hours when she has only been working for two hours.

This sentence refers to a present habit consisting of repeated instances of a situation. Each instance is such that both *He has already been at work for four hours* and *She has only been working for two hours* are true. Both these clauses represent their STO as continuing into the same TO. The TO in question is different for each of the instances constituting the habit. The use of *when* is possible because the TOs in question precede t_0 .

Since both its clauses express anteriority, (27) realizes configuration 6 (in which the HC-STO is anterior to the HC-ITO and the WC-STO is anterior to the WC-ITO). A similar example, but with an indefinite perfect in the WC, is the following:

- (28) What usually happens is that *when the administration has finally issued your visa, you have been waiting so long* that you do not feel like using it any more.

Examples realizing configuration 4 (with the HC-STO anterior to the HC-ITO and the WC-STO simultaneous with the WC-ITO) can be found as well:

- (29) As a rule, when his wife gets up he has already been at work for two hours.

And the following realizes configuration 8 (with the HC-STO anterior to the HC-ITO and the WC-STO posterior to the WC-ITO):

- (30) As a rule, these girls have only been married for a couple of weeks when they are already going to have a baby.

Another exceptional case (not noted in [Chapter 5](#)) in which an HC with a continuative perfect can combine with a WC in the past tense is when the WC focuses on some past time(s) within the period up to t_0 throughout which the HC-situation is holding:

- (31)

- (a) I can't imagine how you got hold of that idea. I've always had a Christian name, even when I *was* a baby. (DR-MILN)
- (b) For six years I've had badly cooked food and atrocious wine, when I *could afford* it, so for God's sake let's get out and get some good English food. (DR-MAUG)

2.2

The HC uses an indefinite perfect

In this section I will investigate how (and whether) a WC-STO can be introduced into a pre-present domain established by an indefinite perfect in the HC.

We notice at once that the possibilities will be restricted. As noted in section 3.3 of [Chapter 5](#), an indefinite perfect referring to a single situation is by definition incompatible with an adverbial specifying the time of the situation: an indefinite perfect can only be used if the time of actualization remains indefinite (apart from the fact that it is represented as lying in a period up to t_0). Thus, the following sentence cannot be used to locate a past visit of mine to Italy in time:

(32) *I have been in Italy (at the time) when John was there last year. This means that a WC functioning as STO-adverbial cannot normally be inserted into an HC establishing a pre-present domain by means of an indefinite perfect.

There are similar restrictions on the use of a WC as TO-adverbial. A TO-adverbial specifies the HC-ITO binding the HC-STO. If the HC uses a perfect form, the relation between the HC-STO and the HC-ITO is that of anteriority. However, if the HC uses the present perfect, the HC-ITO can only be t_0 (since an indefinite present perfect represents its STO as anterior to t_0), and (as noted above) t_0 is not a time that can normally be specified by a WC. (We say *Now that I'm here, he's gone!*, not **When I'm here, he's gone!*, except on a habitual-repetitive interpretation.) It follows that an HC with an indefinite perfect is as a rule incompatible not only with a WC functioning as STO-adverbial but also with one functioning as TO-adverbial.

However, it was pointed out in section 3 of [Chapter 5](#) that there are possible exceptions to this rule. The most important of these are when the WC is used as TO-adverbial and uses the Historic Present System, when the sentence has a habitual-repetitive meaning, and when the HC receives an 'existential perfect interpretation'. In what follows I will go somewhat more fully into these possibilities.

2.2.1

WC used as STO-adverbial (configurations 1–3)

2.2.1.1

Habitual-repetitive interpretation

When the sentence receives a habitual-repetitive interpretation, the tense of the HC locates the habit as a whole in time, whereas the tense forms of HC and WC together express a configuration which represents the temporal structure of each of the instances making up the habit. If the HC uses an indefinite perfect, the WC expands the pre-present domain thus established as if it were a past one. For example:

(33)

- (a) Too many have bogged down in bickering. Even when public bodies *arrived* at a consensus, at least one dissenting vote has been usual. (BR)
- (b) I have often seen Washington when the cherry trees *were* in bloom. (Smith 1976:216)
- (c) Whenever some Washington circles *were* really ready for talks to eliminate friction they have always succumbed to pressure from the war clique in the Pentagon and in Bonn. (BR)
- (d) Indeed, analysts say that payouts have sometimes risen most sharply when prices *were* already on their way down from cyclical peaks. (WSJ)

These examples realize configuration 1. The following realize configurations 2 and 3, respectively:

(34)

- (a) They have sometimes refused to release a film when the preview *had not been* a success.
- (b) In the past, coffee prices have always fallen sharply when the market *was going to be flooded*.

A point worth making is that examples like those in (33) alternate with examples in which the WC uses the present perfect:

(35)

- (a) When mechanical means of reproducing works of art *have been developed*—woodcuts, engravings, etchings, pottery moulds—they have reproduced these works as well as the more conventional. (LOB)
- (b) ‘But how did he know you’d be there?’—‘God knows. I’ve gone there before when my sister’s *been* away.’ (ADIMV 104)

- (c) A relatively small group of major companies pays the great majority of taxes in Mexico. And when the government *has faced* cash crunches, it has combed their books for whatever money it can claim. (WSJ)
- (d) Indeed, good judges have been criticized, without just cause, when past form *has been* upset. (LOB)
- (e) Thus I have declined a number of invitations from foreign Governments and have only gone when I *have been* able to 'work my passage', usually with my pen. (LOB)
- (f) I've spent hours looking at things like this—when you've not *been* around. (DR-PIN)
- (g) In periods when the Conservative government *has been* in power, unions have been pushing harder to the extent of some three index points per year. (LOB)

In some cases the preterite and the present perfect appear to be interchangeable. In the following example there are two conjoined WCs, one of which uses the present perfect, the other the past tense:

(36) I have come across cases where specialists—in some cases I must admit where they are fulfilling their first championship show engagement— when they *have gone* into raptures over very ordinary specimens with quite obvious faults and even when fundamental anatomical faults *were* pointed out to them—such as faulty shoulders, movement and so on—they have not only been unable or unwilling to see the faults, but have even given me a sort of pitying look one gives to a half-witted child because I even suggested that their idol had feet of clay—so to speak. (LOB)

However, there is usually a slight difference of meaning between the preterite and the present perfect. Compare:

(37)

- (a) I have often helped him when he *has been* ill.
- (b) I have often helped him when he *was* ill.

(38)

- (a) John has played well when he *has batted*.
- (b) *John has played well when he *batted*. Sentences (37 a–b) can be paraphrased as (37 a'–b'), respectively:

(37)

- (a') (On the occasions) when he has been ill, I have often helped him.
- (b') It has often happened that I helped him when he was ill.

Unlike (37 a'), (37 b') has an instantiation reading: the WC forms part of the description of a situation of which there are said to have been many instances. In (38 a-b), which do not contain a frequency adverb like *often*, this kind of interpretation ('It has happened that John played well when he batted') appears relatively inaccessible. This explains why (38 b) is felt to be unacceptable.

If the WC does use the present perfect, it creates a pre-present domain of its own, which is interpreted as W-simultaneous with that expressed in the HC. That is, as in cases of indirect binding, the WC-STO is not related to the WC-ITO but to another TO. However, since the TO in question is t_0 , the result is not indirect binding but a shift of domain.

2.2.1.2

Existential perfect interpretation

An indefinite perfect in the HC can combine with a WC on an 'existential perfect interpretation', i.e. if it is used to express that a particular kind of situation has actualized once, several times or not at all in a period leading up to t_0 :

(39)

- (a) I don't think you have ever come to me when you were in trouble.—That is not true. *I HAVE appealed to you when I was in trouble*. Several times. But you wouldn't help me.
- (b) But I have known a good conductor insist on what was arguably a 'correctly' fast pace when the singer was incapable of singing at that pace. (LOB)
- (c) I've known them keep this rival-chasing up for hours at a stretch when the chasee couldn't, or wouldn't, get away. (LOB)

These examples, in which the WC functions as STO-adverbial and uses the preterite to represent the WC-STO as simultaneous with the WC-ITO, realize configuration 1. The WC may also use the past perfect to represent the WC-STO as anterior to the WC-ITO (configuration 2), or *was going to* to represent the WC-STO as posterior to the WC-ITO (configuration 3):

(40)

- (a) Has he ever spent more than £100 on booze {when/on the very day that} he *had been paid* his wages?
- (b) Has she ever notified the police {when/at a time when} she *was going to leave* the country?

A thing worth noting is that examples (39 a-c) (with the preterite in the WC) and (40 b) (with the preterite of *be going to* in the WC) alternate with examples using the present perfect (establishing a simultaneous pre-present domain) in the WC:

(41)

- (a) Have you ever helped him when he *has been* ill?
- (b) Has she ever notified the police when she *has been going to leave* the country?

Note, however, that these sentences become far less acceptable if *when* is replaced with *at a time when*. This probably has to do with the fact that, as in the case of habitual-repetitive sentences, there is actually a slight difference of meaning between the preterite and the present perfect in the WC. Compare:

(42)

- (a) Have you ever helped him when he *has been* in trouble?
- (b) Have you ever helped him when he *was* in trouble?

The different interpretations of (42 a–b) can be paraphrased as follows:

(42)

- (a') When he has been in trouble, have you ever helped him?
- (b') Has it ever happened that you helped him when he was in trouble?

Apparently, the former type of reading is difficult to get if we use *at a time when* instead of *when*.

2.2.2

WC used as TO-adverbial

2.2.2.1

WC specifying t_0

When the HC uses an indefinite perfect and establishes a pre-present domain, the HC-STO is represented as anterior to t_0 . The use of a WC as TO-adverbial therefore means that the HC-ITO specified by the WC is t_0 . However, it was pointed out in section 3.1 of [Chapter 5](#) that a canonical WC cannot normally specify t_0 . This means that the combination of an HC with an indefinite present perfect and a WC used as TO-adverbial will only exceptionally be possible.

(a) Historic Present System In the Historic Present System an HC with an indefinite perfect can combine with a WC relating the WC-STO to t_0 . The possible tenses in the WC are the present tense (configuration 4), the present perfect (configuration 6) and the present tense of *be going to* (configuration 8):

(43)

- (a) (*summary*) {When/on the day that} Bill *arrives*, John has already left.

- (b) (*summary*) {When/by the time that} John *has finished his* meal, Bill has left for the office.
- (c) (*summary*) The roof has not yet been repaired {when/at the time that} the monsoon *is going to set in*.

(b) Habitual-repetitive sentences When the HC (using an indefinite present perfect) receives a habitual-repetitive interpretation, it may be accompanied by a WC in the present tense:³

(44)

- (a) (At a time) when we *need* him at the office he has usually gone abroad,
- (b) Usually, he has not got up yet (at the time) when I *call* at his house.

In habitual-repetitive sentences consisting of an HC and a WC, the use of the tenses is determined by the temporal structure of the individual subsituations making up the habit. In (44 a-b) each of these instances realizes configuration 4 (with the HC-STO anterior to the HC-ITO and the WC-STO simultaneous with the WC-ITO). Because the habit as a whole holds at t_0 , it is t_0 that functions as HC-ITO.

If the WC-STO is represented as anterior or posterior to the WC-ITO, the temporal structure realized is configuration 6 or 8, respectively:

(45)

- (a) Usually, he has not got up yet {when/at the time that} I *have* already *left* for the office.
- (b) Usually, he has not got up yet {when/at the time that} I *am going to see* my first patient.
- (c) *When* = 'at a time like this when' *When* can refer to t_0 (i.e. the WC-ITO may be t_0) if *when* is interpreted as 'at a time like this when':

(46)

- (a) Why has he left the office {when/at a time when} we need him desperately?
- (b) The percentage was even higher—roughly three-quarters—among professionals and those earning more than \$50,000 a year. Service has declined just at a time when consumers *are more* impatient than ever. (WSJ)

³ In the corresponding sentences referring to a single situation, we normally use *now that*, not *when*:

- (i) Now that everybody *is waiting* for him to come home he has decided to go abroad!

These sentences realize configuration 4 (with the HC-STO anterior to the HC-ITO and the WC-STO simultaneous with the WC-ITO). We can also find examples realizing configuration 6 (with the HC-STO anterior to the HC-ITO and the WC-STO anterior to the WC-ITO) and configuration 8 (with the HC-STO anterior to the HC-ITO and the WC-STO posterior to the WC-ITO):

(47)

- (a) Why has he left the office {when/at a time when} our secretary *has gone* abroad? We need him here! (config. 6)
 (b) Because municipal bonds yields have risen at a time when interest rates generally *have fallen*, some portfolio managers are assuming that bonds bought now will appreciate in value as the municipal bond market rebounds. (WSJ) (config. 6)

(48)

- (a) Why has he left the country {when/at a time when} his wife *is going to be operated on*? (config. 8)
 (b) The President has lost a close ally {when/at a time when} *he is going to need* all the support he can get. (config. 8)

2.2.2.2

WC depending on HC using *has been going to*

A WC can be used as TO-adverbial if the HC uses the absolute-relative tense form *has been going to* on an existential perfect interpretation. This form both establishes a pre-present domain and represents the HC-STO as posterior to the HC-ITO. The HC-ITO specified by the WC (i.e. included in the common frame) is then not the HC-STO but the central TO of the pre-present domain. Because the pre-present domain is expanded as if it were a past one, the WC will use the past tense for simultaneity (configuration 5), the past perfect for anteriority (configuration 7) and the past tense of *be going to* for posteriority (configuration 9). The following sentences illustrate these three configurations, respectively:

(49)

- (a) Have you ever been going to commit suicide {when/at a time when} you *were feeling down*?
 (b) Have you ever been going to commit suicide {when/at a time when} you *had been rejected*?

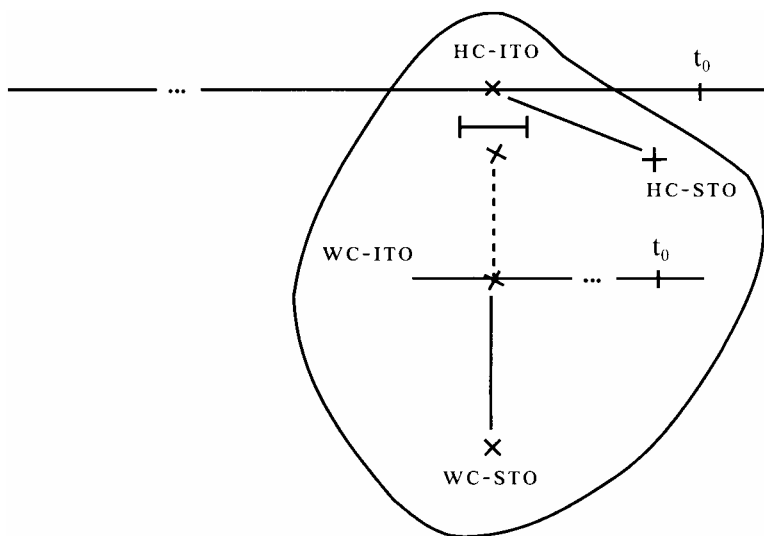


Figure 6.8 The temporal structure of (49 a)

- (c) Have you ever been going to commit suicide {when/at a time when} you *were going to* lose your job?

The temporal structure of (49 a) can be represented as in Figure 6.8.

3

THE HC-STO BELONGS TO A PRESENT DOMAIN

If the HC-STO is located at t_0 , the HC cannot normally combine with an Adv-RRC (e.g. *at the time that...*) or with a WC (see section 3.1 of [Chapter 5](#)). We normally use *now that* or *while* instead. There are a number of exceptions to this, but since these have been treated in the above-mentioned section of [Chapter 5](#), I will not go into them again here.

4

THE HC-STO BELONGS TO A POST-PRESENT DOMAIN

When the HC-STO belongs to a post-present domain, there are three possibilities as regards the location of the HC-ITO: it may be the central TO of the domain, or it may be anterior or posterior to the central TO.

4.1

The HC-ITO is the central TO

4.1.1

Configurations 1–3

In these configurations, the HC-STO is the HC-ITO and the WC-STO is simultaneous, anterior or posterior (respectively) to the WC-ITO. In this case the HC establishes the domain and we use the Present Perspective System in the WC:
(50)

- (a) I'll be in France {when/at the time that} she *is* in Rome, (config. 1)
- (b) He will tell you everything {when/the moment that} his wife *has left*. (config. 2)
- (c) She will smoke less {when/in the period that} she *is going to have* a baby, (config. 3)

A variant of this pattern is that in which there is no HC in the future tense but there is implicit reference to the future, so that the WC is located in an implicitly established post-present domain:

(51)

- (a) I'm hoping to be a teacher when I'm *demobbed*. (DR-MILN)
- (b) Be ready when you're *called*. (DR-SHAW)
- (c) When I *see* you at Merton in a week's time I expect a good report from your headmaster. (DR-RAT)
- (d) What does he have in mind to do when he *graduates*? (BR)
- (e) The ships and the men and the commander for the battle will be the best that we have, and when they *come* on the enemy the plan of battle is already laid out. (DR-RAT)

It should be noted that although the Present Perspective System is the rule in canonical WCs and Adv-RRCs, exceptional examples of Adv-RRCs using the Future Perspective System can be found if the phrase 'temporal NP+when' is not felt to be a stereotyped unit (similar to a temporal conjunction) and does not specify a definite time:

(52) Most counties also have maps available from the county engineer showing roads and other features and from the assessor's office showing ownerships of land. Inspect the site in the field during the time of the year when the area *will be* most heavily *used* for recreation. (BR)

Examples like these will be discussed more fully in [Chapter 11](#).

4.1.2

Configurations 4, 6 and 8

In these configurations, the HC-STO is anterior to the HC-ITO and the WC-STO is simultaneous, anterior or posterior (respectively) to the WC-ITO. If the HC-ITO is the central TO of the post-present domain, these configurations are realized by the use of the future perfect in the HC and the Present Perspective System in the WC:

(53)

- (a) {When/by the time} he *comes* to live here he *will* already *have retired*. (config. 4)
- (b) {When/by the time} he *has* finally *received* damages he *will* already *have retired*. (config. 6)
- (c) {When/by the time} she *is going to have* a baby she *will* hopefully *have acquired* some sense of responsibility. (config. 8)

4.1.3

Configurations 5, 7 and 9

In these configurations, the HC-STO is posterior to the HC-ITO and the WC-STO is simultaneous, anterior or posterior (respectively) to the WC-ITO. In this case we use an absolute-relative tense form involving *will be going to* in the HC and the Present Perspective System in the WC:

(54)

- (a) {When/by the time} she *comes* to live here she *will be going to have* a baby. (config. 5)
 {When/by the time} he *has finished* high school he *will* already *be going to join* the army. (config. 7)
 {When/at the time that} she *is going to commit* suicide she *will be going to kill* her husband and children too.

4.2

The HC-ITO is anterior to the central TO

4.2.1

Configurations 1–3

In these configurations, the HC-STO is the HC-ITO and the WC-STO is simultaneous, anterior or posterior (respectively) to the WC-ITO. In this case there are two possibilities:

- (a) In most cases the post-present domain is not established by the HC supporting the WC but by a superordinate clause. To represent the HC-STO

(which in these configurations is the HC-ITO) as anterior to the central TO we use the past tense (as Present Perspective System tense). (We do not normally use the present perfect because an HC in the present perfect is as a rule incompatible with a WC—see above.)⁴ This past tense form in the HC creates a pseudo-past subdomain within the post-present domain. This subdomain is developed like a normal past domain, which means that the WC uses the preterite to represent the WC-STO as simultaneous with the WC-ITO, the past perfect to express anteriority and *was going to* to express posteriority.

(55)

- (a) If some kind of accident happens, we will tell the police that we were not there {when/at the time that} it *happened*. (config. 1)
- (b) Repeat (5). Then repeat (1–4). The plug will be wetter than [it was] when you *started* by now. (LOB) (config. 1)
- (c) We will go there when it stops raining. If Mum asks us tonight where we have been, we will tell her that {when/at the time} the rain *had* finally *stopped*, we went out to play football, (config. 2)
- (d) When her next child is born she will say that {when/at the time} she *was going to* get the baby she had nowhere to go. (config. 3)

Note, however, that the HC can use the present perfect on a habitual-repetitive or existential perfect interpretation. In that case the HC creates a pseudo-pre-present subdomain which is expanded as if it were a past domain (so that the WC uses the preterite to represent the WC-STO as simultaneous with the WC-ITO):

- (i) If we manage to keep track of a *Bombus* queen after she has left her feeding place, we may discover the snug little hideout which she *has fixed up* for herself when she *woke up* from her winter sleep. (BR)

(56)

- (a) He will ask if you *have ever spoken* to her {when/at a time when} you *were feeling down*. (config. 1)
- (b) If you marry him, you will confess at the end of your life that you have often *cried when you were* alone in your bedroom. (config. 1)
- (c) Next time he will probably ask you if your wife has ever consulted a solicitor when the two of you *had quarrelled*. (config. 2)
- (d) He will ask you if she has ever seen a doctor when she *was going to have* a baby. (config. 3)

⁴ The following is an exceptional example in which the HC does use the present perfect (while the WC uses the past tense):

As noted in connection with true pre-present domains, the WC may also use the present perfect in config. 1 :

(57) I am confident that at the end of the season the coach will be able to say that I *have batted* well when I *have played*.

(b) The HC-STO (functioning as HC-ITO) is also anterior to the central TO of the post-present domain if the HC uses the future perfect. This tense both establishes a domain and represents its STO as anterior to the central TO. In that case the HC-STO is again treated as if it were a past TO, so that the WC uses the preterite for simultaneity, the past perfect for anteriority and *was going to* for posteriority:

(58)

- (a) At five o'clock John will no longer be there. He *will have left* when Mary *called* for him at four o'clock, (config. 1)
- (b) At five o'clock John will no longer be there. He will have left when he *had finished* his homework, around four o'clock.
- (c) I expect that John will have left her by then. He will have left her {when/at the time when} she *was going to have* a baby.

4.2.2

Configurations 4, 6 and 8

In these configurations, the HC-STO is anterior to the HC-ITO and the WC-STO is simultaneous, anterior or posterior (respectively) to the WC-ITO. In this case the post-present domain is not established by the HC but by a superordinate clause. Since the HC-ITO is itself anterior to the central TO (as is true of all the configurations we are discussing in section 4.2), the HC-ITO is the central TO of a pseudo-past subdomain within the post-present domain. In this subdomain we use the past perfect for anteriority and the preterite for simultaneity. The configurations 4, 6 and 8 are therefore realized by the use of the past perfect in the HC and the preterite, past perfect and *was going to* (respectively) in the WC.

(59)

- (a) If we kill him there, the police will believe that {when/at the time when} he *was killed* he *had already been* in the bar for hours, (config. 4)
- (b) If you do not put that bottle aside and prepare for your concert, the newspapers will write tomorrow that you *had already drunk* a bottle of whisky {when/by the time that} you *had finished* dressing for the concert. (config. 6)
- (c) If you do not put that bottle aside and prepare for your concert, the newspapers will write tomorrow that {when/by the time that} your concert *was going to start* you *had already drunk* a bottle of whisky (and that it then became obvious that you were too drunk to go on stage). (config. 8)

It should be noted that in these configurations the post-present domain can no longer be established by the use of a future perfect in the HC because the HC-ITO (which in the present section is anterior to the central TO) is no longer the HC-STO (as it is in configurations 1–3), so that the temporal structure of the future perfect (viz. HC-STO anterior to central TO of post-present domain) is not realized.

Another thing to be noted is that if the HC-ITO is anterior to a TO which is itself anterior to the central TO of the past domain, the WC-STO can be bound indirectly (by the use of the past perfect in configuration 4 and *had been going to* in configuration 8):

(60)

- (a) If you do not put that bottle aside at once and prepare for your concert, the newspapers will write tomorrow that I told them after the performance that {when/at the time when} your concert {*began/had begun*} you had already drunk a bottle of whisky, (config. 4)
- (b) If you do not put that bottle aside at once and prepare for your concert, the newspapers will write tomorrow that I told them after the performance that {when/at the time} when your concert {*was going to begin/had been going to begin*} you *had* already drunk a bottle of whisky. (config. 8)

4.2.3

Configurations 5, 7 and 9

In these configurations, the HC-STO is posterior to the HC-ITO and the WC-STO is simultaneous, anterior or posterior (respectively) to the WC-ITO. Here again the HC-ITO, which is anterior to the central TO, functions as the central TO of a pseudo-past subdomain, and both the HC-STO and the WC-STO belong to this subdomain. The HC (expressing posteriority) therefore uses *was going to*, while the WC uses the preterite for simultaneity, the past perfect for anteriority and *was going to* for posteriority:

(61)

- (a) She will say that {when/at the time} she *was staying here* she *was going to change* her job. (config. 5)
- (b) She is now only fifteen, but I hope that in a couple of years she will not have to admit that {when/by the time} she *had finished* high school she *was* already *going to have* a baby. (config. 7)
- (c) Suppose your husband dies next year, that you feel depressed and consider committing suicide. Will you admit to anybody afterwards that {when/at the time that} you *were going to commit* suicide you *were going to kill* your children too? (config. 9)

Note that if the HC-ITO is anterior to a TO which is itself anterior to the central TO, we use *had been going to* in the HC. In that case the WC may allow indirect binding:

(62)

- (a) He will no doubt remember that she told us that {when/at the time when} she {*was staying/had been staying*} here she *had been going to change* her job. (config. 5)
- (b) He will no doubt remember that she told us that {when/at the time that} she {*was going to commit/had been going to commit*} suicide she had been going to kill her husband and children too. (config. 9)

It should also be noted that on an existential perfect interpretation, the HC may use *has been going to* instead of *was going to*. In that case the HC-ITO is the central TO of a pseudo-pre-present (rather than pseudo-past) subdomain, but since this subdomain is again developed as if it were a past one, the WC uses the same past time-sphere tenses as in (61 a–c):

(63)

- (a) Sooner or later some doctor will ask him if he *has ever been going to commit* suicide {when/at a time when} he *was feeling* down, (config. 5)
- (b) The doctor will ask her if she *has ever been going to have* a baby when she *had neglected* to take the necessary precautions. (config. 7)
- (c) Sooner or later some doctor will ask him if he *has ever been going to commit* suicide {when/at a time when} he *was going to lose* his job. (config. 9)

4.3

The HC-ITO is posterior to the central TO

4.3.1

Configurations 1–3

In these configurations, the HC-STO is the HC-ITO and the WC-STO is simultaneous, anterior or posterior (respectively) to the WC-ITO. In this case the post-present domain is normally established not by the HC supporting the WC but by a superordinate clause. To represent the HC-STO (which is the HCITO) as posterior to the central TO, the HC uses the future tense (as Present Perspective System tense). This form creates a subdomain (with the HC-STO as central TO) which is developed like a normal post-present domain, i.e. by means of the Present Perspective System:

(64)

- (a) He will say that he *will not be* at home {when/at the time that} his sister *calls*. (config. 1)
- (b) He will say that he will lock the door {when/the moment} she *has left* the house. (config. 2)
- (c) He will warn her that her boy-friend will let her down {when/the moment} she *is going to have* a baby. (config. 3)

It should be noted that the HC-STO (functioning as HC-ITO) is also posterior to the central TO if the HC uses the absolute-relative tense form *will be going to*. However, a clause using this tense form does not normally support a WC. If we concoct examples in which it does, we notice that the WC again uses the Present Perspective System:

(65)

- (a) As usual, he will have no time to do it. He will be too busy. But, co-operative as he is, he will be going to do it when he *has* time. That's what he has always told us and that's what he is going to tell us now. (config. 1)
- (b) He will be going to help us when he *has finished* his own work, (config. 2)
- (c) I predict that {when/at the time} she *is going to have* a baby, he will be going to finish his studies. (config. 3)

4.3.2

Configurations 4, 6 and 8

In these configurations, the HC-STO is anterior to the HC-ITO and the WC-STO is simultaneous, anterior or posterior (respectively) to the WC-ITO. In this case the post-present domain is not established by the HC but by a superordinate clause. As in all the configurations discussed in section 4.3, the HC-ITO is posterior to the central TO. Since the tense of the HC needs to express both this relation and the relation of anteriority between the HC-STO and the HC-ITO, the HC uses the future perfect. To relate the WC-STO to the WC-ITO, the WC uses the Present Perspective System:

(66)

- (a) He will say that he *will already have retired* {when/by the time that} he *comes* to live in our village, (config. 4)
- (b) He will say that {when/by the time that} he *has* finally *received* his damages he *will already have retired*. (config. 6)
- (c) If you ask for his opinion, he will say that {when/by the time that} the murderer *is going to be hanged*, a great many policemen *will have arrived* in order to prevent any riots. (config. 8)

Note that we cannot use *will come* in the WC of (66 a). Like *would*, *will can* never be used for indirect binding in WCs.

4.3.3

Configurations 5, 7 and 9

In these configurations, the HC-STO is posterior to the HC-ITO and the WC-STO is simultaneous, anterior or posterior (respectively) to the WC-ITO. As in the previous configurations, the tense of the HC needs to express not only the relation between the HC-ITO and the central TO but also the relation between the HC-STO and the HC-ITO. Since both relations are posteriority relations, the HC uses *will be going to*. To relate the WC-STO to the WC-ITO, the WC uses the Present Perspective System:

(67)

- (a) She will say that {when/by the time that} she *comes* to live in our village, she *will be going to have* a baby. (config. 5)
- (b) She will say that {when/by the time that} he *has finished* high school, he *will be going to join* the Navy. (config. 7)
- (c) Her answer will perhaps be that {when/at the time that} she *is going to have* a baby she *will be going to live* on her own in London, (config. 9)

5

CONCLUSION

In this chapter I have applied the findings of [Chapter 5](#) to sentences locating their HC-STO in a domain which is established in the past, the pre-present, the present and the post-present, respectively. I have discussed how the nine temporal configurations resulting from the temporal structure of *when*, as well as the constraints on the use of WCs referred to in [Chapter 5](#), fit into the model of the English tense system presented in [Chapter 4](#). One conclusion from this scrutiny of a great many possibilities is that the tense theory offered in [Chapter 4](#) has been vindicated, as it has been shown to systematically make the correct predictions. Another conclusion is that the data confirm the hypothesis that the use of tenses in canonical WCs is exactly the same as that in Adv-RRCs introduced by *at the time that*.

SPECIAL RELATIVE TENSE USES IN CANONICAL *WHEN*-CLAUSES

1 INDIRECT BINDING

There are two types of indirect binding that are systematically possible in canonical WCs. One is the type that we have repeatedly referred to in the previous chapter, the other is a more special type which occurs only in the Present Perspective System. In this section, I will have a closer look at these possibilities, starting with the latter.

1.1

Indirect binding in a post-present domain

To illustrate this possibility, we must start from the observation (made in Chapters 4 and 6) that when a habitual-repetitive situation is located in the prepresent, not only the HC but also the WC may use a present perfect:

(1)

- (a) I have often cried when I *have felt lonely*.
- (b) John has batted well when he *has played*. (Hornstein 1975:92)

In these examples, the WC-STO is not bound by the WC-ITO but is related directly to t_0 . This means that not only the HC but also the WC creates a prepresent domain of its own. Now, we have seen that the relative tense forms used in the Present Perspective System are often ‘pseudo-absolute’ tense forms. This means that the present perfect forms of (1 a-b) are retained when the two STOs are incorporated into a post-present domain:

(2)

- (a) (If you go to live there on your own) you will no doubt end up complaining that you *have often cried* when you *have felt lonely*.
- (b) (If you include John in the team, I am sure that) you will tell me at the end of the competition that John *has batted* well when he *has played*.

In these examples the central TO of the post-present domain (viz. the STO of *will end up/will tell*) is treated as if it were t_0 . Both the *that*-clause and the WC depending on it use a present perfect to relate their STO to this 'pseudo- t_0 ': they represent their STOs as lying in the timespan leading up to the central TO (i.e. as lying in the pseudo-pre-present). This means that the WC-STO is not related to the WC-ITO but to the pseudo- t_0 . Needless to say, this is a form of indirect binding.

1.2

Indirect binding in a past domain

There is a second (and more productive) type of indirect binding, which is subject to the condition that the HC-ITO must be W-anterior to a contextually given past or pseudo-past TO. This is the type of indirect binding that was repeatedly referred to in [Chapter 6](#). It is illustrated by examples like the following:

(3)

(a) The house had been like this when he and Jean *had first come* here. (NMDT 68)

(b) (If you do not put that bottle aside at once and prepare for your concert) the newspapers will write tomorrow that I told them after the performance that when your concert *had begun* you had already drunk a bottle of whisky.

(4)

(a) He said he had bought it when he *had been going to get* that salary increase (which in fact he never got).

(b) (If you do not put that bottle aside at once and prepare for your concert) the newspapers will write tomorrow that I told them after the performance that when your concert *had been going to begin* you had already drunk a bottle of whisky.

It is typical of these examples (as well as all of those referred to in [Chapter 6](#)) that both the HC and the WC use a past perfect (either a regular past perfect or a form involving *had been going to*). It might therefore seem as if the WC 'copies' the tense form of its HC. However, the use of the past perfect in the HC is not a sufficient condition for the use of the same tense in the WC. An additional condition is that the HC-ITO must be W-anterior to a past or pseudo-past TO referred to in the context. If this is not the case, the WC cannot be bound indirectly:

(5)

(a) He says that he had already retired when he *{was/*had been}* sixty.

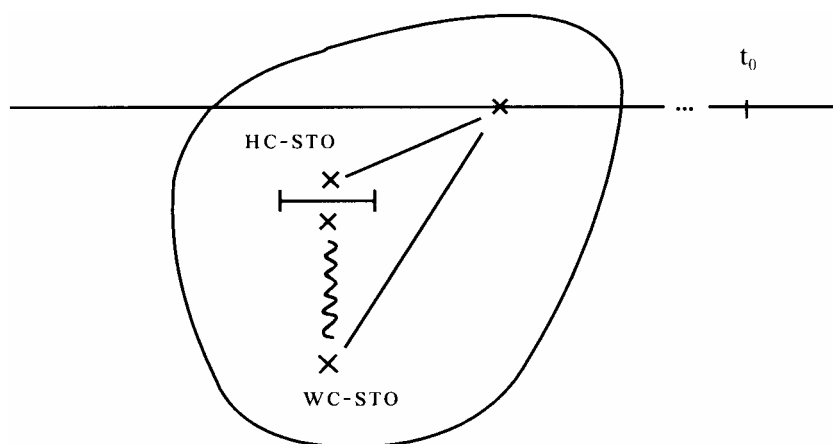


Figure 7.1 The temporal structure of (3 a)

(b) When I {saw/*had seen} her last week, we hadn't met yet.

(c) If we kill him there, the police will believe that when he {was killed/*had been killed} he had already been in the bar for hours.

In all three examples, the WC is used as a TO-adverbial and the HC-STO is represented as anterior to the HC-ITO. In (5 a–b) the WC cannot be bound indirectly because the HC-ITO is not itself anterior to a past TO. Similarly, in (5 c) there can be no indirect binding because the HC-ITO is anterior to the pseudo- t_0 (will believe), not anterior to a TO which is itself anterior to the pseudo- t_0 .

What the examples teach us is that the use of a past perfect in the HC is a sufficient condition for indirect binding if the WC is used as STO-adverbial,¹ but not if it is used as TO-adverbial. It is only in the former case that the overall condition that the HC-ITO should be W-anterior to a past or pseudo-past TO is automatically satisfied. (Compare Figure 7.1, which shows the temporal structure of (3 a), with Figure 7.2, which represents the temporal structure realized by the WC and its HC in (5 a).)

(i) Afterwards I was glad that I had left when I did.

If a WC uses the past perfect for indirect binding, the context has to make clear that the WC-STO should be interpreted as W-simultaneous with the WC-ITO. The past perfect itself does not express this relation. (The corresponding form used for direct binding, viz. the preterite, does express it.) If the form that

¹ Still, the use of the past perfect in the WC would be unusual in sentences like the following, in which the verb of the WC is a pro-form:

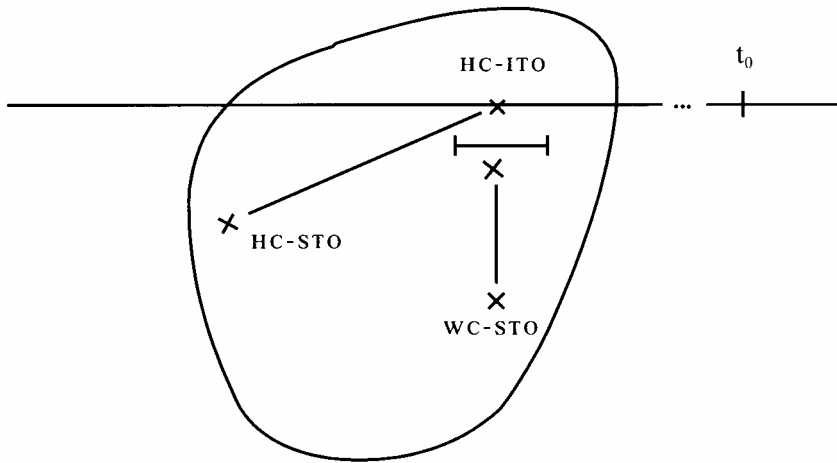


Figure 7.2 The temporal structure of (5 a)

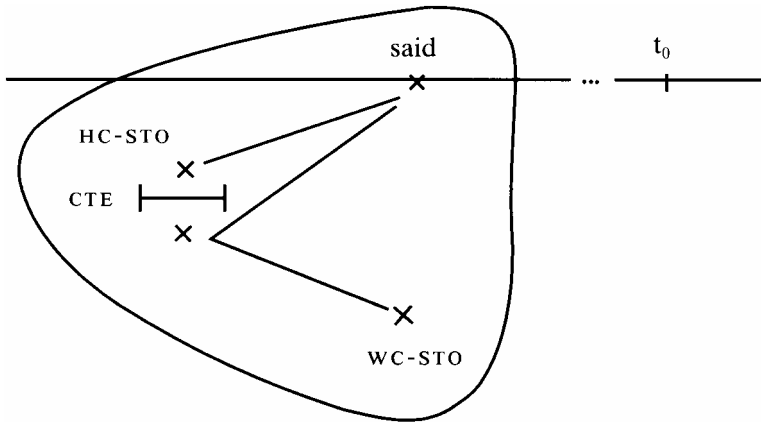


Figure 7.3 The temporal structure of (4 a)

effects indirect binding is built with *had been going to*, the WC-STO must be interpreted as W-posterior to the WC-ITO. This time the tense form does express this relation. The difference between indirect binding (*had been going to*) and direct binding (*was going to*) here, is that only in the former case does the tense form also express another relation, viz. the relation of anteriority that exists between the TO binding the WC-STO and the TO by which it is bound itself. (This is clear from [Figure 7.3](#), which represents the temporal structure of (4 a).)

An interesting observation is that when the WC is bound indirectly, the speaker sometimes shifts the domain in the HC (by using an absolute preterite) instead of using the past perfect. The following are some attested examples:

(6)

- (a) Sheila heard the gurgling death-rattle of the bath upstairs, and for some inexplicable reason felt a cold shudder creeping along her spine. She felt just as she *did* as a young girl when she *had* once *answered* the phone for her father. She recalled the strange, almost frightening questions...(LSW 63–4)
- (b) From a locked drawer she took out a large German revolver. Basil had given it to her—it was a souvenir of the war that he had acquired at secondhand. It *was* loaded when he *had brought* it to her and was loaded now. (FORG 197)
- (c) Murder? That was more up Morse's alley. When Strange *had* first *introduced* the matter he *thought* he was being invited to undertake one of those thankless, inconclusive, interminable, needle-in-a-haystack searches: panders, pimps and prostitutes, shady rackets.... But now he began to brighten visibly. (LSW 14)
- (d) But today she was genuinely concerned. John had been sick twice during the night and *was lying* shivering and sweating when she *had called* him at 7.00 a.m. He had eaten nothing all day and...she had rung the doctors surgery at 5.00 p.m. (LBW 132)
- (e) When he *had* first *seen* the black handbag as it plummeted to the ground, and came to rest in a cushion of deep snow at the corner of the church, his instinctive reaction *was* to look sharply and suspiciously around him. (SOA 158–9)
- (f) She *was* already bathed and dressed when the woman *had come* to waken her, and now she went downstairs and out into the open air. (FORG 79)

The same phenomenon can also be observed in Adv-RRCs:²

(7)

- (a) Peter Moran looked, if not dirty, scruffy. On each occasion Charles *had seen* him his hair *needed* a wash. (TSM 256)
- (b) Martin, like his father, often mixed business with relaxation, and it was on one of those evenings when Tim *had expressed* his envy of those who own their homes, that he *suggested* he too should buy a flat. (LOD 31)

What renders the shift of domain in the HC acceptable is the fact that for pragmatic reasons the HC-STO must be interpreted as W-simultaneous with the WC-STO. Since the tense form of the WC locates the WC-STO as anterior to a past TO, this means that the HC-STO must also be interpreted as W-anterior to this TO, irrespective of whether the tense form of the HC expresses that anteriority (using a past perfect) or shifts the domain (using a past tense). In the latter case the use of the past tense in the HC does not preclude indirect binding in the WC, because the basic condition for indirect binding of the WC-STO is satisfied: the HC-STO is interpreted as W-anterior to a past TO.

It should be noted, finally, that canonical WCs and Adv-RRCs normally allow indirect binding only if the relation expressed is that of anteriority. As a rule they

do not allow indirect binding by means of the conditional tense. However, there appear to be two kinds of exceptions. First, WCs may sometimes use the conditional tense if the HC-STO is interpreted as W-posterior to another TO but the tense form of the HC does not express this posteriority relation. For example:

(8)

- (a) 'I was due at Northampton Central Police Station', said Halliday in a heavy voice, 'but I dropped Elinor at the hospital on my way, promising to phone her when I'd *pick her up*.' (PKD 207)
- (b) She heaved a sigh, then laughed at herself for being so silly and
 - (i) That *was* the time his wife Maria *had called* him an 'under-grown donkey'. (LOB)

self-pitying. It was her own fault for inviting Robert on a day when Lois *would be* there, and, instead of standing about, feeling sorry for herself, she ought to be doing something to help poor Bertie. (LOB)

- (c) Mr Conway said the Fox shows appearing on nights when Paramount-MCA shows *wouldn't be offered* could be promoted on the programs produced by Paramount-MCA. (WSJ)
- (d) (*said of someone taking miniatures worth £500 to a potential buyer*) That little one, she talked of being careful when she *would have* five hundred pounds in money with her. But she has five hundred pounds with her now.—In miniatures. (DS 15–16)

In (8 a) the time of phoning Elinor (i.e. the HC-STO) is W-posterior to the time of promising, but the verb form of the HC (viz. *to phone*) is not a tensed form expressing this relation. The form *would pick up* effects indirect binding because it represents the WC-STO as posterior to the TO to which the HC-STO is W-posterior. (The corresponding direct binding form *picked up* would represent the WC-STO as simultaneous with the WC-ITO.) Sentence (8 b), which was discussed in [Chapter 5](#), is similar, and so are (8 c-d).

In older English, examples similar to (8 a-d) can be found in which the WC uses *should* or the past subjunctive. Poutsma (1926a:183–4) writes that 'Jane Austen seems to have a peculiar fondness for *were* after *when* and that 'the use of *should* is quite usual also in ordinary English'. I have borrowed the first of the following examples from him:

(9)

2 There are also examples involving a NP-RRC (see section 2 of Chapter 11):

- (a) She was very sure that he would be a great deal happier for having Mr Knightley always at hand when he *were* once got used to the idea. (Jane Austen)
- (b) I found, in them all, warm hearts and noble spirits. They were ready to hear, and ready to act when a feasible plan *should be proposed*. (DUGL)
- (c) Especially I made strong deep baskets to place my corn in, instead of sacks, when I *should come* to have any quantity of it. (ROBI)
- (d) We today are not entitled to excoriate honest men who believed Parker to be downright pernicious and who barred their pulpits against his demand to poison the minds of their congregations. One can even argue—though this is a delicate matter—that every justification existed for their returning the Public Lecture to the First Church, and so to suppress it, rather than let Parker use it as a sounding board for his propaganda when his turn *should come* to occupy it. (BR)

Examples with *should* are also possible if the HC does express posteriority:³

- (i) I knew that at heart I was a physical coward; and I always feared the thought that, if there were to come a time when I *should* be called upon to show a personal, an individual—as against a communal, corporate—act of courage, well, I knew that I would fail. (RTD 136)

(10)

- (a) Behind them they left a trail that *would break* Mr Harrison's heart when he *should see* it. (AVON)
- (b) But I never considered it as other than a transitory life. There was always a prophetic instinct, a low whisper in my ear, that within no long period, and whenever a new change of custom *should be* essential to my good, change *would come*. (SCRLT)
- (c) Hester comforted and counselled them, as best she might. She assured them, too, of her firm belief that, at some brighter period, when the world *should have grown* ripe for it, in Heaven's own time, a new truth *would be revealed*, in order to establish the whole relation between man and woman on a surer ground of mutual happiness. (SCRLT)

The second type of exception pertains to Adv-RRCs only (not to canonical WCs). Adv-RRC sometimes use *would* for indirect binding if the phrase 'temporal NP+*when*' is not felt to be a stereotyped unit (similar to a temporal conjunction) and does not specify a definite time (see section 1 of [Chapter 11](#)):

3 The following example is similar, except that the WC is an NP-RRC:

(11)

- (a) She expected he would do it on a day when she herself *{was/would be}* absent.
- (b) He advised us to visit the place during the time of the year when the area *would be* least crowded by tourists.

2

SLOPPY W-SIMULTANEITY

2.1

When the tense form of a WC used as STO-adverbial expresses simultaneity, this simultaneity is often interpreted as being of the 'sloppy' kind (see section 2.3.3 of [Chapter 5](#)). This means that the tense form expresses simultaneity but the WC-STO is actually interpreted as W-anterior or W-posterior to the HC-STO:

(12)

- (a) The business closed when the owner *was murdered* by robbers. (WSJ)
- (b) When John *left* the house, he put on his boots.
- (c) 'I used to play rugger', said Armstrong. 'I missed it when I *gave it up*.' (LOB)
- (d) When he *saw* Trelawny's printed letter, Lord Sidney wrote to Douglas Kinnaird saying that it was incorrect throughout. (LOB)

Strictly speaking, it would seem to be more logical to use a verb form expressing anteriority or posteriority in such examples:

(13)

- (a) The business closed when the owner *had been murdered* by robbers.
- (b) When John *was going to leave* the house, he put on his boots.

In most cases, however, the speaker will prefer (12 a-b) to (13 a-b) because they are simpler and because the temporal relation between the situations is anyhow clear from the pragmatics of the sentence.⁴ The explicit use of a more complex tense form, as in (13 a-b) is usually unnecessary, unless the speaker wishes to emphasize the precise temporal order of the situations (which is then asserted rather than merely inferrable). Moreover, the use of *had been murdered* or *was going to leave* adds an aspect of meaning. Whereas *was murdered* and *left* in (12 a-b) just represent their situations as past facts, *had been murdered* also conveys a resultative implicature, while *was going to leave* has prospective meaning and therefore actually fails to represent the situation as factual: in (13 b) the WC refers to the time when the WC-situation was anticipated, but fails to represent

the situation as actualizing. The past tense will therefore be preferred when the reference is to a situation that did actualize in the past.

2.2

A sloppy simultaneity reading may also be invited in cases of indirect binding:

(14) He handled the Tremlett and Vowchurch financial affairs and when he *had bought* his flat, Norman had made the preliminary survey and Adrian had handled the conveyance. (LOD 94)

Here the WC-STO is interpreted as W-simultaneous with the HC-STO (*had made*) in spite of being bound by another past TO. The interpretation in question is one of sloppy simultaneity.

2.3

As noted in section 2.3 of Chapter 5, the frequent use of sloppy simultaneity forms in WCs is due to the temporal structure of *when*, which is 'HC-ITO included in common TE (common frame) which also includes WC-ITO'. This temporal structure does not require that the HC-ITO should be W-simultaneous with the WC-ITO. All that is required is that the two should be conceived as falling within the same interval (common TE).⁵ As a matter of fact, this analysis makes clear that the use of a simultaneity form in the WC in cases where the

- (i) When trading resumed yesterday, EBS shares *immediately* surged \$4. (WSJ)
- (ii) When First Interstate balked, arguing that the figure was too high, regulators *responded* by raising their recommendation to \$350 million. (WSJ)

WC-STO is not W-simultaneous with the HC-STO is only seemingly an instance of a tense form expressing sloppy simultaneity. The truth is that the tense form in the WC represents the WC-STO as simultaneous with the WC-ITO and not with the HC-STO. The tense form in the WC thus expresses true simultaneity. That the WC-STO need not be W-simultaneous with the HC-STO is due to the semantics of *when* and has nothing to do with the tense form.

4 In some cases the sentence itself contains a word triggering a sequence interpretation:

5 In Chapter 9 we will see that when the WC is used as STO-adverbial and uses a tense form expressing simultaneity, the unmarked interpretation is for the common TE to coincide with the WC-STO. Since the common TE includes the HC-STO, the HC-STO is then interpreted as W-simultaneous with (because included in) the WC-STO. A sloppy W-simultaneity interpretation is a deviation from this. It is a marked reading in which the common TE does not coincide with the WC-STO.

2.4

According to Heinämäki (1978:26–7) and Schiffrin (1992:788), the use of *when* to indicate succession is only possible if both HC and WC express an achievement or accomplishment, not if they express a state or activity. (The reference is to the four situation types distinguished by Vendler (1967).) However, this claim stands in need of qualification. We can easily find examples in which the HC-situation is a state or an activity, provided it can be interpreted inchoatively:

(15)

- (a) When John broke his leg, he used the same crutches that his wife had used,
- (b) She *was* penniless when her firm went bankrupt.

These examples show that if the HC-situation is to be interpreted as following the WC-situation, the only condition is that it be (interpreted as) bounded to the left. It is not necessary that they are also bounded to the right (which is a condition that states and activities do not satisfy). This stands to reason: a succession interpretation requires that one situation terminates before the other begins, i.e. that one situation (the one that is interpreted as actualizing first) is right-bounded whereas the other is left-bounded. Whether the situations are bounded or unbounded at the other end is irrelevant.

2.5

In [Chapter 9](#) we will see that WCs that have front position are thematic and establish a TE which functions as temporal ‘anchor’ for the temporal interpretation of the HC-situation. If a WC is used this way, and the HC-situation is interpreted as W-posterior to the WC-situation (in spite of the WC using a simultaneity form), then it is sometimes possible for the HC to use a tense form which expresses this posteriority relation. Consider:

(16)

- (a) When John left his home town, he *would never return*.
- (b) When John left his home town, he *would not return* until fifty years later.
- (c) When he committed his first murder, the body was discovered before it was cold. But when he committed his second, the body *would be found* only six months later.
- (d) Grupo Desc, a big conglomerate, has long depended on Pemex petrochemicals to produce plastic packing material. But when the Pemex plant shut down for an annual overhaul, it *would never give* notice to its customers. (WSJ)

At first sight, the tense forms in these examples would seem to express configuration 5 (with the WC-STO simultaneous with the WC-ITO and the HC-STO posterior to the HC-ITO). However, we have seen that in configuration 5 the HC has to use *was going to* rather than *would* because it expresses what is anticipated at the time of the HC-ITO (i.e. the HC has prospective meaning). This is not the case in (16 a–d): here the HC-situation is not represented as anticipated but as factual, i.e. as a situation that actualized in the past. This means that this use of *would* is the same as that observed in sentences like the following, which are typical of a narrative style:

(17)

- (a) Thirty-two youngsters from this village were sent to the front in 1917, and only two of them *would come back*.
- (b) People didn't know at the time, but FDR *would be elected* a fourth time. (Matthiessen 1983:392)

The conditional tense form here represents its situation as factual, and could therefore be replaced by the past tense (albeit with loss of the emphasis on the W-posteriority relation). In (16 a–d) too the past tense could be used in the HC. Another alternative to *would* is *was/were to*:

(18)

- (a) Thirty-two youngsters from this village were sent to the front in 1917, and only two of them *were to come back*.
- (b) When John left his home town, he *was not to return* until fifty years later.

Examples like (16)–(18) are interesting because the use of *would* or *was to* implies that the relevant STO is not related to t_0 by means of an absolute past tense but is represented as posterior to the STO of the preceding clause. In the case of (16 a–d) this means that the HC-STO is not bound by the HC-ITO but by the WC-STO, so that a temporal structure is realized which is none of the usual nine configurations discussed in Chapters 5–6.

2.6

Examples like (16 a–d) alternate with examples in which the HC uses the past tense:

(19)

- (a) When John left his home town, he *did not return* until fifty years later,
- (b) But when stocks held steady, Treasury bonds later *retreated*. (WSJ)

What we observe in these sentences is similar to what we observe in conditional sentences like *If I have no time to do it today, I will do it tomorrow*: the

subclause uses a simultaneity form in spite of the fact that there are adverbs making clear that the STO of the subclause should not be interpreted as W-simultaneous with that of the HC. In conditional sentences this is possible (and conventional) because a conditional creates an intensional domain, which is treated as a temporal domain where the use of the tenses is concerned (see Declerck and Depraetere 1995). In (19 a–b) it is possible because the WC serves as anchor TE.

2.7

WCs that are interpreted in terms of sloppy W-simultaneity often do not really specify a time but describe the occasion(s) on which the HC-situation actualizes:

(20)

- (a) He always votes Conservative when there is a general election,
- (b) I got this as a present when I graduated.

When the notion of ‘occasion(s)’ is stretched to that of ‘case(s)’, the WC becomes ‘case-specifying’, and hence atemporal (see section 8.1 of [Chapter 2](#)). Such WCs no longer refer to time at all but describe the cases in which the statement made in the HC is true:

(21)

- (a) Children are orphans when their parents are dead.
- (b) When a husband is unemployed, he can do the housekeeping while his wife goes out working.

Atemporal WCs like these are sometimes called ‘restrictive WCs’ (see Farkas and Sugioka 1983, Declerck 1988b, 1991b:534) because they restrict the cases in which the HC-statement is true. In the above examples the idea of a set of cases (to be restricted by the WC) results from the fact that the subject NP is used genetically: a generic NP calls up the idea of an unspecified set, hence of an unbounded number of individuals. Since it is these individuals that constitute the cases restricted by the WC, we can replace the WC by a restrictive relative clause without any apparent difference of meaning:

(22)

- (a) Children whose parents are dead are orphans.
- (b) A husband who is unemployed can do the housekeeping while his wife goes out working.

As in (21 a–b), the generic subject NP calls up the idea of an indefinite (unbounded) number of entities and hence an indefinite number of cases (each entity being associated with one case). Whereas in (21 a–b) the atemporal WC

restricts the number of cases, and hence of entities, for which the HC-statement is true, the relative clause in (22 a-b) restricts the number of entities, and hence the number of cases, for which the HC-statement is true. The result is that the WCs have much the same effect as the relative clauses.

The tense system used in case-specifying WCs will be examined in [Chapter 11](#).⁶

2.8

Unlike canonical WCs, Adv-RRCs introduced by phrases like *at the time when* do not normally allow a sloppy W-simultaneity interpretation. However, they do when they are introduced by a phrase like *the moment (that)*:

(23) One of Auntie Gracie's maxims had been that only slatternly housekeepers leave dirty dishes in the sink. Arthur always washed his the moment he *finished* eating. (ADIMV 19)

2.9

As noted by Edgren (1971:60) and Hamann (1989:75), a sloppy W-simultaneity reading is excluded if *when* is preceded by *just*:

(24) {*When/*just when*} I told John the news, his answer was laconic.

2.10

A sloppy W-simultaneity reading of *when* requires that there should be some kind of logical relation (e.g. cause/effect) between the WC and the HC. This explains Ritchie's (1979:90) observation that sentences like the following are odd:

(25) ?When my car broke down, the sun set.

The restriction has to do with the Gricean Maxim of Relation (Relevance). The use of *when* (in configuration 1) means that the speaker locates the WC-STO and the HC-STO within a common TE. Obviously, the speaker must have some reason for doing this. In the unmarked case, the reason is that the two STOs are W-simultaneous. If this is not the case, the reason is that the speaker wants to express some kind of logical relation between the two STOs.

⁶ For a more detailed analysis of the semantics of case-specifying WCs, see Declerck (1988b).

3

THE EXPRESSION OF IRREALIS IN WHEN-CLAUSES

In unembedded clauses it is possible to use the conditional perfect to refer to a counterfactual (imaginary) past situation, usually in a context referring to, or implying, a counterfactual condition:

(26) I would have welcomed more information on what they wanted us to do [if that had been possible].

This use of the conditional perfect is also possible in WCs:

(27)

- (a) I would have told her (...) But when I *would have spoken* of this, I saw that she was looking into the future. (Jespersen 1932:309)
- (b) Maddeningly, just when I *would have welcomed* full information on the books he was reading, he started to mention nothing beyond authors and titles, often in a shortened form. (GREEM 97)
- (c) 'It is very kind of you to have asked me.' And then, when he *would have rung off*, she said, 'I suppose you have changed the flat a lot?' (LOB)
- (d) If his assessment of these occasions is accurate (...) it is fairly clear that British initiatives were responsible for keeping the negotiations alive when they *would otherwise have collapsed*. (Edgren 1971:110)
- (e) Ten years ago, the newspaper *El Espectador*, of which my brother Guillermo was editor, began warning of the rise of the drug mafias and of their leaders' aspirations to control Colombian politics, especially the Congress. Then, when it *would have been* easier to resist them, nothing was done and my brother was murdered by the drug mafias three years ago. (WSJ)
- (f) Though the House has now voted on capital-gains and a drug-bill funding deal appears concluded, it's too late for Congress to complete the remaining spending bills on time. Instead, the president is sent an "emergency" continuing resolution to get us past Sunday, when the government *would otherwise have* to shut down. (WSJ)

Sentences like these would appear to run counter to the widespread belief that WCs differ from *if*-clauses in that they are presupposed to be factual:

When-clauses, including those referring to past events, are restricted to refer to fact and reality, whereas *if*-clauses suppose the possibility of a state or event in potentially real as well as irrealis situations.

(Reilly 1986:314)

(See also Heinämäki 1978:31, Haiman 1986:218, Rijksbaron 1986:3.) The truth is that canonical WCs presuppose actualization of the WC-situation in some possible world, but not necessarily in the actual world.⁷ Sometimes the world in

question involves situations which at some time or other are expected to actualize later. This is the case in sentences like the following:

(28) John said he would commit suicide when a nuclear war broke out. Personally, I do not believe there will ever be a nuclear war.

Here the first sentence refers to a world of expectation (existing in John's mind) in which the WC-situation actualizes. The second sentence makes clear that the speaker believes that this world will not turn out to be the actual world, i.e. that the anticipated WC-situation will not actualize in the real world. Examples like (27 a–f) differ from (28) in two respects: (a) instead of just voicing an assumption, the speaker explicitly represents the anticipated WC-situation as not actualizing in the real world; and (b) it is not the linguistic context but the verb form of the WC itself that expresses this.

If the WC uses the conditional perfect, the TE which it establishes is the time of actualization of the WC-situation in the alternative world of expectation. Since this world is not different from the actual world as far as time is concerned, the time indicated is also valid in the real world. The WC can therefore establish a TE like any other canonical WC, except that the time indicated is not a time of actualization but a time of nonactualization.

Apart from the conditional perfect, the conditional tense can also be used to convey a counterfactual meaning, provided the verb is stative or progressive:

(29) Make sure you don't pay for holidays that occur when an employee *would* not otherwise *be working*. (BR)

Canonical WCs can also use a verb form which represents the actualization of the WC-situation as 'hypothetical', i.e. as unlikely but not impossible. This is typically the case in WCs introduced by *whenever* and using *should*:

(30)

- (a) I have promised to stand in for him whenever his state of health *should render* it impossible for him to attend the monthly meeting of the Board.
- (b) This decided him to part with the boy, whenever he *should be found*. (Poutsma 1929:669)

In examples like these, the WC has a conditional connotation.

4

CONCLUSION

This chapter has been concerned with some special uses of relative tense forms in canonical WCs. We have had a closer look at two types of indirect binding in this type of WC, the one having to do with the use of the present perfect in post-

⁷ The WC and the HC must, however, always refer to the same possible world (see Steube 1980: 57).

present domains, the other with the use of the past perfect in past domains. It has been shown that the latter is subject to the condition that the HC-ITO must be interpreted as W-anterior to a past or pseudo-past TO.

The second special use is that which looks like the use of tenses to express 'sloppy simultaneity'. It has been shown that as regards canonical WCs we can speak of sloppy W-simultaneity, but not of tenses expressing sloppy simultaneity. That is, the sloppy W-simultaneity interpretation is not due to the tense forms used but to the semantic structure of *when*.

The third special use is that of the conditional perfect or the conditional tense to express irrealis. The use of *should*, imparting a hypothetical meaning to the WC, has also been briefly referred to.

CANONICAL *WHEN*-CLAUSES ESTABLISHING A TEMPORAL DOMAIN

The survey of possibilities given in [Chapter 6](#) has made clear that canonical WCs (as well as the corresponding Adv-RRCs) as a rule relate the WC-STO to the WC-ITO. Since it is the tense form of the WC which expresses this relation, it follows that canonical WCs as a rule use relative tense forms. There are, however, a number of cases in which the WC arguably uses an absolute tense form. The present chapter will be devoted to these. In sections 1–31 will briefly examine whether the WC creates a domain of its own in the special uses that were noted in [Chapter 5](#). Section 4 is devoted to some other cases in which the WC clearly uses an absolute tense form.

1

HISTORIC PRESENT SYSTEM

In the Historic Present System, the WC-ITO is represented as if coinciding with t_0 . This means that the WC-STO is related to t_0 , hence that the WC uses an absolute tense. For example:

(1)

- (a) (*summary*) When they *arrive* at his house, John is already in bed.
- (b) (*historic present*) When Gordon *has shut* the door, Joan starts crying.
- (c) (*summary*) Joan takes the linen inside when there *is going to be* a storm.

The use of the present tense in the WC of (1 a) raises a theoretical question. Whereas the tense forms in the WCs of (1 b-c) are obviously absolute tense forms, it is difficult to say whether the present tense in the WC of (1 a) is a relative tense form (expressing simultaneity in a present domain) or an absolute one (establishing a domain which is interpreted as W-simultaneous with that of the HC). As far as I can see, there is no clear evidence in favour of either analysis. On the one hand, it makes sense to say that any tense form that relates an STO directly to t_0 is an absolute tense form; on the other, it was shown in [Chapter 6](#) that on a single-event interpretation, a canonical WC cannot establish a W-simultaneous post-present domain (by the use of the Future Perspective

System) or a W-simultaneous pre-present domain (by the use of a present perfect). This may be an indication that canonical WCs are generally incapable of establishing W-simultaneous domains (at least on a nonrepetitive interpretation).

Another point worth making is that even if the tense forms in the WCs of (1 a–c) are absolute tense forms, one could say that they are used in a way typical of relative tense forms. As noted in section 3.1 of [Chapter 5](#), sentences like (1 a–c) realize a temporal structure whose central TO is t_0 . Thus, in (1 b) the STO that could have been the central TO of a past domain is located at t_0 . In this way a past domain is developed as if it were a present one. This means that present time-sphere tenses which normally create domains are used to develop a pseudo-present domain.

2

PRESENT TENSE SENTENCES WITH SINGLE- INSTANCE READING

The above-mentioned problem of analysis also crops up in examples like the following, which receive a single-instance reading:

(2) You see: my secretary is not here when I need her. Sentences in which *when* means ‘at a time like this when’ are similar:

(3)

- (a) Why is he abroad when things *are* so difficult at home?
- (b) Why is he not at home when his wife *is going to have* a baby in a couple of hours?
- (c) Why has he left the office when we *need* him desperately?

3

HABITUAL-REPETITIVE SENTENCES

As shown in [Chapter 6](#), a canonical WC would seem to use an absolute tense form if the sentence receives a habitual-repetitive interpretation:

(4)

- (a) He is never at home when I *need* him.
- (b) He always stays at home when his wife *has fallen* ill.
- (c) He does not usually go abroad when his wife *is going to have* a baby.
- (d) When we *need* him at the office he has usually gone abroad.
- (e) Usually, he has not got up yet when I *call* at his house.
- (f) Usually, he has not got up yet when I *have* already *left* for the office.
- (g) Usually, he has not got up yet when I *am going to see* my first patient.

These examples refer to habitual situations. A habit is a characteristic that exists over an extended period of time (Comrie 1985:39). In most cases a habit implies repetition: the characteristic in question is ascribed to the referent of the subject NP on the basis of the fact that there have been a number of instances. Such a habit can therefore be seen as a complex situation consisting of an unspecified number of subsituations. If the individual subsituations can be described in terms of an HC and a WC, as in the above examples (where each subsituation is made up of a HC-STO and a WC-STO which are related to each other via a common TE), then the complex situation as a whole will be described in exactly the same terms. Which tense forms are used in doing this depends on the time at which the habit is located as well as on the relation between the HC-STO and the HC-ITO and the relation between the WC-STO and the WC-ITO. In the above examples the habit is said to hold at t_0 , but none of the subsituations (instances) making up the habit need actually take place at t_0 . This renders it very difficult to say whether the tenses used in HC and WC are absolute tenses. The tenses in question express the temporal structure of the instances of the habit rather than locating any of them in time. Still, they are present time-sphere tenses and also serve to locate the habit as a whole at t_0 .

If the habit is located in the pre-present rather than at t_0 , the WC clearly does establish a W-simultaneous domain:

(5)

- (a) From time to time in Denmark, there has been a move to increase sales, especially when the international weekly and monthly journals *have emphasized* the health-giving properties of yoghurt. (LOB)
- (b) Many a motel owner—when *we've stopped* there again—has remembered us and has said he preferred our dogs to most children. (BR)
- (c) I've spent hours looking at things like this, when *you've not been* around. (DR-PIN)

In examples like these, both the HC and the WC establish a pre-present domain, but the two domains are interpreted as W-simultaneous. This kind of construction requires that both the HC-situation and the WC-situation consist of an unspecified number of subsituations. The use of *when* means that each of the HC-subsituations is interpreted as W-simultaneous with one of the WC-subsituations. In this way the overall situations (which are located in the pre-present) are also interpreted as W-simultaneous with each other, but this relation is not expressed by the tense forms. The tense forms of the two clauses relate the two overall situations directly to t_0 . In doing so they establish two domains which are interpreted as W-simultaneous.

Apart from examples such as (5 a-c), there are also instances in which the WC establishes a pre-present domain and is followed by an HC in the past tense:

(6)

- (a) When we *have suggested* changes, the people concerned *were* furious.
- (b) When I *have seen* him in the last two years, he *was* invariably accompanied by several girls.
- (c) When stocks *have been added to* the S&P 500 in the past, a flurry of buy orders often *forced* the exchanges to halt trading because of an imbalance. (WSJ)
- (d) In the past, when companies *have cut* dealer profit margins on cars, the dealers often *made up* the difference by trying to sell more add-ons to consumers. (WSJ)

This combination of tense forms is rather unusual. One of my British informants remarked that, strictly speaking, sentences like these are ungrammatical, but that they ‘may often occur in casual conversation’. According to him, (6 a-d) would sound better if either the present perfect or the past tense were used throughout (see also section 2.2.1.1 of [Chapter 6](#)).

The combination of a present perfect in the WC with a past tense in the HC is anyhow only possible if the WC precedes the HC. This restriction is the same as for sentences involving a restrictive relative clause and an HC: here too the subclause may use the present perfect if it precedes the HC in the past tense:

(7)

- (a) Everything I *have ever done* was wrong.
- (b) The one time that I *have ever been* in London I *had* a crummy hotel. (McCoard 1978:139)

In sentences like (6 a-d) and (7 a-b) the present perfect in the WC or relative clause clearly establishes a pre-present domain. The past tense in the HC is more difficult to analyse: theoretically it could be either a relative past tense expressing simultaneity in the pre-present domain or an absolute past tense creating a (W-simultaneous) domain of its own. At present I have no conclusive evidence in favour of either of these analyses.

It should be noted, finally, that sentences with a present perfect in both WC and HC need not always be of the type illustrated by (5 a-c). In the latter examples, each of the subsituations making up the habit which is located in the pre-present is an instance of configuration 1 (with the WC-STO represented as simultaneous with the WC-ITO). However, each of the subsituations may also be an instance of configuration 4 (with the HC-STO represented as anterior to the HC-ITO):

- (8) Until now, whenever he’s *come* here he’s just *had* a quarrel with his wife.

It follows that a sentence like the following is ambiguous, because each instance of Bill’s being in prison may be interpreted as either coinciding with or preceding the relevant instance of the speaker seeing Bill (see also Leech 1971 : 47, Barense 1980:45, Declerck 1991a:350–2):

- (9) Whenever I’ve seen Bill he’s been in prison.

4

OTHER CASES OF *WHEN*-CLAUSES SHIFTING THE DOMAIN

4.1

Shift of domain from the past to the present time-sphere

The WC obviously uses an absolute tense form when it shifts the domain from the past to the present time-sphere. We can distinguish the following cases.

4.1.1

Sometimes there is a shift from a past domain to the present because the WC has generic meaning (i.e. expresses a universal truth) or refers to a habitual situation which holds not only at the time of the HC-situation but also at t_0 :

(10)

- (a) During the latter part of May and early in June the weather *was* unusually cold and wet, and growth was checked at a time when the quality teas of the year *are made*. (LOB)
- (b) I *had reached* the age when sexual questions *pester* the imagination and supply undergraduates with an absorbing topic for discussion. (LOB)
- (c) I am always recalling that when I was a little boy I *learnt* that to plant a tree and, still more, to care for it when you *have planted* it, *was* a good deed which would leave your heritage better than when you found it. (LOB)

4.1.2

In the following examples the WC refers to a single (nonhabitual and non-generic) situation which is located at t_0 even though the HC is in the past tense. The combination of a WC in the present tense with an HC in the past tense is rendered possible by the fact that the WC-situation covers a timespan which includes not only the HC-situation but also t_0 :

(11)

- (a) Word of Dag Hammarskjöld's death in an African plane crash has sent a shockwave around the globe. As head of the United Nations he was the symbol of world peace, and his tragic end *came* at a moment when peace *hangs* precariously. (BR)
- (b) Do we want to go through this? Or can we ask you why you *changed your* forecast just when it's about to be right? (WSJ)
- (c) He said Mr Kaunda must know that his statements had stimulated violence, but he had done nothing to stop it. 'It is true he *made* a point of again being

absent from Northern Rhodesia when his followers *have indulged* in such violence. (...)’ (LOB)

4.1.3

Apart from examples like (10)–(11), in which the WC refers to the present or pre-present, there are also examples in which it refers to the post-present:

(12)

- (a) I thought it might be wise for you to have someone close to you when the time *comes*, for that extra bit of support and comfort. (DR-HOW)
- (b) He added that he was Very confident’ child-care provisions would be part of the reconciliation bill when it *is sent* to the president. (WSJ)
- (c) Last month Sir William Morgan, chairman of Gloucester Wagon, said that when existing orders *are completed* the company would stop making rolling stock for railways, and the main works would be closed down. (LOB)

In these examples, the WC-situation is W-simultaneous with an HC-situation that is itself represented as posterior to a past TO. In this type of sentence we would expect the WC to use a relative past tense form, but the form that is actually used is a relative present tense form, such as is used to represent an STO as simultaneous with a post-present binding TO. This shift from the past to the post-present is made possible by the fact that the WC-STO is W-posterior not only to the HC-STO but also to t_0 .

Unlike the present tense forms in the WCs of (10)–(11), the present tense forms in (12 a–c) are not absolute tense forms. Still, the WC each time effects a shift of domain. The Present Perspective System form establishes a post-present domain in an indirect way (see section 16 of [Chapter 4](#)): the WC-STO is not the central TO of the post-present domain. The Present Perspective System form at once expresses a relation in the domain, and in so doing asserts the existence of the post-present domain.

4.1.4

As is well known, situations that are to be represented as hypothetical or counterfactual are treated as if they were past situations (e.g. *if I were you...*). This means that a ‘modal domain’ is conventionally treated as if it were a past domain: the tenses basically used to express remoteness from present time are used metaphorically to express remoteness from present reality, even if the speaker is actually speaking about the present or future. WCs depending on an HC making use of this system are mostly incorporated into the past domain in question, but they can also shift the domain, for the same reasons as were referred to in sections 4.1.1–4.1.3. The following are some examples illustrating the two possibilities, respectively:

(13)

- (a) Imagine sleeping with you every night. I'd need to have pleasant dreams, and even if I did, they'd be nightmares when I *woke up* and *turned over* to face you. (DR-HOW)
- (b) In their haste to meet production goals...they would accept information even when they *knew* it was suspect. (WSJ)
- (c) That wouldn't do at all. I mean, think how terribly embarrassing [it would be] when we *met*. (DR-COOP)
- (d) Once activated, the card would sit in the car's window, showing traffic wardens how much time the motorist could remain. When the motorist *returned* to his car he could turn the card off and, if it showed time remaining, save it for later. (WSJ)

(14)

- (a) How would you feel about it if I were to ask you for a date when I *get through* at Hanover? (BR)
- (b) I wish sometimes we could just go out and buy something when we *need* it, without all this performance of consumers' guide and best buy. (DR-BEN)
- (c) A little-noted rule would limit the benefit of a lower tax on gains when property *is sold*, by letting Uncle Sam 'recapture' all taxes lost from past depreciation. (WSJ)
- (d) What would he say when *sees* the baby? (DR-MAR)
- (e) I'd be glad if you'd not undermine my authority when I'm *dealing* with the boys. (DR-LAF)

4.2

Shift of domain from the pre-present to the present

Sometimes the HC uses an indefinite perfect to establish a pre-present domain which does not include t_0 (and which, if expanded, would be treated as if it were a past domain), but the WC-STO is located at t_0 rather than incorporated into the pre-present domain:

(15)

- (a) In addition, IBM noted that the stronger dollar has cut the value of overseas revenue and earnings when they *are translated* into dollars. (WSJ)
- (b) I've only ever met Mrs Cunliffe when she *comes* round collecting signatures for protest petitions. (DR-MAR)
- (c) This arrangement has proved helpful, particularly when the teacher of the class *takes* both sections. (LOB)
- (d) I tried to explain what has happened, unfailingly, whenever a significant body of Negroes *move* North. (BR)

- (e) Many's the time I've knotted my sheets together in the early hours of the morning when the guards *are* asleep and crept out into the prison yard. (DR-HOW)
- (f) Have you ever said to yourself on a day when the stock market *is taking gas*, why didn't I put my nest egg in Swiss government bonds 10 years ago and forget it? (WSJ)

In examples like these the shift to the present is made possible by the fact that the WC refers to a habitual-repetitive situation, instances of which are to be found not only in the past or pre-present but also in the present.

4.3

Shift of domain within the post-present sector

If the HC uses the Future Perspective System, the WC must normally use the Present Perspective System. As a matter of fact, the Present Perspective System is the rule in canonical WCs whenever the HC-STO is interpreted as W-posterior to t_0 . This means that it must also be used in sentences like *Let's do it when we have more time* or *He promises to do it when he has time*, in which the HC is not in the future tense but implicitly refers to the future. Still, in very formal or archaic texts, examples can be found in which the WC uses the Future Perspective System:

(16)

- (a) 'For my part', he says, 'my Subject does not necessarily oblige me to look after this Water; or to point forth the place whereunto 'tis now retreated. For when, from the Sea-shells and other Remains of the Deluge, I *shall have given* you undeniable Evidence that it did actually cover all parts of the Earth; it must needs follow that there was then Water enough to do it, where it may be now hid, or whether it be still in being or not.' (LOB)
- (b) Whenever the Secretary of the Treasury, or the Comptroller General of the United States, as the case may be, *shall find* that any person is entitled to any such payment, after such payment shall have been received by such person, it shall be an absolute bar to recovery by any other person against the United States, its officers, agents, or employees with respect to such payment. (BR)
- (c) It's the only drawback I have. When I *shall be asked* at the last judgement to repent, to own up to the one bad thing in all my life and take it back, that one big regret would be that I had only been just a little girl from birth and not just a little boy as well. (DR-HOW)
- (d) 'Thou shalt not kill.' Except when it *shall come* to pass that thy trade-routes shall be endangered. (DR-NICH)

Another exception to the rule that canonical WCs do not use the Future Perspective System concerns cases in which the WC contains or implies a condition:

(17)

- (a) I think we have a right to use chemical weapons when doing so *will help* to save lives.
- (b) One atom scientist, Dr Artur Compton, came out today for dropping the atom bomb ‘any time it *will defend* freedom or saves lives’. (Edgren 1971: 110)

In (17 a), the WC is interpreted as ‘when it will help to save lives if we do so’. There is a similar implicit condition in (17 b). In Declerck (1991a: 215–21) it is pointed out that *if*-clauses implying or containing another *if*-clause similarly use the Future Perspective System:

(18)

- (a) This system of subsidies will be maintained if the farmers *will suffer* considerable losses if it is abolished.
- (b) We will not use these abbreviations if it *will result* in confusion (if we use them).

5

CONCLUSION

This chapter has been devoted to cases in which a canonical WC establishes a temporal domain of its own. As pointed out in Chapters 5–6, this is systematically possible in the Historic Present System, in present tense sentences with single-instance reading, and in habitual-repetitive sentences. Apart from these, I have discussed some exceptional cases of WCs shifting the domain, as well as the conditions under which this appears to be possible.

THE INTERPRETATION OF CANONICAL *WHEN*-CLAUSES

1

INFORMATION STRUCTURE

From the point of view of information structure, a canonical WC is like any other time-specifying adverbial in that it can be used in three ways. First, the WC may constitute the new information expressed in the sentence. (New information is defined here as information which is presented as not being recoverable from the linguistic or extralinguistic context, though it may have been previously mentioned—see Halliday 1967:204.) In that case the sentence is specificational (see [Chapter 2](#)), because it provides an answer to an overt or presupposed question *When?* In this type of sentence the WC must follow the HC,¹ and it may specify either the HC-STO or another TO binding the HC-STO:²

(1)

- (a) (When did he leave?)—He left when the clock struck five. (STO-adverbial)
- (b) (When had he finally finished?)—He had finally finished when it was five o'clock. (TO-adverbial)

Second, the entire sentence (i.e. HC and WC) may give new information. In this case, the WC may precede or follow the HC:

(2)

- (a) (What happened?)—When he turned the ignition key, a bomb exploded.
- (b) (What happened?)—A bomb exploded when he turned the ignition key.

Third, the WC may belong to the part that expresses old information. In this case too, the WC may precede or follow the HC:

(3)

- (a) (Who was he looking at when he said that?)—He was looking at me when he said that. (STO-adverbial)

- (b) (What were you doing when he came in?)—When he came in, we had all finished our work and were about to go home. (TO-adverbial)

The information structure of the sentence may help to determine its temporal interpretation. As pointed out in section 1 of [Chapter 5](#), an STO either coincides with the TFS (time of the Full Situation) or is a proper subinterval of the TFS. In some cases both interpretations are available. Thus, in *At five o'clock I was here* it is left unspecified whether I was here only at five o'clock or before or/and after five o'clock as well. Similarly, *When John arrived I was here* is true both if I was here only at the time of John's arrival and if I was here for a longer period including the time of John's arrival. However, the latter interpretation (in which the HC-STO is a proper subpart of the HC-TFS) will not be selected if the WC is the only constituent providing new information, as in (4):

- (4) When were you here?—I was here when John arrived.

The question *When were you here?* asks for a temporal specification of the full time of my being here. In accordance with the Gricean Maxims, the reply sentence is taken to provide this information. This means that the time specified by the WC (i.e. the HC-STO) is interpreted as being the HC-TFS (unless *when* is not interpreted purely temporally but rather as specifying an occasion).

2

THEMATIC STRUCTURE

A time adverbial that is given initial position, and therefore functions as theme of the sentence (see Brown and Yule 1983:133, Rijksbaron 1986:5, Ford 1993: 65), establishes an 'anchor TE', i.e. a kind of temporal peg on which the rest of the sentence is hung (cf. Halliday's well-known definition of 'theme').³ In that case the rest of the sentence tells us about the state of affairs holding at the TE in question.⁴ In (5 a–c), the anchor TE is established by *at eight o'clock*. In (6 a–b), the WC functions similarly.⁵ As is clear from these examples, an adverbial establishing an anchor TE may be either an STO-adverbial or a TO-adverbial.

- (5)

- (a) We left early. {*At eight o'clock/When dawn broke*} we were already far from the village. (STO-adverbial)

1 As pointed out in Declerck (1988b: 243–51), specificational sentences that are not clefts or pseudo-clefts and which show the unmarked intonation pattern (with the nuclear accent falling on the last open-class constituent expressing new information) must as a rule have a word order in which the variable (presupposed information) precedes the value (new information).

2 In addition, the speaker may want to suggest a causal link between the two situations. A WC often has a causal implicature.

- (b) We left early. {*At eight o'clock/When dawn broke*} we had already passed the bridge. (TO-adverbial)
- (c) We got up early. {*At eight o'clock/When dawn broke*} we were already going to leave. (TO-adverbial)

In some cases the anchor time is defined by several adverbials:

(6)

- (a) The next day, when Hal returned from school, there was the bird in a wooden cage with bars in front. (LOB)
- (b) Linda did not unpack but washed herself and combed her hair. Yet fifteen minutes later when she went quietly down the stairs, she could have been dressed for a ball, the way their eyes turned and watched her approach. (LOB)

In such examples the TE established by the first adverbial includes the common TE established by the WC, so that the two adverbials collaborate to specify a single time, which functions as anchor time.⁶

If a WC establishes an anchor TE, it serves as the temporal starting-point for the interpretation of the sentence. This means that, in a certain sense, the HC is semantically dependent on the WC. This does not mean, however, that it is the WC that establishes the domain and the HC that is temporally subordinated. The configurations expressed in sentences where the WC functions as anchor TE are exactly the same as those realized in other sentences with a WC. This is clear from examples referring to the post-present. If we transpose (5 a) into the post-present sector, it is the HC that uses the Future Perspective System (absolute tense), while the WC uses the Present Perspective System (relative tense):

(7) (We will leave early.) When dawn *breaks* we *will* already *be* far from the village.

Moreover, there is a perfect similarity between (8 a) and (8 b):

3 Dik's (1978:139) definition of 'theme' is that it 'presents a domain or universe of discourse with respect to which it is relevant to pronounce the following predication'.

4 Initial WCs differ from final WCs in that they have a text-organizing function: they 'do guiding and shifting work in the development of discourse' (Ford 1993:12). (See also Linde and Labov 1975, Silva 1981, Ramsay 1987.) As noted by Steedman (1982:154) and Ford (1993:32), it follows that initial WCs often have more than the rest of the sentence in their scope: the temporal framework (background) which they introduce often holds for several clauses that follow. Final WCs, by contrast, 'do not serve any pivotal discourse organizational function' (Ford 1993:67): they merely complete the information given in the preceding main clause.

5 Chafe (1984:444) calls such preposed adverbial time clauses 'guideposts' to information flow, 'providing a temporal...orientation for the information in the upcoming main clause'.

(8)

- (a) (We left early.) At five o'clock we were already far from the village,
 (b) (We left early.) When dawn broke we were already far from the village.

The only difference between (8 a) and (8 b) is that the time adverbial is a WC in (8 b) and a prepositional phrase in (8 a). This suggests that the verb form of the HC (*were*), which is clearly an absolute preterite in (8 a), is also an absolute preterite in (8 b).

- (i) I saw him yesterday when he came out of the church,
 (ii) Yesterday I saw him when he came out of the church,
 (iii) *When he came out of the church I saw him yesterday.

Clearly, *I saw him yesterday* is not a suitable statement about the topic 'when he came out of the church'.

In sum, it is irrelevant to the tense system whether or not the WC functions as anchor TE. In both cases it is the HC that establishes the domain and the WC that is temporally subordinated. In this respect sentences involving a WC are quite similar to sentences involving another type of time adverbial (e.g. *this morning*). Compare:

(9)

- (a) When did you write this letter?—I wrote this letter {this morning/when I was in the study}.
 (b) What did you do {this morning/when you were in the study}?— {This morning/when I was in the study}, I wrote a letter.

In both cases the time adverbial establishes a TE. The fact that this TE is interpreted as an anchor TE in (9 b) is a question of how the sentence is structured in terms of theme (topic) and rheme (comment) (and in terms of old and new information). This may be important for the interpretation of the sentence, but has no bearing on the temporal relations expressed by the tense forms.

A final remark about thematic WCs is that they are as a rule incompatible with HCs involving a time-specifying adverbial. Compare:⁷

(10)

- (a) When John arrived (at two o'clock), Bill had already left.
 (b) *When John arrived (at two o'clock), Bill had left at one o'clock.
 (c) John arrived at two o'clock. Bill had left at one o'clock.

6 If only one of the adverbials is topicalized, it has to be the one with widest scope:

The reason why (10 b) is unacceptable is that the specification of the time of Bill's leaving is not a suitable rheme (comment) if the theme (topic) is the time of John's arrival. However, the same theme combines perfectly well with the rheme in (10 a): this sentence predicates of the time of John's arrival that the state of Bill having left was holding at that time. Example (10 c) is also impeccable because the two (independent) clauses do not form a theme-rheme structure. (For a more explicit discussion of examples like (10 a–c) and some exceptions to the rule, see Declerck 1991a: 363–7.)

3

FURTHER FACTORS DETERMINING THE TEMPORAL INTERPRETATION OF HEAD CLAUSES AND WHEN-CLAUSES

Apart from the information structure and the thematic structure, there are various other factors that determine the temporal interpretation of a sentence involving

- (i) At 2 p.m., John had (already) left.
- (ii) *At 2 p.m., John had left before midday.
- (iii) It was already 2 p.m. John had left before midday.

However, Bertinetto does not suggest the solution that I am arguing. a canonical WC: the tenses used, the time specified by the time adverbial(s) (if any) in the HC or WC, the time (if any) that is given in the linguistic or extra-linguistic context, the progressive or nonprogressive aspect of the verb, the repetitive or nonrepetitive representation of the situation, the Aktionsart (lexical aspect) expressed by the verb phrase, and the homogeneous or heterogeneous representation of the situation and of the TE. The first three factors require no further comment. The others will be defined and briefly discussed in this section. The interplay of the various factors will be investigated in section 4.

3.1

Perfective vs imperfective aspect

Aspect is expressed by the verb form and has to do with the way the speaker views a situation. There is perfective aspect when the situation is viewed as a whole (from outside, as it were) and imperfective aspect when it is not (i.e. when the situation is viewed from within). In the latter case the reference is not to the entire situation but just to its beginning, middle or end. In English, the only form of imperfective aspect expressed by the verb form is progressive aspect (see

7 Bertinetto (1982:74–6) notes the same problem in connection with sentences in which the thematic time adverbial is not a WC:

Comrie 1976:24). There is progressive aspect when the form of the verb reveals that the speaker is only referring to the middle part of the situation, disregarding its beginning and end. Needless to say, progressive aspect is expressed by progressive verb forms and perfective aspect by simple (nonprogressive) verb forms.

The distinction between perfective and imperfective aspect is relevant to the interpretation of sentences with a WC because perfective aspect indicates that the situation 'is viewed as bounded' (Bybee and Dahl 1989:55), whereas imperfective aspect renders a clause 'unbounded'. It will be pointed out below that the (un)boundedness of HC and WC is one of the crucial factors determining their interpretation.

3.2

Telic vs atelic Aktionsart

Aktionsart (lexical aspect) is an aspect of meaning contributed by the meaning itself of the words that make up the predicate constituent (i.e. the verb phrase, including the complement(s) and necessary adverbial(s), if any). An expression functioning as predicate will represent a situation as either durative or punctual (nondurative), semelfactive or iterative, and telic or atelic. The expression is telic if it involves reference to a natural terminal point,⁸ without which the situation is not complete and beyond which it cannot continue. Otherwise, the description is atelic. Thus, expressions like *drive a car* and *be old* are atelic, because they do not refer to any natural point of completion. Expressions like *drive the car into the garage* or *walk two miles* are telic, because they involve reference to a point of completion beyond which the situation (as it is described by the verb phrase) cannot continue.⁹

It is typical of a telic expression that it can be used as complement of a verb like *finish* or *complete*. An atelic expression can be used as complement of a verb like *stop*, which refers to an arbitrary end-point, but not as complement of a verb like *finish*, which refers to the natural point of completion. (A situation can stop or be stopped at any point, but it is finished only when the point of completion is reached.)

Since telicity is a question of how a situation is represented by a linguistic expression (predicate), we can apply the label '(a)telic' both to the situation described and to the expression describing it. (In the literature, the term 'situation types' is often used (see e.g. Quirk *et al.* 1985:200). It should be clear, however, that many situations are not inherently telic or atelic. Telicity is a question of how the linguistic material describes the situation. The same situation can often be

⁸ This natural terminal point is often referred to as the 'culmination point'—see e.g. Mommer (1986:59) and Moens (1987:57).

referred to by means of either an atelic expression (e.g. *drink whisky*) or a telic one (e.g. *drink a glass of whisky*).)

3.3

Bounded vs unbounded situations/sentences

(Un)boundedness is neither an aspect nor an Aktionsart. It is expressed, not by the verb form or the predicate, but by the entire clause. A situation is represented as bounded if the clause describing it represents it as reaching a terminal point.¹⁰ For example:

(11)

- (a) John read a book.
- (b) John will work in the garden until five.

Both sentences represent the actualization of the situation as coming to an end. In (11 a), where the predicate (*read a book*) is telic, this end is the natural point of completion inherent in the telic meaning of the predicate; in (11 b), where the predicate (*will work in the garden*) is atelic, the terminal point is an arbitrary point defined by the *until*-phrase. For ease of reference we can say that the situations in (11 a-b) are 'bounded situations' and that (11 a-b) are 'bounded clauses'. It should be clear, however, that these are simplified labels. 'Bounded situation' and 'bounded clause' are short for 'situation represented as bounded by the clause describing it' and 'clause representing a situation as bounded', respectively.

A situation/clause which is not bounded will be called 'unbounded'. An unbounded clause is thus a clause which does not represent (or, when the reference is to the future, does not conceive) its situation as terminating. (Needless to say, it follows that unbounded situations are by definition durative, not punctual.)

Unbounded situations differ from bounded ones in that they are 'homogeneous', i.e. the situation remains essentially unchanged as it proceeds in time: it is 'the same all the way through' (Galton 1984:154).¹¹ Such a situation is automatically 'dissective', i.e. every part of it is like any other part and like the situation as a whole.¹² Because of this, the description used to refer to the situation as a whole can also be used to refer to parts of it. For example:

9 Applying the telic/atelic distinction to the well-known classification proposed by Vendler (1967:99–107), we can say that 'states' and 'activities' are atelic, whereas 'accomplishments' and 'achievements' are telic.

10 Boundedness as defined here is equivalent to 'right-boundedness'. Botne (1981:78) makes a richer distinction, in which 'bounded' means 'bounded on the right and on the left' and is to be distinguished from 'right-bounded' and 'left-bounded'. However, we do not need this finer distinction here.

(12) John was in the garden.

If this situation held, say, from two to five, then it also held from two to three, and from four to five, etc. Sentence (12) can therefore refer both to the situation as a whole and to any part of it.¹³

By contrast, a bounded situation is 'heterogeneous', and therefore 'unitary'. This means that a bounded clause can only be used to describe the situation as a whole: it cannot be used to refer to any part of the bounded situation. (Thus, if there is a situation that can be described in terms of the sentence *I wrote three letters*, then the same description cannot be applied to the various parts of that situation: it can only be applied to the complete situation.)

It follows that a useful test for distinguishing between unbounded (homogeneous) situations and bounded (heterogeneous) ones is to try adding the adverb *still* to the clause describing the situation. As noted by Michaelis (1993: 200), the result of this will be grammatical only if the situation is represented as homogeneous:

(13)

- (a) At the time I was still in America.
- (b) At the time I was still writing my book.
- (c) *At the time I still wrote my book.

A telic expression can be used both in a bounded and in an unbounded clause.¹⁴ In the former case the inherent terminal point is represented as reached (as in *John walked two miles*); in the latter it is not represented as reached (as in *John was walking two miles*).¹⁵ This means that whereas (a)telicity is a question of whether the situation is described as *having* a natural terminal point, (un)boundedness is a question of whether the situation is represented as *reaching* a (natural or arbitrary) terminal point. In other words, (a)telicity is a question of

11 This is not to say that a homogeneous situation cannot have momentary gaps (e.g. *She was in bed with flu for five days*).

12 Hu (1988:52) formulates this as follows: 'Homogeneous situations have no distinctive subintervals. This means that if such a situation holds at a time interval I, it can hold at either a subinterval or a superinterval of I.' Bennett and Partee (1978:17) call this characteristic the 'subinterval property'. Carlson (1981:48) speaks of 'partitivity', while Hataav (1989:512) calls it the 'distributivity property'. Cooper (1986:27) dubs it 'temporal ill-foundedness'.

13 At least, it can refer to any *relevant part* of the situation. In many cases a situation need not be continuous: there may be gaps in it. (For example, the sentence *We walked for three hours* remains true if our walking was interrupted twice by a five-minute rest.) These gaps should be considered as irrelevant parts of the situation.

14 Many people wrongly fail to distinguish between the notions '(a)telic' and '(un)bounded'. I myself failed to do so in Declerck (1979), but have insisted on the necessity of the distinction in Declerck (1989) and Declerck (1991a). Depraetere (1995) argues along the same lines.

how we conceptualize a kind of situation with the help of a linguistic expression;¹⁶ (un)boundedness is a question of how we represent or conceive a situation as actualizing in the world that is being referred to.

When there is progressive aspect, the clause is automatically unbounded, because progressive aspect means that the speaker refers to the middle of the situation, disregarding its possible beginning and end.¹⁷ By contrast, a combination of perfective aspect (i.e. reference to the situation as a whole) and telic Aktionsart automatically results in a bounded clause. An atelic dynamic situation (i.e. what Vendler (1967) calls an ‘activity’) is also represented as bounded when the verb expresses perfective aspect (and is therefore in the nonprogressive form). Hence the difference between the following sentences:

(14)

- (a) At five o’clock John was (still) running away,
- (b) At five o’clock John (*still) ran away.

In (14 a), the progressive form represents the activity as homogeneous. This renders it possible to add *still* and allows the interpretation on which the HC-STO is not the HC-TFS but just that portion of it that coincides with the punctual TE. In (14 b), the nonprogressive (perfective) verb form refers to the situation as a whole and thus represents it as heterogeneous. It follows that we cannot add *still* to the verb phrase and that (14 b) does not allow the interpretation on which the HC-STO is just that part of the HC-TFS that coincides with the TE. In other words, (14 b) cannot be interpreted as meaning that the punctual TE is properly included in the TFS. The only possible interpretation is an inchoative one: John ran away and he started doing so at five o’clock. On this reading the punctual TE coincides with the initial point of the situation, but the situation is still referred to as a whole and is therefore represented as bounded (heterogeneous).

- (i) Look! It’s *been* snowing.

15 As noted by Tedeschi (1981:248), *John was walking two miles* implicates that John walked two miles, but this implicature can be cancelled, as in *John was walking two miles when he suddenly dropped dead*.

16 As noted by Klein (1994:10), it is pragmatically clear that a state such as indicated by the linguistic expression *sleep* has boundaries, but the linguistic expression in question does not say anything about them. *Sleep* is therefore an atelic predicate. This shows that ‘we must distinguish carefully between whether a situation has a certain property or not and whether such a property is made explicit or not, that is, belongs to the linguistic meaning of the utterance which describes the situation’ (Klein 1994:10). Moens (1987:57–8) apparently overlooks this when he writes that ‘events will be referred to as “bounded” in that they are supposed to start and end at relatively precise points in time.’

17 Note, however, that there is one use of the progressive form that provides an exception to this, viz. the so-called ‘explanatory-resultative’ use (see Declerck 1991b: 164–5):

- (ii) You've *been drinking* again. I can smell it.

In this use the reference is to a situation that has come to an end.

Boundedness can also be produced by the addition of an adverbial indicating a specific duration which is the result of measuring the situation from beginning to end. Thus, the unbounded sentence *John was in the house* is rendered bounded by the addition of such adverbials as *for two hours* or *until Bill arrived* (see also Michaelis 1993:200).

A question which is too complex to go into here is that of the effect of negation on the (un)boundedness of clauses. There is no doubt that unbounded clauses remain unbounded when they are made negative. It also makes sense to assume that bounded clauses become unbounded when a negation is inserted into them: if there is no actualization, the situation cannot be interpreted as having boundaries. Still, it is perhaps not *a priori* impossible for there to be exceptions to this rule. The literature reveals a wide diversity of opinion on this question—see Kittredge (1969:68), Edgren (1971:167–71), Givón (1978: 106), Comrie (1985:53), Dowty (1986:44), Moens (1987:139), Ford (1988: 17), Hamann (1989:73–4), Herweg (1990:105–9), Contini-Morava (1991), Michaelis (1993: 206), Klein (1994:48–58) and Declerck (1995a). However, the question is not very relevant to the discussion of how sentences with a canonical WC are interpreted. Edgren's (1971:167–9) analysis of an extensive corpus leads to the conclusion that negative canonical WCs are very seldom used and that such examples as can be found either have a habitual meaning or are not instances of purely temporal WCs: they have causal implicatures or belong to one of the many types of noncanonical WC.

The concept of (un)boundedness plays a role in the temporal interpretation of clauses. For example, it is only when the situation is represented as unbounded that the STO (the time of the situation as it is predicated and located in time) can be a proper subpart of the TFS (the time of the full situation) (see section 1 of [Chapter 5](#)). If the situation is bounded, the STO coincides with the TFS, i.e. the entire situation is referred to and located in time.

3.4

Repetitive vs nonrepetitive situations/sentences

Let us use the label 'repetitive sentence' for a sentence that represents a situation as repetitive (iterative), i.e. as consisting of repeated occurrences of the same kind of situation. A repetitive sentence (or the situation represented by it) is 'bounded-repetitive' or 'unbounded-repetitive' according to whether there is or is not an indication specifying or otherwise bounding the number of subsituations. Thus, (15 a-c) are unbounded-repetitive, whereas (16 a-c) are bounded-repetitive:

(15)

- (a) John kicked the ball for hours.
- (b) John drank a cup of coffee every hour.
- (c) Mary has knitted this kind of sweater for years.

(16)

- (a) John kicked the ball three times.
- (b) Ted five times drank a cup of coffee.
- (c) Ted drank five cups of coffee.

Repetitive sentences present no special problem, since repetitive situations can be treated exactly like nonrepetitive (semelfactive) situations. If the sentence is bounded-repetitive, the STO coincides with the TFS. If the sentence is unbounded-repetitive, the STO may be either the TFS or a subinterval of this. These are the same two possibilities as we have observed in connection with nonrepetitive unbounded sentences. (It must, however, be noted that repetitive unbounded sentences can only refer to ‘relevant’ subintervals, i.e. to subintervals that are sufficiently long to be repetitive themselves, i.e. to refer to more than one subsituation. Self-evidently, if this were not the case, the sentence would not be repetitive.)

Unbounded-repetitive sentences can be put in the progressive form. The effect, as usual, is that the STO is some interval forming part of the middle of the TFS:

(17)

- (a) When I spotted him, *John was furiously kicking the ball with his left foot.*
- (b) John is drinking cups of coffee.
- (c) Mary has been knitting this kind of sweater for years.

Since progressive aspect always renders a sentence unbounded, bounded-repetitive sentences cannot normally be put in the progressive without losing their bounded-repetitive character. A sentence like *John was kicking the ball thirty times* is no longer bounded, but refers to an unbounded (hence disjunctive and homogeneous) situation.¹⁸

3.5

Homogeneous vs heterogeneous TEs/adverbials

Like situations, the TEs identified by time adverbials may be (represented as) homogeneous or heterogeneous (see section 1 of [Chapter 5](#).) A homogeneous TE is a durative time interval that is understood as being ‘the same all the way through’ (Galton 1984:154). Such a homogeneous timespan is disjunctive: the adverbial establishing the TE can also be used to refer to any portion of the timespan in question. For example, the adverbial *in 1983* can be used not only to

refer to the complete timespan which began on 1 January 1983 and ended on 31 December 1983 but also to talk about any day in that period:

(18)

- (a) In 1983 I still lived in Paris.
- (b) My father died in an accident in 1983.

In (18 a), *in 1983* may well refer to the twelve-month period as a whole; in (18 b) we interpret it as referring to a particular day in that period.

The reason why the TEs established by adverbials like *yesterday*, *in 1983*, etc. are homogeneous is that these adverbials refer to an interval without explicitly drawing attention to its boundaries. Such an interval is therefore an unbounded TE. Unbounded TEs are always homogeneous.

By contrast, an adverbial is heterogeneous (i.e. represents a TE as heterogeneous) if it can only refer to the TE as a whole, not to any smaller portion of it. For example:

(19)

- (a) *From 1983 to 1986* I lived in Paris.
- (b) *My father died in an accident *from 1983 to 1986*.

It will be clear that the reason why the adverbial *from 1983 to 1986* is interpreted as establishing a heterogeneous TE is that it explicitly refers to the beginning and end of the timespan in question, i.e. because it represents the TE as bounded on both sides. There is thus a correspondence between boundedness and heterogeneity. However, this correspondence is not as absolute where TEs are concerned as it is where situations are concerned. We have seen that any situation that is bounded (in the sense of 'right-bounded', i.e. reaching a terminal point) is heterogeneous. The same is not true of right-bounded TEs.¹⁹ Consider:

(20)

- (a) John was in the garden before breakfast,
- (b) John left the house before breakfast.

Before breakfast refers to a timespan of indefinite length which is right-bounded: the boundary in question is the time of breakfast. However, *before breakfast* can be interpreted as a homogeneous TE: (20 a) can be used not only if John was in the garden all the time before breakfast but also if he was there for some time in

18 Sentences like *John was kicking the ball thirty times* may seem odd, but this is only because they require a specific kind of setting. If John had announced in advance that he was going to kick the ball thirty times and the speaker heard this, then there is nothing unusual about the speaker saying something like *John was kicking the ball thirty times when the headmaster came in*.

the course of that timespan; in (20 b) *before breakfast must* even be interpreted as ‘at some time before breakfast’. This means that in order for a TE to be interpreted as heterogeneous it is not sufficient that it be right-bounded. As a matter of fact, even adverbials that represent the TE as bounded on both sides may sometimes be interpreted as homogeneous:

(21)

(a) He left the house (somewhere) *between three and four*.

(b) He has been here only once *since last week*.²⁰

The reason why bounded TEs can be interpreted as homogeneous is that TEs are not interpreted as homogeneous or heterogeneous in isolation but rather in relation to the situation referred to. As a rule, any durative time-specifying adverbial can be interpreted as homogeneous because of the inclusion relation that exists between the TE and the STO. When we say that *between three and four* indicates a homogeneous TE because it can be read as ‘somewhere between three and four’, we are thinking of the location of the STO relative to the TE (as in *He came between three and four*). Since any durative TE properly includes a punctual STO, even bounded TEs can be interpreted as homogeneous. The only exception is when the TE is established by an adverbial such as *from three to four* or *until five*, which specifies not only the time but also the duration of the STO. In that case the TE automatically coincides with the STO, which may or may not be the TFS:

(a) When the adverbial provides new information, it specifies the duration of the situation. In that case the STO is also the TFS. For example:

(22) When was he in the kitchen?—He was *there from three to four*.

(b) If the adverbial represents given information and the situation is unbounded, the STO may or may not be a proper subpart of the TFS. For example:

(23) Where were you from two to four?—*From two to four* I was at home.

The answer here is true not only if the HC-TFS actualized from two to four but also if it started before two and/or lasted until after four.

In sum, whereas unbounded TEs are always homogeneous, bounded TEs are only heterogeneous if the adverbial specifies the duration of the STO. Otherwise bounded TEs are also interpreted as homogeneous. Since the property of being

19 In Declerck (1991a: 268–9) I failed to see this and wrongly equalled ‘bounded time adverbial’ with ‘heterogeneous time adverbial’.

20 In this example the right boundary of the TE is the time of speech. The TE is therefore bounded on both sides.

homogeneous or heterogeneous is a property of the TE determined by the nature of the time adverbial describing it, the labels 'homogeneous' and 'heterogeneous' will be applied both to the TEs and to the adverbials establishing them.

It should be noted, finally, that like other adverbials establishing a TE, adverbial time clauses are heterogeneous or homogeneous adverbials. Thus, in *John was in the garden before he had breakfast* the *before*-clause is a homogeneous time adverbial, since the sentence is true not only if John was in the garden all the time before he had breakfast but also if he was there at (or for) some time in that period.

A canonical WC describing a durative situation may function either as a heterogeneous adverbial or as a homogeneous one. When the WC-STO is not represented as anterior or posterior to the WC-ITO, this depends on whether the WC represents its situation as bounded (heterogeneous) or unbounded (homogeneous), respectively. For example:

(24)

- (a) I made the phone call when my husband was in the garden,
- (b) John was in the study when I wrote that letter.

The WC functions as a homogeneous adverbial in (24 a) and as a heterogeneous one in (24 b). That is, only in (24 a) can the WC be interpreted as 'at some time in the course of the WC-STO'.

When the WC-STO is represented as anterior or posterior to the WC-ITO, the WC automatically functions as a homogeneous adverbial:

(25)

- (a) John arrived when I had already left.
- (b) John arrived when I was just going to leave.

In (25 a) my leaving took place completely before John's arrival and is therefore a bounded situation. In spite of this, the WC is felt to be unbounded because the common TE (common frame) which it defines is not the time of my leaving but the time of the state of my already having left (see Heny 1982:142, Salkie 1987: 93, Smith 1989:112, Fabricius-Hansen 1991:55, Klein 1994:9). Sentence (25 a) represents the time of John's arrival as properly included in this homogeneous common TE. Similarly, in (25 b) the common TE including the time of John's arrival is the time when the state of my being going to leave was holding.

The rule that a canonical WC functions as a heterogeneous adverbial if it is bounded and its tense form expresses simultaneity does not apply if the WC does not have its basic time-specifying meaning but defines an occasion:

(26)

- (a) When John built his sailboat, he bought some timber from me.

- (b) When John went to Australia for two weeks, he paid a visit to his cousin Sarah.

In both examples the WC is bounded, but it does not function as a heterogeneous adverbial because the HC-STO does not coincide with the common TE. The reason is that the WCs define an occasion rather than specifying a time.

3.6

Durative vs punctual TEs

In section 2.3.3 of [Chapter 5](#) it was pointed out that the common TE (common frame) established by *when* is as a rule interpreted as the shortest interval that is in keeping with the pragmatics of the sentence and its context. This means that the common TE established by a canonical WC is as a rule interpreted as coinciding with the WC-ITO, except if the HC-ITO and the WC-ITO are not interpreted as W-simultaneous but in terms of sequence (i.e. when there is a sloppy W-simultaneity interpretation). For example:

(27)

- (a) John will still be in bed when I open the door of my office.
 (b) When John comes in, Mary will leave the room.
 (c) When John dies, he will be buried in the village churchyard.

In each case the tense form of the WC represents the WC-STO as simultaneous (i.e. coinciding) with the WC-ITO. Since the WC-situation (and hence the WC-STO) is conceived as punctual, the WC-ITO is also conceived as punctual. In (27 a), where the HC-STO is interpreted as simultaneous with the WC-STO, the common TE is conceived as commensurate with the WC-ITO and hence as punctual. Since this punctual common TE includes the HC-STO (in terms of coincidence), the HC-STO is also conceived as punctual, i.e. as a point of time from the homogeneous HC-TFS. In (27 b), two readings are available. First, the punctual HC-STO may be conceived as coinciding with the punctual WC-STO. In that case the common TE is also conceived as punctual. Second, the two situations may be conceived as following each other closely. In that case the common TE (which includes the HC-STO as well as the WC-ITO, which are not W-simultaneous with each other) is conceived as having a certain duration. In (27 c), pragmatic knowledge rules out the interpretation in which the two STOs coincide. The common TE is therefore conceived as an interval whose length is determined by pragmatic factors (i.e. the customary lapse of time between a death and the subsequent funeral).

In sum, if there is a sloppy W-simultaneity reading, the common TE established by a canonical WC is conceived as longer than the WC-ITO, since it includes both the WC-ITO and the HC-ITO, which are not W-simultaneous with each other. Otherwise the common TE is interpreted as coinciding with the WC-

ITO (which coincides with the WC-STO if the tense form of the WC expresses simultaneity since simultaneity (as expressed by tense forms) has been defined in terms of coincidence—see section 1.2.3 of [Chapter 5](#)).

3.7

Summary of section 3

The following are the main conclusions arrived at in section 3:

- (a) If a situation is represented as bounded (heterogeneous), the STO is the TFS. If it is represented as unbounded (homogeneous), the STO may either coincide with the TFS or be a proper subpart of the TFS.
- (b) If a TE is heterogeneous, it coincides with the STO (or whichever TO functions as ITO). If a TE is homogeneous, it either coincides with the ITO or properly includes it.
- (c) A WC establishes a heterogeneous common TE if its situation is bounded and the WC-STO is not represented as anterior or posterior to the WC-ITO; otherwise it creates a homogeneous common TE.
- (d) The common TE established by *when* is as a rule interpreted as the shortest interval that is in keeping with the pragmatics of the sentence and its context. This means that the common TE established by a canonical WC is as a rule interpreted as coinciding with the WC-ITO, except if the HC-ITO and the WC-ITO are not interpreted as W-simultaneous but in terms of sequence (i.e. when there is a sloppy W-simultaneity interpretation).

These conclusions in their turn lead to the following:

- (a) If a WC is bounded and its tense form expresses simultaneity, it establishes a heterogeneous common TE which coincides with the WC-ITO and which, barring sloppy W-simultaneity or one of the other special interpretations to be discussed below, also coincides with the HC-ITO. It follows that the unmarked interpretation is for the HC-ITO and the WC-ITO to coincide. Thus the normal interpretation of a sentence like *I filled in my form when you filled in yours* (in which the HC-ITO is the HC-STO and the WC-STO coincides with the WC-ITO) is that the two situations actualized at the same time.
- (b) If the WC is unbounded, or if its tense form expresses anteriority or posteriority, it establishes a homogeneous common TE which includes (properly or otherwise) the HC-ITO. Since the common TE is taken to be the shortest interval that is in keeping with the pragmatics of the sentence, it is as a rule interpreted as coinciding with the WC-ITO. It follows that the HC-ITO is interpreted as included (properly or otherwise) in the WC-ITO. The normal interpretation of *I filled in my form when I was at home*, in which the WC-STO is interpreted as coinciding with the WC-ITO, is therefore

that the HC-situation actualized during (i.e. either throughout or in the course of) the WC-situation.

4

THE EFFECT OF (NON)HOMOGENEITY AND (NON) DURATIVITY ON THE TEMPORAL INTERPRETATION OF HEAD CLAUSES AND *WHEN*- CLAUSES

In this section I will examine some constraints and possibilities which follow from the fact that both the HC and the WC may or may not be bounded and may or may not be punctual. In doing so I will restrict myself to discussing sentences realizing configuration 1, in which the HC-ITO is the HC-STO and the WC-STO is simultaneous with (i.e. coincides with) the WC-ITO. I will also consider only those interpretations in which *when* is not interpreted as *whenever*. Both restrictions are adopted for reasons of simplicity.

Since both the HC and the WC may be punctual,²¹ durative-bounded or durative-unbounded, there will ultimately be nine possible combinations to be examined.

4.1

Punctual WC

The relevant principles here are the following:

- (a) If the WC is punctual, the WC-STO is the WC-TFS.
- (b) The simultaneity relation between the punctual WC-STO and the WC-ITO is a relation of coincidence: the WC-STO (and hence the WC-TFS) coincides with the WC-ITO.
- (c) The unmarked interpretation is for the common TE to coincide with the WC-ITO (and hence with the WC-STO and the WC-TFS). This means that the common TE is conceived as punctual. Since the common TE includes the HC-STO (properly or otherwise), the HC-STO is also interpreted as punctual and as coinciding with the WC-ITO (and hence with the WC-STO and the WC-TFS).

21 As pointed out by Mommer (1986:75), there are two types of punctual verbs: those that refer to a punctual 'culmination-point' only (e.g. *reach*) and those that refer to a punctual 'nucleus' only (e.g. *knock*). (Moens (1987:57) makes a similar distinction between 'culminations' and 'points'.) In what follows I will disregard this distinction because it is not directly relevant to the subject under discussion. It should also be clear that when I speak of a 'punctual situation', 'punctual' should be interpreted as 'conceived as punctual' rather than as 'having no duration whatsoever'.

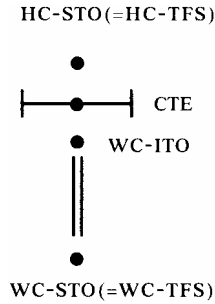


Figure 9.1 The interpretation of a punctual WC and a punctual HC

- (d) If the above interpretation is pragmatically impossible or unlikely, the HC-STO and the WC-ITO are interpreted as following each other. This means that the common TE, which includes both, is taken to be a longer interval. (In that case the interpretation is in terms of sloppy W-simultaneity.)

4.1.1

Combining a punctual WC with a punctual HC

On the unmarked interpretation the common TE is punctual because it coincides with the punctual WC-TFS (see above). This means that the inclusion relation between the common TE and the HC-STO is one of coincidence. Since in a punctual HC the HC-STO is also the HC-TFS, it follows that the HC-TFS is interpreted as coinciding with the WC-TFS. A sentence like *I heard the shot when it was fired* is interpreted this way. Figure 9.1 is an attempt at representing this interpretation. (A dot is used to represent a punctual TO; a dot in the middle of the usual symbol for the common TE signals that the common TE is a nondurative interval; in order to make clear that simultaneity is to be understood as coincidence, the simultaneity relation between the WC-STO and the WC-ITO is represented by a double vertical line.)

If it is pragmatically impossible for the HC-STO to be interpreted as W-simultaneous with the WC-STO (as in *When he was shot at, he fired back*), the common TE is taken to be an interval longer than the punctual WC-ITO, viz. long enough to include the HC-STO as well as the WC-ITO. In that case the WC is sometimes interpreted as specifying an occasion rather than a time, as in *When he found the lost ring, he also found some secret letters*. In that case the order in which the two STOs actualized remains unspecified.

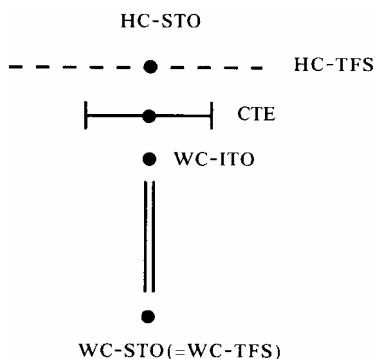


Figure 9.2 The interpretation of a punctual WC and a durative-unbounded HC

4.1.2

Combining a punctual WC with a durative-unbounded HC

As before, the unmarked interpretation is that in which the common TE is taken to coincide with the punctual WC-TFS. Since the common TE includes the HC-STO, this means that the HC-STO must be punctual too. As noted above, this presents no problem if the HC is unbounded, for the HC-STO may then be any subinterval of the HC-TFS. An example of this is *John was in the study when the shot was fired*. Since the HC-TFS properly includes the punctual HC-STO, and since the latter is interpreted as coinciding with the punctual WC-TFS, the WC-TFS is also interpreted as properly included in the HC-TFS—see Figure 9.2.

If it is pragmatically unacceptable to interpret the WC-TFS as included in the HC-TFS, we assume a sloppy W-simultaneity reading in which the common TE is interpreted as a longer timespan and the WC-STO is taken to precede or follow the HC-STO. The following are examples of this:

(28)

- (a) When John was shot by that sniper, he was in hospital for five months.
- (b) When three top executives of Donald Trump's casino operation were killed in a helicopter crash Tuesday, he knew he needed someone trustworthy to help fill the void. (WSJ)
- (c) When the volumes collapsed, the industry suddenly was hurting on all fronts. (WSJ)
- (d) When General de Gaulle came back to power two and a half years ago, there was a general wave of optimism about his chances of bringing the tragic problem of Algeria to a settlement. (LOB)
- (e) When John shot the sniper he aimed his rifle very carefully.

In (28 a-d), the succession interpretation imparts a left boundary to the otherwise unbounded HC-situation: the HC is interpreted inchoatively. (In some cases, e.g.

when the HC uses a progressive verb form, this is only possible if the HC contains an adverb like *suddenly* or *in a moment*.) In (28 e), where the WC-STO is interpreted as following the HC-STO, the HC-situation is interpreted terminatively, i.e. as having a right bound.

4.1.3

Combining a punctual WC with a durative-bounded HC

In a bounded clause, the STO is by definition also the TFS. Since an STO cannot be longer than the TE including it, a punctual adverbial cannot be inserted into a clause that represents a durative situation as bounded. This explains why we can say (29 a) but not (29 b), except on a special (inchoative) interpretation:

(29)

- (a) At five o'clock John was writing a letter,
- (b) At five o'clock John wrote a letter.

In (29 a) the situation is represented as unbounded, and hence as homogeneous and disjunctive. This means that the STO can be interpreted as just a point of time, so that the insertion of an adverbial establishing a punctual TE presents no problem. In (29 b), in contrast, the situation is represented as bounded and hence as heterogeneous and unitary. This means that the STO is the TFS. Since the situation is a durative one, the STO cannot be interpreted as included in the punctual TE. Sentence (29 b) is therefore semantically anomalous, unless the situation is interpreted inchoatively, i.e. as 'John wrote a letter and he started doing so at five o'clock' (see Comrie 1985:30). On this interpretation, the STO is a point of time (viz. the initial point of the TFS) and can therefore be interpreted as coinciding with the punctual TE. Another exceptional interpretation which is sometimes possible is a terminative one. The sentence *Come to my house at five o'clock* is acceptable on the reading 'Come to my house and see to it that you arrive at five o'clock'. In this case it is the terminal point of the TFS that is interpreted as the punctual STO that coincides with the punctual TE.

Naturally, the same constraint applies if the time adverbial is a canonical WC. The following sentences are interpreted in the same way as (29 a–b), respectively:

(30)

- (a) When I left, John was writing a letter,
- (b) When I left, John wrote a letter.

Like (29 a), (30 a) makes a statement about just that portion of the unbounded HC-situation that coincides with the punctual common TE defined by the WC. As in the case of (29 b), (30 b) has no similar interpretation because a bounded durative STO cannot coincide with a punctual common TE. There are, however,

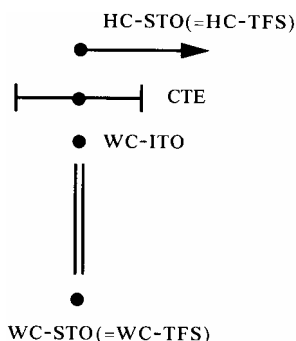


Figure 9.3 The interpretation of a punctual WC and a durative-bounded HC

two other readings that do make sense. One is an inchoative interpretation of the HC, as in (29 b) or in *When Bill arrived, she made tea*. This reading is represented by Figure 9.3. The other interpretation is the reading in which the WC specifies the occasion on which the HC-situation actualized rather than the time when it did. In this case *when* does not receive its literal interpretation ‘at the time at which’. This reading is available in (30 b) and is clearly invited in examples like the following:

(31) When the chairman died, the secretary wrote an obituary in the local newspaper.

Here the W-relation between the HC-STO and the WC-STO is one of sloppy W-simultaneity. This means that the common TE is conceived as longer than the WC-STO (see section 3.6 above) and can therefore include the durative HC-STO. In this case it does not matter whether the WC is punctual or not, since the common TE is anyhow not interpreted as coinciding with the WC-STO but is conceived as a longer timespan including both the HC-STO and the WC-STO.

4.2

Durative-bounded WC

Here the relevant principles are the following:

- (a) If the WC is bounded, the WC-STO is the WC-TFS.
- (b) The simultaneity relation between the WC-STO and the WC-ITO is a relation of coincidence: the WC-STO (and hence the WC-TFS) coincides with the WC-ITO.
- (c) The unmarked interpretation is for the common TE to coincide with the WC-ITO (and hence with the WC-STO and the WC-TFS). Since the WC is bounded, the common TE is a heterogeneous timespan, so that the inclusion relation between the common TE and the HC-STO is one of coincidence (see section 3.5 above). On this interpretation the HC-STO is therefore

interpreted as coinciding with the WC-ITO and hence with the WC-STO and the WC-TFS.

- (d) If the above interpretation is pragmatically impossible or unlikely, the HC-STO and the WC-ITO are interpreted as following each other (=sloppy W-simultaneity). In that case the common TE, which includes both, is taken to be a longer interval.

4.2.1

Combining a durative-bounded WC with a punctual HC

This combination is special because it does not yield the unmarked interpretation (in which the HC-STO coincides with the WC-STO). A punctual HC-STO cannot coincide with a durative WC-STO. This reading is therefore ruled out for sentences like the following:

- (32) The shot was fired when I wrote that letter.

There is no interpretation either in which the punctual HC-STO is properly included in the durative WC-STO, for this would require the use of *was writing* in the WC (which would render the WC unbounded and the common TE homogeneous). However, there is an acceptable interpretation if the WC is taken to describe the occasion on which the HC-situation actualized rather than the time when it did. There are examples in which this kind of reading is clearly invited:

- (33) The chairman resigned when the secretary wrote a libellous article about him in the local newspaper.

Here the W-relation between the HC-STO and the WC-STO is taken to be sloppy W-simultaneity. This means that the common TE is interpreted as longer than the WC-STO (see section 3.6 above), hence that *when* is not interpreted as expressing the relation 'punctual HC-STO at some time in the course of durative WC-STO' but is pragmatically interpreted as 'WC-STO preceding HC-STO'. For this interpretation it is irrelevant whether the WC is heterogeneous or not.

The second possible reading for sentences like (32) is that in which the WC is assigned an inchoative or terminative interpretation. The following may be judged acceptable on one of these readings:

- (34)

- (a) I left the study when you wrote that letter,
(b) I shot him when he came to my house.

The inchoative reading of (34 a) can be represented as in [Figure 9.4](#). (An arrow pointing both ways indicates a bounded or heterogeneous interval.)

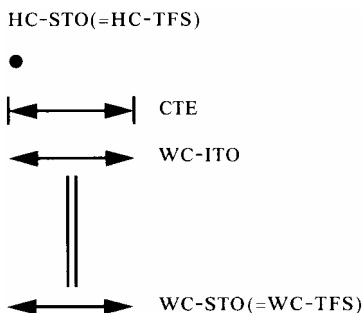


Figure 9.4 The interpretation of a durative-bounded WC and a punctual HC

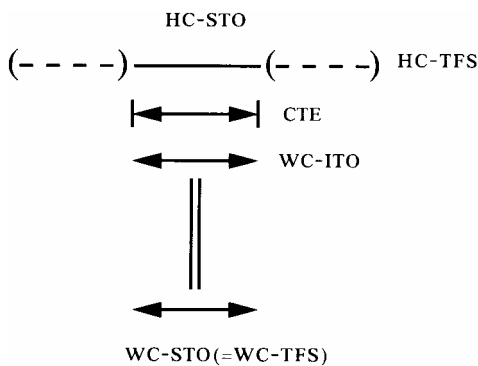


Figure 9.5 The interpretation of a durative-bounded WC and a durative-unbounded HC

4.2.2

Combining a durative-bounded WC with a durative-unbounded HC

As before, the common TE is interpreted as coinciding with the WC-TFS (on the unmarked interpretation) and as coinciding with the HC-STO (because it is a heterogeneous common TE). It follows that the HC-STO, which may or may not be the HC-TFS (since the HC is unbounded), is interpreted as coinciding with the WC-TFS. Thus, (35) implies that John was here throughout the interval when Bill wrote the two letters (i.e. implies that the HC-STO coincides with the WC-TFS) and is compatible with the reading that John was also here before and/or after Bill wrote the letters (i.e. with the interpretation in which the HC-STO is a proper subpart of the HC-TFS).²² These possible readings are represented by Figure 9.5. In addition to them, an ‘occasion reading’ may suggest itself in certain contexts.

(35) John was here when Bill wrote these two letters.

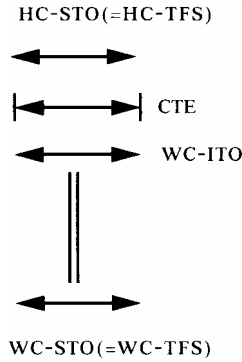


Figure 9.6 The interpretation of a durative-bounded WC and a durative-bounded HC

4.2.3

Combining a durative-bounded WC with a durative-bounded HC

As before, the common TE is interpreted as coinciding with the WC-TFS (on the unmarked interpretation) and as coinciding with the HC-STO (because it is a heterogeneous common TE). It follows that the HC-STO, which is the HC-TFS (since the HC is bounded), is interpreted as coinciding with the WC-TFS. Thus, the unmarked interpretation of (36) is for the two situations to cover exactly the same timespan (see [Figure 9.6](#)):

(36) John ran only two miles when I ran five.

If the coincidence interpretation is pragmatically implausible, the hearer will assume a sloppy W-simultaneity reading. In that case the common TE is conceived as a longer timespan in which the HC-TFS and the WC-TFS follow each other or overlap. This kind of reading is invited by examples such as the following:

(37)

- (a) When John wrote her a letter, she wrote a letter in reply.
- (b) When he wrote a book about her, she painted his picture, (suggests that she started painting after he finished his book or after he started writing it)

As in the other cases, sloppy W-simultaneity may also mean that the WC defines an occasion rather than a time.

22 As noted in section 1, this interpretation is only available if the WC is not the only constituent providing new information.

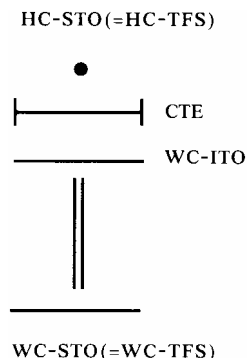


Figure 9.7 The interpretation of a durative-unbounded WC and a punctual HC

4.3

Durative-unbounded WC

The relevant principles here are the following:

- (a) The simultaneity relation between the WC-STO and the WC-ITO is a relation of coincidence: the WC-STO coincides with the WC-ITO.
- (b) The common TE is interpreted as coinciding with the WC-ITO (and hence with the WC-STO). Since the common TE includes the HC-STO, this means that the HC-STO is interpreted as included in the WC-ITO and hence as W-simultaneous with the WC-STO. (This interpretation is the only one available if the WC is unbounded. In this case no sloppy W-simultaneity reading will be selected.)
- (c) If the WC is durative and unbounded, the WC-STO may in principle be either the WC-TFS or a subinterval of the WC-TFS. However, since the WC serves to define the common TE, the common TE is interpreted as coinciding with the WC-TFS rather than with some unspecified part of it.
- (d) Since an unbounded WC defines a homogeneous common TE, the common TE (and hence the WC-TFS) may either coincide with the HC-STO or properly include it.

4.3.1

Combining a durative-unbounded WC with a punctual HC

In this case the HC-STO is the HC-TFS. This punctual HC-TFS is properly included in the homogeneous common TE, and hence in the WC-TFS. For example:

(38) When John was in his bedroom he suddenly heard a shot.

The temporal interpretation of this sentence is represented by [Figure 9.7](#).

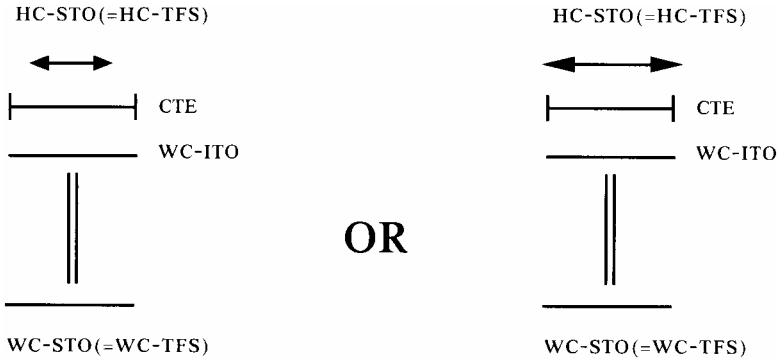


Figure 9.8 The interpretation of a durative-unbounded WC and a durative-bounded HC

4.3.2

Combining a durative-unbounded WC with a durative-bounded HC

Since the HC is bounded, the HC-STO is again the HC-TFS. This durative HC-TFS is included in the common TE, and hence in the WC-TFS, in terms of either proper inclusion or coincidence. Thus, in (39) it may or may not have taken John all the time Bill was out to write the two letters.

(39) John wrote those two letters when Bill was out.

Figure 9.8 represents the two possible readings of (39).

4.3.3

Combining a durative-unbounded WC with a durative-unbounded HC

If the HC is unbounded, the HC-STO may be either the HC-TFS or some unspecified part of it. This HC-STO is included in the common TE, and hence in the WC-TFS, in terms of either proper inclusion or coincidence. This means that sentences like (40) allow various interpretations.

(40) John was here when Bill was in London.

Sentence (40) is true in each of the following cases:

- (a) One possibility is that the HC-STO is the HC-TFS and that the common TE (and hence the WC-TFS) includes the HC-STO in terms of coincidence. In that case the HC-TFS is commensurate with the WC-TFS. On this reading of (40), John's being here coincided completely with Bill's being in London.
- (b) It is also possible that the HC-STO is the HC-TFS but that the common TE (and hence the WC-TFS) properly includes the HC-STO. On that reading of (40), John was here at/for some time in the course of Bill's being in London.

- (c) A third possibility is that the HC-STO is a proper subpart of the HC-TFS. In that case it must be the common TE that picks out the HC-STO from the HC-TFS, which means that the common TE is taken to coincide with the HC-STO. Since, as before, the common TE coincides with the WC-TFS, the WC-TFS coincides with the HC-STO and is therefore properly included in the HC-TFS. On this reading of (40), Bill was in London at/for some time in the course of John's being here.

It is clear, then, that if both HC and WC are unbounded, all that we know for certain is that at least some part of the HC-TFS coincides with at least some part of the WC-TFS. The precise relation between the two TFSs remains unspecified. (This means that the above three possibilities are a question of vagueness, not of ambiguity. It is not true that (40) is three-ways ambiguous.)²³ It follows that a (pragmatically triggered) inchoative reading of the HC is one of the types of interpretation that are in principle possible:

(41) When the sea was visible ahead of them, the relief was as great as if the sun had come out. (BR)

However, a sloppy W-simultaneity reading on which there is a lapse of time (however short) between the two unbounded situations is never available, because this kind of interpretation requires that the situation that actualizes first should be interpreted as right-bounded.

It should be noted that when both HC and WC are unbounded and the WC functions as anchor TE (i.e. is thematic), there is an implicature that the HC-STO is also the HC-TFS; in other words, that the HC-situation does not actualize outside the common TE. Thus, the normal out-of-context interpretation of *When the children were in bed, the house was very quiet* is that both clauses refer to the same time (see Ritchie 1979:94). This implicature, which in (41) is suspended for pragmatic reasons, follows from the fact that a preposed WC is thematic: the statement made in the HC is taken to apply to (and hence, by implicature, to be confined to) the timespan defined by the WC. (Needless to say, this reading is reinforced if the WC has a causal implicature.)

5

HABITUAL-REPETITIVE SENTENCES

The nine possible interpretations discussed in the previous section remain unaffected when the speaker quantifies over HC-STOs, as in

(42)

23 If the sentence were three-ways ambiguous, the two clauses of *John was here when Bill was in London, and so was I* would have to be interpreted in terms of the same possibility (see Lakoff 1970), but this is not the case. The sentence is perfectly appropriate if John and I were here at different times in the course of Bill's being in London.

- (a) Whenever I came home, my wife was absent.
- (b) Always/sometimes when I came home, my wife was absent.
- (c) When I came home, my wife was always/often absent.

Except for the idea of repetition, sentences like these are interpreted exactly like the corresponding semelfactive sentences. That is, they express repetition of cases defined in terms of an HC and a WC, and each of which has one of the nine interpretational structures discussed in section 4.

6 CONCLUSION

In this chapter I have investigated the many factors that help to determine the temporal interpretation of canonical WCs. I have spoken about the information structure and the thematic structure of sentences involving a canonical WC, about perfective and imperfective aspect, telic and atelic Aktionsart, bounded and unbounded sentences/situations, repetitive and nonrepetitive situations, homogeneous and heterogeneous time adverbials, and durative vs punctual TEs. This has been followed by a detailed discussion of how the interpretation of the temporal relations holding between the HC-TFS, the WC-STO, the TE, the WC-ITO, the WC-STO and the WC-TFS are determined by the (non)-homogeneity and the (non)durativity of the intervals described by the WC and the HC.

10

NARRATIVE *WHEN*-CLAUSES

1

DEFINITION

Narrative WCs form a special type of WC, which is illustrated by the following examples:

(1)

- (a) I was sitting quietly in the drawing-room when suddenly John came in.
- (b) Hardly had we arrived at our hotel when Betty said she wanted to go home.
- (c) We had just come to the swimming pool when it started raining. (Heinämäki 1978:27)
- (d) My grandmother was standing on her own, watching a dance, when a beautiful young woman (...) suddenly abandoned her partner ...(Edgren 1971:178)
- (e) I was just going to lock the door when the doorbell rang.

The WCs in examples like these do not have the time-specifying function that is typical of canonical WCs. This is clear from the following observations:

- (a) The narrative WCs in (1 a-e) can be paraphrased by means of *and then*, etc. Canonical WCs (as in *I was not there when it happened*) do not allow such a paraphrase.
- (b) Canonical WCs that follow the HC always answer the question *when?* (Preposed, i.e. thematic, canonical WCs do not do so, because they establish an anchor TO—see section 2 of [Chapter 9](#).) In spite of the fact that they always follow their HC, narrative WCs do not answer the question *When did the HC-situation actualize?* Thus, (1 a) is not felt to be an answer to the question *When was I sitting in the drawing-room?* In fact, narrative WCs do not have a time-specifying function with respect to the HC at all. Rather, it appears to be the other way round: the HC serves as temporal anchor for the narrative WC. A narrative WC therefore provides an answer to the question

What happened then (i.e. *while/after the HC-situation was holding*)? This is illustrated by the fact that (1 e) is interpreted as synonymous with *Just as I was going to lock the door, the doorbell rang*. (See also Edgren 1971:178, Couper-Kuhlen 1989a: 360, 1989b:12.)

- (c) It follows that narrative WCs make an assertion. This distinguishes them from canonical WCs, which are ‘non-assertive’ (Bybee, Pagliuca and Perkins 1991:20) because they are ‘presupposed to be true’ (Heinämäki 1978:2, Hamann 1989:54), either in the real world or in the alternative (e.g. irrealis) world referred to—see section 3 of [Chapter 7](#).
- (d) Canonical WCs can alternate with other time-specifying adverbials. Thus, in *John was in the kitchen when I left* the WC can be replaced with *at the time that I left* or simply *at the time*. Because they are not time-specifying adverbials, narrative WCs do not allow this kind of substitution. The following is not a paraphrase of (1 a):

- (2) I was sitting in the drawing-room at the time that John suddenly came in.

It is clear from the above observations that narrative WCs do not have the usual time-specifying function. They are clauses which are typically found in narrative contexts and which function as ‘narrative clauses’:¹ they ‘push forward’ the action, i.e. they indicate a new action or event in the chain of actions/events that constitute the backbone of the story.² Moreover, they are foregrounding in the sense that they give prominence to the WC-situation, i.e. they represent their situation as relatively important, even central to the narrative. They thus combine two aspects of meaning: sequentiality and prominence (see Quirk *et al.* 1972:745, Fleischman 1985:857, Contini-Morava 1991:43).

1.1 Sequentiality

The term ‘narrative clause’ is due to Labov and Waletzky (1967), who define it as a clause whose range does not cross a temporal juncture between two other clauses. Narrative clauses are ‘characterized by temporal sequence: their order

- (i) Normally she could have telephoned the house to ask how he was, but now she was too ashamed. *Then*, late in the afternoon, when she had ceased

1 Ramsay (1987:404) overlooks this class of WCs when she suggests that ‘the information conveyed by...final *when*-clause[s] does not advance the main line of the narrative...it only completes the information given in the main clause.’ The same applies to Ford (1993: 69), who makes the same claim.

2 This explains why *when* can be paraphrased as *and then*, for clause-initial *then* can also be used to push forward the action in a narrative (see Schifffrin 1991:222):

hoping to hear his voice every time her telephone rang, Gus answered a call.
(LOB)

- (ii) He kept apologizing all the time, asking me to forgive him. Then, when I was leaving, he asked me to marry him. (DR-HAMP)
- (iii) They played crack the whip a few minutes without mishap. *Then* when Miss Langford was on the end of the line of girls, Jack, in the middle of the line, gave an extra hard pull and the young teacher sprawled backwards, sitting down hard, her dress flying over her head. (BR)

Ford's (1993:32) comment on this use of *then when* (or, more commonly, *then, when*) is that 'the *then* marks a sequentially next time in the event chain', while the initial WC that follows makes explicit the reference of *then*, i.e. it 'specifically introduces the situational and temporal frame in which some of the more significant events took place'.

cannot be changed without changing the inferred sequence of events in their original semantic interpretation' (p. 21). In other words:

We define narrative as one method of recapitulating past experience by matching a verbal sequence of clauses to the sequence of events which actually occurred.

(Labov 1972:359–60)

This definition hinges on the concept of sequential (iconic) ordering. This is usually interpreted as meaning that a narrative clause is one that 'pushes forward' the action in time and hence belongs to the sequence of temporally ordered events that constitute the backbone of a narrative (see e.g. Hopper 1979, Dry 1983). Still, it should be noted that this aspect of meaning is not sufficient to fully characterize narrative WCs. As pointed out by Partee (1984:262), Fleischman (1985:876) and Couper-Kuhlen (1989b: 9), a WC preceding its HC may also carry the action forward, but is not felt to be a narrative WC similar to those in (1 a–e):

(3)

- (a) People began to leave. When the room was empty, the janitors came in.
(Partee 1984:262)
- (b) Morgan filled the fire box with wood again, then started supper and set the table. When the meal was ready, he told Jones to wash up, and going into the front room, woke the girl. (BR)

The WCs are not felt to be narrative WCs here because the situations in question are not foregrounded (prominent).

It should also be noted that the sequential interpretation of narrative WCs is different from a sloppy W-simultaneity reading (which also crucially involves the idea of sequence). A sloppy W-simultaneity reading is a marked

interpretation which is given to a canonical WC in configuration 1 if it is pragmatically impossible or implausible for the HC-STO to be W-simultaneous with the WC-STO. In this kind of reading either situation may precede the other, depending on the pragmatics of the sentence and its context. In the case of narrative WCs the idea of moving the action ahead in time is inherent in the construction itself, and the WC-situation cannot be interpreted as preceding the HC-situation. (This explains why a narrative WC always follows its HC, since it is typical of narrative clauses that they are ordered iconically.) Moreover, a sloppy W-simultaneity reading in which the HC-STO is interpreted as preceding the WC-STO (as in *He put out the lights when he went out*) always implies that the HC-situation is finished before the WC-situation actualizes. The HC therefore has to be either bounded or punctual. The same thing is not true if the WC is a narrative WC. In that case the HC is typically unbounded-durative (see below), so that the HC-STO includes the WC-STO, as in *I was sitting in the lounge when suddenly a shot was fired*. In examples like these, there is sequential ordering only in the sense that the HC-situation starts before the WC-situation.

In sum, the essential difference between a canonical WC and a narrative one from a temporal point of view is that in the former case the WC defines a 'frame' for the HC (by establishing a TE including the HC-ITO), whereas in the latter case it is the other way round.³

1.2 Prominence

Narrative WCs represent their situations as prominent, i.e. as central to the narrative, or at least relatively important. They express a minor or major 'peripeteia' and hence often signal an unexpected development (see Weinrich 1973:115).⁴ This explains why so many of them use adverbials like *suddenly*, *all of a sudden*, etc. (It also explains why *when* can be so aptly paraphrased as *and then*, as noted by Couper-Kuhlen (1989b: 27), 'the pragmatic effect of this adverbial is surely to shift attention away from the first event and direct it to the second.')

This foregrounding function is what distinguishes narrative WCs from preposed WCs which move the action ahead in time (as in (3 a–c)). The fact that WCs of the latter type are not considered to be narrative WCs shows that the foregrounding function of narrative WCs is actually more important than their temporal function (of ordering situations in time). This also appears from the fact that in many narrative WCs the HC-situation overlaps the WC-situation, which means that there is sequential ordering only in the sense that the HC-situation starts before the WC-situation (see above). Furthermore, there are WCs that follow the HC and push forward the action but still fail to be interpreted as narrative WCs because their situation is not felt to be unexpected or prominent:

(4)

- (a) I wondered, as I wrapped a sarong around my waist, if Nigel at all resented being deprived of his afternoon sleep. They were sitting over the tea things when I joined them. (LOB)

- (i) In an invention that drives Verdi purists bananas, Violetta lies dying in bed during the prelude, rising deliriously when then she remembers the great parties she used to throw. (WSJ)

Because of the presence of *then*, the WC here clearly pushes forward the action. However, it is not a narrative WC because the HC-situation (*rising*) does not function as a frame for the WC-situation. (The temporal sequence is as follows: *lies-remembers-rising*)

- (i) The guests were coming out of the church when George arrived,
(ii) The guests were coming out of the church when George stumbled.

Whereas somebody's arrival can easily be an important event in a story, it is extremely unlikely that somebody's stumbling should be central or important to the narrative.

- (b) He came out alone. I wasn't far behind him when he entered the parking lot and hurried over to his car. (BR)

By contrast, a construction with a narrative WC usually refers to a development that is unexpected in some way or another:

(a) In some cases the course of events is unexpected in that the WC-situation actualizes sooner than expected or/and the HC-situation is interrupted earlier than expected. For example:

(5)

- (a) I had scarcely started writing when I was asked to hand in my paper.
(b) I had hardly obtained a pair of spectacles when I ceased to need them, my eyes suddenly getting a second wind. (LOB)
(c) Nicolas had slept in the park only part of one night, when he discovered that Munich's early mornings even in summer are laden with dew. (BR)
(d) We had not yet unpacked when he was already there.

3 The claim that a WC which pushes forward the action is not felt to be a narrative WC unless the HC is interpreted as defining a frame for the WC-situation is confirmed by examples like (i):

4 This explains Harkness' (1985:345–6) observation that, while the WC of (i) can be read as a narrative WC, the WC of (ii) can only be read as a canonical WC:

- (e) We had just been warned of his coming when he already rang the doorbell.

As is clear from these examples, the 'sooner than expected' implication is often triggered by restrictive adverbs like *hardly*, *scarcely*, *barely*, *only*, *just*, etc. in the HC and by the use of *already* in the WC.

(b) In some cases the course of events is unexpected in that the HC-situation lasts longer than expected. In these examples the HC typically uses *still*:

(6)

- (a) He was still rumbling discontentedly when Pike returned bearing a folder of foolscap sheets. (LOB)

- (b) Some thirty minutes later he was still avidly studying the photograph that seemed to fascinate him, when Louie Morri sidled into the room. (LOB)

(c) In some cases the course of events is unexpected in that the WC-situation actualizes when a turn of events no longer seems likely.

(7)

- (a) Although we enjoyed our rounds of the government offices in Vientiane, with officials offering tea and pleasing conversation in French, we were getting nowhere. We had nearly decided that all the tales of Lao lethargy must be true, when we were invited to take a trip with the Prime Minister. (BR)

- (b) After months of suffering, his life was almost despaired of when as a last resort it was suggested that the patient should be taken to consult Hahnemann once again. (LOB)

(d) In some cases the WC-situation interrupts, or puts an end to, the expected or intended course of events.

(8)

- (a) (*stage direction*) They start to dress. Tim is putting on his shoes when he stops and stares. (DR-WHIT)

- (b) We had just come to the swimming pool when it started raining. (Heinämäki 1978:27)

- (c) (*stage direction*) He turns to the wastepaper basket, and is about to remove the underclothing when Dr Rance enters from the garden. (DR-ORT)

- (d) He was going to say more when movement among the trees ahead caught his attention. (LOB)

- (e) She got out, and was beginning to close the door when she saw that the next one was opening, and a man's startled face was gazing at her. (LOB)

- (f) He drew in a deep breath and was on the point of turning back to his newspaper when his eye fell on an out-of-date magazine lying on the floor. (LOB)

(e) In some cases the WC-situation is special, unusual or somehow unlikely to actualize.

(9)

(a) Angus told Mungo afterwards that in all his three years at Rossingham in Pitt House he had never heard the phone ring or been told that it had rung. And there was Mungo, on that evening in June last year, sitting up in his study doing his biology...when he heard a bell ring downstairs. (TSM 52)

(b) Judy and I were in our back yard when the lawn started rolling like ocean waves. (WSJ)

(c) He was crouched over his anvil in the courtyard getting his chisels into trim, when a splinter of steel flew into his eye and imbedded itself in his pupil. (BR)

(f) In some cases the actualization of the WC-situation is unexpected in the sense than it happens without the usual preamble or prelude.

(10)

(a) Stevens was grunting over the last empty pocket when Russ abruptly rose and lunged toward Carmer's hat, which had tumbled half-a-dozen feet away when he first fell. (BR)

(b) In June, 1940, Sergeant Helion, with a company of reserve troops waiting to go into battle, was sketching the hills south of the Loire River, when the war suddenly rolled in upon him. (BR)

It should be noted, finally, that although unexpectedness is mostly implied, it is not absolutely essential. What is important is that the WC-situation should be interpreted as foregrounded, i.e. prominent, important to the narrative. Thus, in the following example the WC is a narrative WC, but there is no implication of unexpectedness:

(11) (*said of a lady who left the house very upset*) The fresh morning air in her face was both sedative and stimulant. They had not left Longford Manor far behind when she was almost her normal self. (FORG 96)

2

FURTHER CHARACTERISTICS OF NARRATIVE WHEN-CLAUSES

The special function of narrative WCs entails that in several respects they behave unlike canonical WCs but rather like unembedded (i.e. syntactically independent) clauses.⁵

2.1

Preposing

Whereas canonical WCs may precede or follow their HC, narrative WCs cannot be preposed. Compare:

(12)

- (a) John was in the kitchen when I left,
- (b) When I left John was in the kitchen.

(13)

- (a) I was quietly sitting in the drawing-room when suddenly the telephone rang.
- (b) *When suddenly the telephone rang I was sitting quietly in the drawing-room.

This restriction follows from the fact that the HC serves as temporal anchor for the narrative WC and that *when* is interpreted as *and then*. Narrative WCs observe the iconicity principle: the order of the two clauses must reflect the succession of the situations. (See also Silva 1981:287.)

2.2

Focusing

Unlike canonical WCs (and time-specifying adverbials generally), narrative WCs cannot be focused. They cannot be the focus of a cleft or pseudo-cleft, nor of negation, nor of a question, nor of a focusing adverb (*even, only, especially*, etc.). For example:

(14)

- (a) It was when I left, not when Mary left, that John was in the kitchen,
- (b) ?It was when suddenly the telephone rang that I was sitting in the drawing-room.

(15)

- (a) John was in the kitchen not when I left but when Mary left.
- (b) ?I was sitting in the drawing-room not when suddenly the telephone rang but when suddenly there was a knock on the door.

(16)

- (a) You keep waking me up just when I'm drifting off. (DR-WHIT)
- (b) ?I was sitting in the drawing-room just when suddenly the telephone rang.

(17)

- (a) A fox is only afraid when death seems imminent. (LOB)
- (b) *I was about to leave only when the bell rang.

If the (b) sentences are at all acceptable, their WCs are interpreted as canonical WCs.

The reason for this restriction is that within the class of adverbials (which, in the terminology of Quirk *et al.* (1985), comprises adjuncts, subjuncts, disjuncts and conjuncts) only adjuncts can be focused (see Quirk *et al.* 1985:1071). Unlike canonical WCs and other time-specifying adverbials, narrative WCs do not function as adjuncts. (As a matter of fact, they do not have an adverbial function at all.)

2.3 Verb of HC

In a construction with a narrative WC, the HC as a rule refers to an unbounded situation which serves as temporal anchor for the WC-situation. This means that the verb of the HC typically belongs to one of the following classes.

2.3.1

The verb of the HC may be a stative verb:

(18)

- (a) Judy and I *were* in our back yard when the lawn started rolling like ocean waves. (WSJ)
- (b) 'I believe in training', he said, and moved away across the nave. He *was* back at the porch when he heard a step behind him. (LOB)
- (c) The yawl (...) seemed prepared to make a safe though violent landing when there came a sudden gust of wind from the west. (LOB)

2.3.2

The HC may use the progressive form:

(19)

5 As noted by Fleischman (1985:857), 'foreground information tends to be carried in main clauses, while background information appears predictably in various types of subordinate clauses' (see also Thompson 1987:445).

- (a) I took one of the ripest and stood on the pavement, with Alison beside me, holding my head well forward and letting the juice trickle over my chin. I *was wishing* Bowling had been there to turn up his nose, when I noticed Alison, looking down at a poster on the wall. (LOB)
- (b) She got out, and *was beginning* to close the door when she saw that the next one was opening, and a man's startled face was gazing at her. (LOB)

2.3.3

The verb of the HC is often a perfect form:

(20)

- (a) Essentially, Mr Freeman *had invested* heavily in the Beatrice leveraged buy-out, when he was told by another prominent trader, Bernard 'Bunny' Lasker, that the deal was in trouble. (WSJ)
- (b) Mr Taccetta says he *had just recouped the* \$5,000 he lost in the 1987 crash when he lost more money last October. (WSJ)

In these examples the HC is unbounded in the sense that it refers to an unbounded interval at which it is the case that the situation referred to is over. That is, though the action itself has come to an end (i.e. is bounded), the situation of it being true that the action has actualized is a state and hence unbounded (see Heny 1982:142, Salkie 1987:93, Smith 1989:112, Fabricius-Hansen 1991:55, Klein 1994:9). The HC refers to this state rather than to the action producing it. (In other words, the HC-ITO included in the common TE created by *when* is not the HC-STO but a TO to which the HC-STO is anterior.)

2.3.4

The HC often uses a verb form with prospective meaning:

(21)

- (a) He *was going to say* more when movement among the trees ahead caught his attention. (LOB)
- (b) He drew in a deep breath and *was on the point of turning back* to his newspaper when his eye fell on an out-of-date magazine lying on the floor. (LOB)
- (c) Appleby *was about to address* himself to this task when he became aware that the deathly stillness of the place had been broken. (LOB)

In these examples the HC is unbounded in the sense that it refers to an unbounded interval at which it is the case that the event referred to is going to actualize. That is, though the event itself has not started yet, the situation of it being true that the event is anticipated is a state and hence unbounded. The HC

refers to this state rather than to the anticipated event itself. (In other words, the HC-ITO included in the common TE created by *when* is not the HC-STO but a TO to which the HC-STO is posterior.)

2.3.5

Sometimes the HC combines several of the above possibilities:

(22)

- (a) He *had just finished* breakfast and *was about to leave* the house when the phone rang.
- (b) She *had just dried* the last plate and *was setting* clean coffee cups on a tray, when a dark-haired, spectacled young man put his head through the kitchen window. (LOB)

The reason why the HC is as a rule unbounded is that it provides a temporal anchor for the WC-situation: the WC-situation actualizes in the course of the action or state expressed in the HC. This interpretation, on which the HC-STO properly includes the WC-STO, requires that the time referred to by the HC should be a homogeneous interval (see section 3.5 of [Chapter 9](#)), hence that the HC-situation should be unbounded.

There are exceptional examples, though, in which the HC refers to a situation that would seem to be punctual or durative-bounded:

(23)

- (a) There was a sort of pocket inside and *I just slipped my hand in it* when what should I find but a letter in the mistress's handwriting, tucked away. (DW 70)
- (b) He *had just time to realize* that the age-long nightmares of falling and death were past and that the morning was come, when he heard the sound again. (Breithutová 1968:142)
- (c) What had caught his attention was obscured by the car itself, so that neither the girl nor the truck drivers could see, but Benson knew what it was. *The girl took a couple of steps toward the man in shorts* when Benson, in that barefoot courtliness Ramey could never decide was real, said, 'You don't want to go around there, Ma'am.' (BR)

However, sentences like these still satisfy the general requirement that the WC-situation should actualize in the course of the HC-situation. If this is not the case, as in the following examples, the WC is not a typical narrative WC:

(24)

- (a) She shook herself, opened her eyes and put up her hand as if to stifle a yawn, when she stood up, took her bag from the rack and turned towards the door. (LOB)
- (b) She wore slacks and a jumper, and went to bed by simply undoing one button, when the whole caboodle fell off on the floor. (LOB)
- (c) At 4.30 we three went to Lula's and wandered round the garden till Acheson turned up, when Clare and he wandered round together and Ma and I kept out of the way. (LOB)
- (d) At about seven o'clock she makes some excuse to go out, when she gives the key to Bowman himself, who's waiting somewhere near the annexe... (SOA 194)

As in prototypical narrative WCs, the WC here pushes forward the action: *when* is equivalent to 'and then'. However, this type of WC does not have the foregrounding effect (implication of prominence and unexpectedness) of narrative WCs. As a matter of fact, these WCs are not narrative WCs but 'continuative relative clauses', i.e. clauses of the same type as the nonrestrictive relative clauses in examples like the following (see also section 4 of [Chapter 2](#)):

(25)

- (a) I gave the book to Bill, who sold it to Betty, who read it and then gave it to me for my birthday.
- (b) He called her an idiot, whereupon she slapped his face and ran out of the room.

2.4

Exclamatory WC

Unlike canonical WCs, narrative WCs may have the form of an independent exclamatory sentence.

2.4.1

In an independent exclamatory sentence the adverbial particle of a phrasal verb may be preposed (e.g. *Down she went!*). A narrative WC also allows this, whereas a canonical WC does not. Thus, (26 a) can only be analysed as involving a narrative WC (see Morgan 1975:445, Green 1976:392), whereas (26 b) is unacceptable because it does not yield a narrative WC interpretation:

(26)

- (a) I was sitting in the kitchen when *in came* this man who I had never seen before in my life,

- (b) *I was surprised when up trotted the dog. (Emonds 1976:30)

Preposing of an adverbial particle is one of the ‘main clause phenomena discussed by Hooper and Thompson (1973) and Green (1976). According to the former, the transformations producing main clause phenomena are ‘restricted to application in asserted clauses’ (p. 472). This is in keeping with our above conclusion that narrative WCs are not presupposed (like canonical WCs) but asserted.

2.4.2

Both in exclamations and in narrative WCs the adverb *here* can be similarly preposed:

(27)

- (a) Here comes the winner!
 (b) I kept turning over and saying ‘Thank the lord we can’t go now anyway.’
 But I’d no sooner got to sleep when *here* comes Von Koren, rucksack on his back, ‘Hup!—Two-three-four’, knocking on my door before dawn. (DR-DELL)

2.4.3

An independent exclamatory clause can have the form of a wh-question using the modal auxiliary *should*:

- (28) We were walking there quietly, looking at the shop windows, and who *should* we run into but our old friend Tom?

A narrative WC can be used similarly as an exclamatory clause:

(29)

- (a) Well, I’d just opened up—it was about quarter to ten and I was dusting off the teapots—you know, Rockingham collects the dust something shocking—when who *should* walk in but that Mrs Levitt, you know—the ginger-haired bit I told you about, the one who thinks she’s God’s gift to bachelors. (DR-SHAF)
 (b) There was a sort of pocket inside and I just slipped my hand in it when what *should* I find but a letter in the mistress’s handwriting, tucked away. (DW 70)

2.4.4

In independent exclamations the verb may be an onomatopoeia or interjection rather than a real verb. The same thing is possible in narrative WCs:

(30) Women out at night for men. Scissors in their handbags to cut you off. Slice you where you're private. Each tit a nail to make you bleed. Each mouth a mousetrap. Cheese nearly in your chops when *click!* Back's broke. (DR-BREN)

2.5

Historic present

Narrative WCs allow the use of the historic present, even if the HC is in the past tense:

(31)

- (a) I was sitting in the sitting-room with my wife, quietly reading the newspaper, when suddenly this chap *comes in* and *threatens* us with a revolver.
- (b) So there I was sitting on the bench when a girl *comes* cantering along on a pony. (LOB)

Subclauses do not normally use the historic present if their HC does not use it (see Wolfson 1982:42–3). The fact that narrative WCs can use it accords with their foregrounding function. As is well known, the use of the historic present is a strong device for foregrounding a situation (see Fleischman 1985:860, Wald 1987:486).

2.6

Word order

Narrative WCs often have a marked word order.

2.6.1

Unlike canonical WCs and like independent clauses, narrative WCs may use a marked word order so as to put end focus on the situation which is being foregrounded. In the following example the use of an existential construction with 'heavy NP shift' (applied to the action NP) clearly marks the WC as a narrative WC:

(32) The conspirators take their position round the trap-door, Adams still eyeing Brunt and Ings, Hanna Smith picking up a grenade and holding a candle beside the fuse when there is heard a tapping at the trap-door and a cheerful cry from Mabeuf from below. (DR-SHAW)

2.6.2

Narrative WCs often contain an adverbial like *suddenly* or *all of a sudden* which underscores the unexpectedness of the occurrence of the WC-situation. In that case the adverbial in question often follows *when* directly:

(33)

- (a) Once, in New York, he had gone flying with some friends in a small private airplane with a single engine. They had all been laughing, joking, when suddenly the engine had failed. (BR)
- (b) I was having a drink in Sardi's, when all of a sudden I saw a woman's backside coming up the steps on the second floor and she was wearing sequined slacks. (WSJ)

In a canonical WC, it is rather unusual for *suddenly* to follow *when* at once:

(34) When were you scared?—I was scared {when the lights went suddenly out/⁷when suddenly the lights went out}.

2.7

Nondurative WC

Unlike its HC, which is typically unbounded-durative, a narrative WC is typically interpreted as nondurative (see Edgren 1971:176). If its verb is not punctual itself, the WC-situation is interpreted inchoatively (i.e. as left-bounded). This inchoative reading is often underscored by the above-mentioned use of a punctual adverbial like *suddenly*, *abruptly*, etc.:⁶

(35) We were sitting quietly in the lounge when suddenly there was a commotion in the hall.

It follows that narrative WCs with a stative verb yield an interpretation that is quite different from that assigned to a canonical WC with a stative verb (such as *He left when I was outside*). In the latter case, the WC is unbounded and therefore establishes a homogeneous TE which includes the HC-STO. This means that the HC-STO is interpreted as W-simultaneous with the WC-STO (see section 4 of [Chapter 9](#)). By contrast, if the verb phrase of a narrative WC is stative, the WC is interpreted in terms of sequence and hence as left-bounded.

⁶ The fact that narrative WCs can be paraphrased with *and then* is in keeping with this. As noted by Schiffrin (1992:762), clause-initial *then* triggers an inchoative interpretation if the situation referred to is a state or activity (i.e. an unbounded situation).

2.8

Intonation pattern

Couper-Kuhlen (1989a: 360–1) notes that ‘in terms of phonological realization narrative temporal clauses are articulated with separate-contour intonation, i.e. they have a melodic configuration which is independent of that used for the main clause.’ By contrast, postposed canonical WCs ‘are articulated as if they were part of the preceding main clause’. (See also Edgren 1971:176.)

3

THE TENSE SYSTEM USED IN NARRATIVE *WHEN*-CLAUSES

Because they function like unembedded clauses rather than like canonical WCs, the use of the tenses in narrative WCs is the same as that in independent clauses.

3.1

HC establishing a domain

If the HC establishes a domain, the narrative WC will establish another, which is interpreted as W-simultaneous with the first or as following it at once. Since a domain can be established not only directly (i.e. by an absolute or absolute-relative tense form) but also indirectly (by the use of a relative tense form—see section 16 of [Chapter 4](#)), we have to reckon with the following possibilities.

3.1.1

Both HC and narrative WC may use an absolute tense form. Sentence (36 a) is an example of this. It may be compared with (36 b), in which the WC is a canonical WC because its situation is not interpreted as foregrounded:

(36)

- (a) We *were sitting* in the kitchen when all of a sudden Bill *recited* that poem,
- (b) We *were sitting* in the kitchen when Bill *was reciting* that poem.

The WC involves a relative preterite in (36 b) and an absolute one in (36 a). The claim that a narrative WC depending on an unembedded clause with an absolute tense form also establishes a domain is confirmed by the fact that when the reference is to the post-present, the system to be used is the (absolute) Future Perspective System, not the (relative) Present Perspective System:

(37)

- (a) I am afraid that the following will happen. We will be sitting quietly in the drawing-room when suddenly Bill *{will come in/*comes in}* and *{will tell/*tells}* us that...⁷
- (b) The warders will hardly have turned their backs when the prisoners *{will already be fighting/*are already fighting}*.

3.1.2

A second possibility is that the HC uses a relative or absolute-relative tense form to establish a domain, while the narrative WC uses an absolute tense form to establish another:

(38)

- (a) We *had* hardly *left the* house when someone else *moved into* it.
- (b) We *will* hardly *have left the* house when someone else *will move into* it.

3.1.3

A third possibility is that the HC uses an absolute tense form to establish a domain, while the narrative WC uses a relative or absolute-relative tense form to establish another:

(39)

- (a) They *were sitting* in the living-room, watching TV, when suddenly their little boy *had disappeared*.
- (b) They *will be sitting* in the living-room, watching TV, when suddenly their little boy *will have disappeared*.

(40)

- (a) They *were sitting* in the garden, having tea and scones, when suddenly it *was going to rain*.
- (b) They *will be sitting* in the garden, having tea and scones, when suddenly it *will be going to rain*.

⁷ The present tense forms are to be read as relative tense forms, not as historic presents. (When they are read as historic presents, they are all right.)

3.1.4

The fourth possibility is that both the HC and the narrative WC use a relative tense or absolute-relative tense form to establish an (each time different) domain:
(41)

- (a) The school children *had* hardly *arrived* when one of them *had* already *disappeared*.
- (b) The school children *will* hardly *have arrived* when one of them *will* already *have disappeared*.

3.2

HC not establishing a domain

If the HC uses a relative tense form which does not (indirectly) establish a domain but merely expresses a relation in an already established one, the narrative WC mostly uses the same tense form, and is therefore bound indirectly:
(42)

- (a) ...and revealed that after working late in St Aldates that night he *had been* on his way to return the few items taken from Canal Reach when he *had seen* the yellow glow flitting about the dark and silent rooms. (DOJ 84)
He predicted that one day we *would be sitting* quietly in our sitting-room when suddenly there *would be* an explosion.
- (c) Once, in New York, he had gone flying with some friends in a small private airplane with a single engine. They *had all been laughing*, joking, when suddenly the engine *had failed*. (BR)

However, the narrative WC may also shift the domain by using an absolute past tense:
(43)

- (a) He said that he *had been about to lock up* the house when suddenly the telephone *rang*
- (b) Gloria *had been waiting* at the Hotel Roma when punctually at 6 the call from Alastair *came through*. (LOB)

As we have seen, shifting the domain is generally impossible in canonical WCs, but is quite frequent in independent clauses. That it is possible in narrative WCs is another indication that the latter behave like independent clauses rather than like canonical WCs.

4

TEMPORAL STRUCTURE AND INTERPRETATION

4.1

Temporal structure

Narrative WCs do not differ drastically from canonical ones as far as temporal structure is concerned. In [Chapter 5](#) we have seen that the following claims can be made in connection with canonical WCs:

- (a) *When* creates a common TE which includes both the HC-ITO and the WC-ITO.
- (b) The HC-ITO may be either the HC-STO or another TO binding the HC-STO (in terms of either anteriority or posteriority).
- (c) The WC-STO is bound by the WC-ITO in terms of simultaneity, anteriority or posteriority.

Claims (a) and (b) also hold for narrative WCs. However, since narrative WCs use the same tense system as independent clauses, claim (c) must be adapted as follows:

- (c') The WC-ITO may be either the WC-STO or another TO binding the WC-STO (in terms of either anteriority or posteriority).

This formulation accords with the fact that when the HC uses an absolute tense form, the WC does so too.

Because the HC-STO may be anterior or posterior to the HC-ITO, and because the WC-STO may be anterior or posterior to the WC-ITO, sentences with a narrative WC may realize configurations similar to those observed in connection with canonical WCs in [Chapters 5–6](#):⁸

(44)

- (a) We *were* hardly out of the house when Tim *had* already *found* what he needed. (cf. config. 2)
- (b) The garden party *was* in full swing when suddenly there *was going to be* a storm. (cf. config. 3)
- (c) We *had* hardly *started* looking for the ring when Bill *had* already *found* it. (cf. config. 6)

⁸ Aristar and Dry (1982:3) overlook this possibility when they claim that a clause in a perfect tense always expresses backgrounded information, since ‘any situation whose ET [Event time] does not coincide with RT [Reference time] cannot be foreground.’

- (d) He *was just going to take* the little girl to bed when she *had* suddenly *vanished*. (cf. config. 7)
- (e) We *had just sat down* in the garden to have a rest when it *was* already *going to rain*. (cf. config. 8)
- (f) We *were just going to leave* the garden when all of a sudden there *was going to be* a storm, (cf. config. 9)

The only difference with canonical WCs is that the WC-ITO is here treated as the central TO of a new domain. It follows that when these examples are transposed into the post-present, the WC each time uses a Future Perspective System form. Thus, the following is the post-present counterpart of (44 a):

(45) We will hardly be out of the house when Tim will already *have found* what he needs.

4.2

Temporal interpretation

If narrative WCs realize temporal structures similar to those of canonical ones, they differ from the latter in temporal interpretation. The crucial difference is the following:

- (a) Canonical WCs specify the time of the HC-situation or serve as temporal anchor for the HC. In both cases the HC depends for its temporal specification on the WC.
- (b) In the case of narrative WCs, it is the HC that serves as temporal anchor for the WC. This means that the WC depends for its temporal specification on the HC.

This functional difference entails the following:

(a) If the WC-STO of a canonical WC is represented as simultaneous with the WC-ITO, the unmarked interpretation is for the common TE to coincide with the WC-STO. Since the common TE includes the HC-ITO, it follows that the HC-ITO is interpreted as included in the WC-STO (properly or otherwise). This kind of interpretation is assigned to sentences like the following:

(46)

- (a) I left when it was five o'clock.
- (b) I was at home when it was five o'clock.
- (c) I left when he was still there.
- (d) I ran three miles when he ran four.

These sentences yield the following interpretations (respectively):

(46)

- (a') Punctual HC-STO coincides with punctual WC-STO.
- (b') Punctual HC-STO coincides with punctual WC-STO. (Note that in spite of the stative verb, the HC-STO is punctual: because the punctual WC-STO includes the HC-STO, it picks out a punctual HC-STO from the unbounded-durative HC-TFS.)
- (c') Punctual HC-STO is properly included in durative WC-STO.
- (d') Durative HC-STO coincides with durative WC-STO. (However, as noted in [Chapter 9](#), this type of sentence easily receives a sloppy W-simultaneity interpretation.)

(b) If the WC-STO of a narrative WC is the WC-ITO, the unmarked interpretation is for the common TE to coincide with the HC-STO. Since the common TE includes the WC-ITO, it follows that the WC-ITO is interpreted as included in the HC-STO (properly or otherwise). This is the way in which we interpret sentences like *I was lying in bed when suddenly there was a knock on the door* (punctual WC-STO is properly included in durative HC-STO). (As noted above, the HC of a narrative WC is typically unbounded-durative, while the WC itself is either punctual or interpreted inchoatively (and hence as punctual). The interpretation 'punctual WC-STO is properly included in durative HC-STO' is therefore the only one available.)

It follows that, though syntactically the HC is the 'main clause', the narrative WC is the 'main clause' from the point of view of interpretation. This explains why as far as the tenses are concerned, both clauses are treated as main clauses, i.e. both use the system of tenses typical of independent clauses.

5 CONCLUSION

This chapter has been concerned with narrative WCs. Section 1 has offered a definition of the concept, which hinges on the notions of sequentiality and prominence. Section 2 has presented a survey of the typical characteristics of narrative WCs that distinguish them from canonical WCs. In section 3 I have examined the tense system used in narrative WCs, noting that this is the system typical of HCs rather than that typical of canonical WCs. In section 4, finally, the temporal structure and interpretation of narrative WCs has been looked at.

WHEN-CLAUSES OTHER THAN CANONICAL OR NARRATIVE WHEN- CLAUSES

In this chapter I will briefly discuss the tense system(s) used in the many types of WCs that are neither canonical WCs nor narrative WCs. In doing so I will concentrate on the differences between these WCs and canonical WCs, rather than on the similarities. In the final section of this chapter, I will summarize the findings and attempt to interpret and explain them.

The differences between the WCs under discussion and canonical WCs appear to be the following:

- (a) Some of the WCs under discussion may (and, usually, must) use the Future Perspective System when the reference is to the post-present. The same types of WC may or must be bound indirectly by the use of the conditional tense when their STO is W-posterior to a past TO.
- (b) Some of the WCs under discussion can refer freely to t_0 . (It was noted in [Chapter 5](#) that canonical WCs cannot locate their situation at t_0 , except in habitual-repetitive sentences, in the Historic Present System, in sentences that receive a single-instance reading (in which case the WC does not answer the question *when?*) and in sentences where *when* is interpreted as ‘at a time like this when. In what follows these exceptions will be disregarded.)
- (c) Some of the WCs under discussion can be added to an HC using an indefinite present perfect. (It was noted in [Chapter 5](#) that this is not possible where canonical WCs are concerned, except in habitual-repetitive sentences, in the Historic Present System, when the HC involves an adverbial like *so far*, when it receives an ‘existential perfect’ interpretation, or when the WC is not fully integrated into the HC. In what follows all these exceptions will be disregarded.)
- (d) Some of the WCs to be treated in this chapter can use a present perfect which receives an indefinite interpretation. (It was pointed out in [Chapter 5](#) that canonical WCs do not allow this, except in the Historic Present System or on a habitual-repetitive interpretation. In what follows I will again disregard these exceptions.)
- (e) Some of these WCs can freely shift the domain from one time-sphere or sector to another. (I am not referring here to the exceptional shifts of

domain which are also possible in canonical WCs and which were discussed in Chapter 8. In what follows these strongly conditioned types of shift will be disregarded. I will concentrate on shifts from the present to the past, which are quite ungrammatical in canonical WCs.)

- (f) Unlike canonical WCs, most of these WCs may use an epistemic modal.¹

In the rest of this chapter I will survey the various types of noncanonical and nonnarrative WC and check systematically if they allow any (or all) of the above six possibilities.

1 ADV-RRCs

In Chapter 6 we saw that Adv-RRCs introduced by phrases like *at/by the time that* use exactly the same tense system as canonical WCs. However, the same is not necessarily true when the prepositional phrase introducing the Adv-RRC is less stereotyped (i.e. shows less resemblance to a temporal conjunction). This type of Adv-RRC must therefore be included in the discussion.

1.1

Whereas the Present Perspective System is the rule in Adv-RRCs introduced by a conjunction-like phrase (with a definite NP) such as *at/by the time (that)* or *the moment (that)*, the Future Perspective System may be found in other Adv-RRCs. Compare:

(1)

- (a) I will stay there until the time when the others {*leave/*will leave*}.
- (b) He will have left the house by the time you {*get/*will get*} there. (DR-BAX)
- (c) The moment she {*comes/*will come*} home, she will begin cleaning up this mess.
- (d) Inspect the site in the field during the time of the year when the area *will be* most heavily *used* for recreation. (BR)
- (e) Panetta predicted Mr Jones would bring to the Amex 'the expertise of knowing how the Congress operates, at a time when the Congress *is going to be paying* a lot of attention to the stock markets'. (WSJ)

Similarly, some Adv-RRCs must use the past tense (direct binding) when their STO is W-posterior to a past TO, whereas others can use the conditional tense (indirect binding):

(2)

- (a) By the time I {*got/*would get*} there, it could be too late.

- (b) She expected he would do it on a day when she herself *{was/would be}* absent.
- (c) He wasn't going to let her know the phone number here—he didn't know it himself yet—or communicate with her at all except on the last Wednesday in the month when Roger *would be* out at his gun club. (ADIMV 32)

Phrases that are compatible with *would* even require it when the HC does not express or imply posteriority:

(3)

- (a) She heaved a sigh, then laughed at herself for being so silly and self-pitying. It was her own fault for inviting Robert on a day when Lois *would be* there, and, instead of standing about, feeling sorry for herself, she ought to be doing something to help poor Bertie. (LOB)
- (b) Conway said the Fox shows appearing on nights when Paramount-MCA shows *wouldn't be offered* could be promoted on the programs produced by Paramount-MCA. (WSJ)

1.2

Like canonical WCs, Adv-RRCs depending on an antecedent such as *at the time* cannot normally refer to t_0 . However, this restriction would not seem to hold for other Adv-RRCs:

(4)

- (a) We're living in a time when many people *have* racist feelings.
- (b) All this is happening on the very day that we *are celebrating* the end of the war.
- (c) Unlike his two predecessors in the American Presidency, Mr John F. Kennedy will take office this week at a moment when the world *is*, technically, at peace. (LOB)
- (d) Indeed, in an era when regulators and critics *are gaining*, some advertisers are realizing that making small concessions may be the only way to marshal their time and money for more important fights. (WSJ)
- (e) The rally comes at a time when in spite of carefully worded statements by the Prime Minister there *is* an air of electoral expectancy. (LOB)

The restriction that the WC cannot refer to t_0 does not hold for these Adv-RRCs because they are not time-specifying WCs. In examples like these, the Adv-RRC is not used to locate the HC-situation in time—it is clearly given information that

1 That canonical WCs cannot use an epistemic modal is well known (see e.g. Edgren 1971:16, Heinämäki 1978).

the reference is to t_0 —but rather to comment on the present. The use of an indefinite antecedent NP in these examples is similar to the use of an indefinite NP in sentences like the following:

(5)

- (a) I will tell her the truth.—You can't do that. You can't tell *a woman who's just had a nervous breakdown* that she is broke,
- (b) This turn of events has put a big damper on *an industry that seemed almost invincible last spring*. (WSJ)

As in (4 a-e), the referent of the indefinite NP is fully identified. The speaker's choice of an indefinite NP (where the conditions for using a definite one are satisfied) is a way to represent an already identified referent as belonging to a set of entities with particular characteristics. (It is the indefinite article that is used to this end because it carries the implicature of 'exclusive reference', i.e. it suggests that there are other entities satisfying the description besides the entity referred to.) In the same way, *at a time when* represents the time referred to (e.g. the zero-time) as belonging to a larger set of times to which the statement made is applicable.

There are no examples similar to (4 a-e) that involve a definite phrase like *at the time when*, *the moment when*, etc., because such phrases are necessarily time-specifying and are therefore incompatible with a present tense:

- (6) *He is [now] keeping silent at the time when I want him to speak up.

1.3

Adv-RRCs can combine with an HC using an indefinite perfect, but only if the Adv-RRC has the above-mentioned commenting function, not if it is time-specifying. Compare:

(7)

- (a) Service *has declined* just at a time when consumers are more impatient than ever. (WSJ)
- (b) Surviving scandal *has become* a rite of political passage at a time when a glut of scandal has blunted this town's sensibility. (WSJ)
- (c) He {*came*/**has come*} to visit us on the day when Mary had her accident.

1.4

An Adv-RRC can use the present perfect, provided it has a commenting rather than time-specifying function. As before, this is possible with *at a time when*, but not with *at the time when*:

(8)

- (a) Surviving scandal has become a rite of political passage at a time when a glut of scandal *has blunted* this town's sensibility. (WSJ)
- (b) Because municipal bonds yields have risen at a time when interest rates generally *have fallen*, some portfolio managers are assuming that bonds bought now will appreciate in value as the municipal bond market rebounds. (WSJ)

1.5

Adv-RRCs do not allow a shift of domain, except if they have a commenting function. In that case both the HC and the WC can use any of the absolute present time-sphere tenses:

(9)

- (a) Moreover, the President *is meeting* the Soviet leader at a time when the Administration *has* still not *decided* on the scope of America's firm foreign policy commitments. (BR)
- (b) The President *has irritated* the general public at a moment when he *is going to need* all the support he can get.

However, the close temporal relation between the HC and the WC renders it impossible to shift the domain from the present to the past time-sphere.²

1.6

Like canonical WCs, Adv-RRCs do not normally use an epistemic modal, unless they serve to comment rather than to specify a time:

(10)

- (a) John will be caught the moment he *{runs away/*may run away}*.
- (b) The President has taken a dangerous decision at a time when many of his supporters *may* already *be losing* faith in him.
- (c) Such options give the holder the right to buy a company's stock at a fixed, generally low price at some time in the future when—if the company has done well—the actual market price of the stock *should be* much higher. (WSJ)

2

WHEN-CLAUSES USED AS NP-RRCs

2.1

Introduction

NP-RRCs have been defined as restrictive relative clauses modifying an NP which does not function as, or form part of, a temporal adverbial. WCs used as NP-RRCs differ from canonical WCs and Adv-RRCs in that they do not involve a common TE. The relative adverb *when* still functions as a time adverbial within the RRC (i.e. it establishes a TE which includes the RRC-ITO), but because the WC does not function as a time adverbial, it does not establish a TE which includes the HC-STO (or another TO functioning as HC-ITO). It follows that NP-RRCs do not always show a close temporal connection with the HC, though there are cases in which they do. If the close temporal relation is lacking, the NP-RRC may use tense forms (such as the conditional tense) which cannot normally appear in canonical WCs.

- (i) At the time this history commences, Robert Moore had lived but two years in the district. (Kruisinga 1932:420)

The situations of WC and HC can be located in different time-spheres here because the WC does not specify the time of the past HC-situation but refers to the structure of the novel and hence to the 'present' of the auctorial (omniscient) narrator.

There are two types of WCs functioning as NP-RRCs that show a close temporal connection with the HC. The first is that in which the situation referred to in the HC is the existence (or coming into existence) of the time identified by the NP-RRC:

(11)

- (a) There was a time when things were different.
 (b) The day will come when you will regret this hasty decision.

In such examples the HC expresses no more than the existence or coming into existence of a particular time, indicated by the antecedent NP. Since the WC is not only syntactically dependent on this NP but also has the semantic function of identifying it, there is a close temporal connection between the two clauses. The tense system used in the NP-RRC may therefore be the same as in sentences consisting of an HC and a canonical WC. However, it does not always have to

2 The following is a seeming exception:

be. An illustration of this is that both direct and indirect binding are possible when the STO of the NP-RRC is W-posterior to a past TO:

(12) But there would be a time when we {*wondered/would wonder*} whose fault it was.

If the WC uses *would wonder*, it shows a form of indirect binding which is not possible in canonical WCs. If it uses *wondered* (which is less usual, but possible), it is bound in the same way as a canonical WC.

For ease of reference I will refer to the interval indicated by the antecedent NP and identified with the TE established by *when* as the 'T'. Sentences whose sole function is to assert the existence of such an interval will be called 'T-existential sentences'. In such sentences the HC-situation is the existence or coming into existence of the T. The NP indicating the T is therefore the most essential constituent of the HC. It follows that if the HC-STO is W-anterior or W-posterior to another TO, the T must also be W-anterior or W-posterior to the TO in question: the T coincides with the HC-STO. This close temporal relation between the HC-STO and the T entails a close temporal relation between the HC-STO and the WC-STO (since the WC is a RRC defining the T).

The second type of sentence showing a close temporal connection between the WC used as NP-RRC and the HC consists of sentences in which the time referred to by the NP-RRC (i.e. the T) is identified with the time referred to by the subject of the HC:

(13)

- (a) Five-thirty? That will be the time when most of them go home,
- (b) It may be that this year will be the first year in some years when our earnings won't have their customary increase. (WSJ)

I will refer to sentences like these as 'identifying sentences'.

Other types of sentence involving an NP-RRC do not show a similar close temporal connection between the two clauses:

(14)

- (a) He remembered the time when he (*had*) *lived* in India.
- (b) He spent the evening thinking of the occasion on which they *had met*.
- (c) He looked forward to the time that he {*would spend/*spent*} with her.

Here the HC serves neither to assert the existence of the T, nor to identify the T with another time, nor to count the number of occasions constituting the T. It follows that the T need not coincide with the HC-STO: the T is interpreted as W-anterior to the HC-STO in (14 a–b) and as W-posterior to it in (14 c).

In the following sections I will briefly discuss the three types of NP-RRC that have just been identified. In doing so I will restrict myself to NP-RRCs that are WCs. (This means, among other things, that I will disregard sentences of the type *This is the second time I've seen him*, in which the RRC cannot be a WC.) As

noted at the beginning of this chapter, I will not present a full discussion of the tense system typical of NP-RRCs but restrict myself to examining six ways in which this system may possibly differ from that typical of canonical WCs. However, before doing this, it seems worth while pointing out that NP-RRCs resemble canonical WCs and Adv-RRCs in that they allow both direct and indirect binding when their STO is W-anterior to a past TO. Compare:

(15)

- (a) There had been a time when I *hated* Henry. (ENDAF 149)
- (b) There had been a time when she *had shared* Annabella's detestation of Mr Hobhouse. (LOB)

(16)

- (a) I had seen Mary on Friday. That had been the day on which I *went* to London for a meeting.
- (b) The only thing then left to be staged was their disappearance, which was best effected during that period when no one normally booked out of hotels—mid-afternoon. And that had usually been the time *when* the Smiths *had decided* to take leave of their erstwhile benefactors—sans warning, sans farewell, sans payment, sans everything. (SOA 117)

(17)

- (a) The smell reminded him of the time when he *was* just about Lapointe's age. (MMF 48)
- (b) I remembered the first time I *had been* in one of those churches and how I *had hated* it. (ENDAF 113)

The possibilities may even be combined in one and the same NP-RRC:

(18) There's enough left for our two lives, and I thought of that day when she *had packed* her suit-case and I *sat* working here. (ENDAF 122)

The use of the past perfect for indirect binding in an NP-RRC requires that the T be W-anterior to a past TO. In T-existential and identifying sentences this usually means that not only the WC but also the HC uses the past perfect. However, there are also examples in which the HC uses the past tense:

(19)

- (a) I would have given anything to sleep. I would have behaved like a schoolboy if I had believed in the possibility of a substitute. But there *was* a time when I *had tried* to find a substitute, and it hadn't worked. (ENDAF 53)
- (b) On occasion the sailing was more light-hearted. There *was* an afternoon when an unofficial prize *had been* offered for the helmsman who, sailing

single-handed, contrived to capsize his boat first after the starting gun had been fired. (LOB)

(20)

- (a) That *was* the time his wife Maria *had called* him an ‘under-grown donkey’ and after, when he had restrained himself from saying anything in reply, she had thrown a melon at him. (LOB)
- (b) Those *were* the days when Mungo *had led* Michael Stern a dance all over the city at Christmas time and locked him up in the warehouse; when he *had been shown* all Stern’s drops and substituted all Stern’s messages with his own; when he *had* actually *entered* Stern’s safe house. (TSM 77)

In [Chapter 7](#) we have adduced some similar examples involving a canonical WC or Adv-RRC. What is special about them is that, while the WC is bound by a contextually given past TO, the HC establishes a domain of its own. In this way the two STOs are located in different domains, even though they are to be interpreted as W-simultaneous with one another. That this is possible without blurring the interpretation follows from the semantics of the construction: in existential and identifying sentences, the time referred to in the HC is by definition the same as that referred to in the WC.

2.2

T-existential sentences

2.2.1

If the reference is to the post-present, an NP-RRC in a T-existential sentence may use either the Future Perspective System or the Present Perspective System:

(21)

- (a) The time will come to all of you when the veil of earthly things *is torn* from your sight—when the cobweb texture of your fancied theories *is* burst asunder, and truth, with radiant light, *explodes* before you. (DR-SHAW)
- (b) The day will come, in midsummer, when you *find* your plants becoming ‘leggy’, running to tall-growing foliage at the expense of blossoms. (BR)
- (c) I pray the day will come when all who wish *are allowed* such practices and not be shamed, and persecuted for them. (DRSHAW)
- (d) There will come a time in a basement shelter when the radiation *has decayed* enough to allow use of the whole basement. (BR)

(22)

- (a) But the time will come, and with vengeance, when the blood of the slain *will be* the people's watchword, and insurrection a public duty. (DR-SHAW)
- (b) ...a professorship will still be regarded as a distinction come the day—early next week, in all probability—when the police force *will be thinned out* to a ceremonial front for the peace-keeping activities of the army. (DR-STOP)
- (c) I am told the time will soon come when women *will find* it necessary to do most of their own work, and even now it is important to have conveniences for the use of servants. (BR)
- (d) I suppose the day will inevitably come when the area *will be encrusted* with developments, but at present it is deserted and seductive. (BR)

The Future Perspective System is the normal system when the HC does not establish future time reference:

(23)

- (a) There are two more Sunday afternoons when the situation *will arise*. (BR)
- (b) I am looking forward to the days we *will spend* together.

Similarly, if the STO of the NP-RRC is W-posterior to a past TO, the NP-RRC of a T-existential sentence may use either the past tense (effecting direct binding) or the conditional tense (effecting indirect binding), though the latter possibility is definitely the preferred one:

(24)

- (a) But the time would come when he *{would have/had}* his revenge.
- (b) Soon after that there would be a time when there *{was apparently going to be/would apparently be going to be}* a war in our country, but fortunately that could be prevented.
- (c) Never had Mary thought the day would come when Dora May's silence *would be* unwelcome. (LOB)
- (d) But she had come out of it at last. She always did, though Finn was afraid the time might come when she *wouldn't*. (LOD 142–3)

2.2.2

Unlike canonical WCs, WCs used as NP-RRCs in T-existential sentences can use the present tense:

(25)

- (a) There has come a time when people no longer *believe* this.
- (b) You see, what I have come to realise, gentlemen, is that the time has come when politics *is* not enough. (DR-SHAW)

The possibility of using the present tense in WCs like these arises from the fact that the function of these NP-RRCs is not to locate a situation in time but rather to comment on the present. (As has been pointed out in section 1, Adv-RRCs also allow reference to t_0 if they have a commenting rather than time-specifying function.)

2.2.3

Whereas a canonical WC or Adv-RRC referring to a single situation cannot normally depend on an HC using an indefinite perfect, an NP-RRC in a T-existential sentence does allow this possibility. This is illustrated by the above examples (25 a–b) and by the following:

(26)

- (a) There has been a time when things *were* different.
- (b) There has been a time when television *had* not yet *been invented*.

The combination with an HC in the indefinite perfect is rendered possible by the fact that the WC does not really specify the time of the HC-situation: its function is to define a kind of time. In (25 a–b), it is a time which has come and is now holding, so that the WC ultimately serves to comment on the present. In (26 a–b), it is a time which has existed at some time in the past but no longer exists at t_0 . In the latter examples, the present perfect in the HC establishes a pre-present domain which does not include t_0 and which is therefore developed as if it were a past one.

2.2.4

An NP-RRC in a T-existential sentence can use the present perfect to refer to a single situation that actualized before t_0 . If the T-existential HC uses the present perfect, the NP-RRC may use either the present perfect (creating a new pre-present domain) or the past tense (effecting temporal subordination):

(27) Until now all lectures have been incredibly boring. There has even been a day when several students *{fell/have fallen}* asleep.

As we have seen, canonical WCs and Adv-RRCs do not allow the present perfect, except on a habitual-repetitive interpretation. NP-RRCs in T-existential sentences also allow both the past tense and the present perfect on this interpretation:

(28)

- (a) There's been lots of times when Dad *was* out of a job and there *wasn't* enough food in the house. (DR-MAUG)

- (b) There have been only seven other times—in 1929, 1933, 1961, 1965, 1968, 1971 and 1972—when the yield on the S&P 500 *dropped* below 3% for at least two consecutive months. (WSJ)

(29)

- (a) There have been occasions when I *have spoken* to specialist judges in connection with their CC winners and *have been* amazed at their apparent lack of knowledge or perception. (LOB)
- (b) There have been plenty of days when I *have spent the* working hours with scientists and then gone off at night with some literary colleagues. (LOB)
- (c) And since then there have been times when *I've thought* I even liked her. (Vermant 1983:58)
- (d) No doubt there have been moments during every Presidency when the man in the White House *has had* feelings of frustration, exasperation, exhaustion, and even panic. (BR)

The same two possibilities are available when the HC is negative, i.e. when the existence of the relevant times in the pre-present is denied:

(30)

- (a) There has never been a time when wines from so many different countries *were* available in Britain. (LOB)
- (b) And there has never been a time in my life before or since when I *have so much wanted* to win. (ENDAF 14)
- (c) I don't think there's ever been a time till now when I've *had* a reasonable amount of money to live on, and now I've got it it's no good to me. (SHF 217)

2.2.5

Occasional examples can be found in which an HC in the present tense combines with an NP-RRC in the past tense:

- (31) There *is* presumably a calendar date—a moment—when the onus of proof *passed* from the atheist to the believer, when, quite suddenly, secretly, the noes *had* it. (DR-STOP)

Such a shift of domain from the present to the past, which is ruled out in canonical WCs, is systematically possible in NP-RRCs forming part of an enumeration or of an existential sentence that serves as a reminder. (This type of existential is also special in that the postcopular NP is a definite NP.)

- (32) And there's the time you *took up* boxing. (DR-SIMP)

2.2.6

NP-RRCs occurring in a T-existential sentence allow the use of an epistemic modal:

- (33) There will come a time when things *may be* completely different.

2.3

Identifying sentences

2.3.1

If the reference is to the post-present, an NP-RRC in an identifying sentence may use either the Future Perspective System or the Present Perspective System:

(34)

- (a) That will be the time when they *have* finally *cut* the knot,
 (b) That will be the time when the decision is *made*.

(35)

- (a) It may be that this year will be the first year in some years when our earnings *won't have* their customary increase. (WSJ)
 (b) Tomorrow will be the day when the final decision *will be made*.

The Future Perspective System is the normal system when the HC does not establish future time reference:

(36)

- (a) Half past five? That's about the time when they *will* probably *start* leaving the building,
 (b) Is that the time when the speaker *will arrived*?

A similar rule obtains when the reference is to the past time-sphere. If the STO of the NP-RRC is W-posterior to a past TO, the NP-RRC may use either the past tense (direct binding) or the conditional tense (indirect binding). The latter possibility is the rule if the HC does not express posteriority:

(37)

- (a) We hoped that the coming year would be the year in which the long expected treaty *{was signed/would be signed}*.
 (b) I knew this was the year in which the decision *would be made*.

2.3.2

In identifying sentences in which the HC is in the present tense, the function of the NP-RRC is to comment on the present rather than to locate the WC-situation in time. (Since the two times are identified with one another, locating the HC-situation at t_0 entails that the WC-situation can only be interpreted as a present situation. The function of the WC is therefore commenting, not timespecifying.) It follows that the NP-RRC can also use the present tense:

(38)

- (a) Today is the day when we *are celebrating* the may or's birthday,
- (b) Don't forget now is the time when he *is reaching* adolescence.

2.3.3

Whereas (barring the exceptions referred to in [Chapter 5](#), which are disregarded in this chapter) a canonical WC cannot depend on an HC using an indefinite perfect, an NP-RRC in an identifying sentence does allow this possibility:

(39) The past year *has been* the year in which the least progress was made.

2.3.4

Whereas a canonical WC cannot use an indefinite present perfect to refer to a single situation that actualized before t_0 , an NP-RRC in an identifying sentence can do so if its function is commenting rather than time-specifying. Compare:

(40)

- (a) The past year has also been the year in which our beloved President *died*.
- (b) The past year has also been the year in which our beloved President *has died*.

In (40 a) the NP-RRC is time-specifying: *died* implies that the past year is identified as the particular year, out of a number of recent years, in which the President died. In (40 b), by contrast, the WC has a commenting function: *has died* implies that the death of the president is identified as a particular attribute of the past year, considered in isolation. There is a similar distinction between the past tense (effecting temporal subordination) and the present perfect (creating a new pre-present domain) in the following examples:

(41)

- (a) The past year has been the year in which our economy *{was ruined/has been ruined}*.
- (b) The past year has been the year in which the least progress *{was made/has been made}*.

Moreover, as in habitual-repetitive canonical WCs and Adv-RRCs, both tenses are possible if the HC of the identifying sentence uses the present perfect and refers to a repetitive situation:

(42)

- (a) The past year has been a year in which several of my friends *{have died/died}* of cancer.
- (b) There's been lots of times when Dad *was* out of a job and there *wasn't* enough food in the house. (DR-MAUG)
- (c) There have been many times I've *tried* to help you during our friendship. (DR-BAX)

The WC also uses the present perfect (but not the past tense) if the identifying sentence is concerned with the number of times the WC-situation has held in a period leading up to t_0 :

(43) I suppose, in the thirteen years of our married life, this trip of mine to America has been the only occasion on which we *have been separated* for more than a day or two. (CP 196)

2.3.5

Because of the close temporal relation between the two clauses—the time referred to in the HC is identified with that referred to in the WC—the WC cannot shift the domain from the present to the past. (Note that what we have observed in examples like (41)–(42) is not a shift of domain but a shift of perspective: the pre-present domain is developed as if it were a past one.)

2.3.6

Unlike canonical WCs, NP-RRCs forming part of an identifying sentence can use an epistemic modal:

(44) Tomorrow is the day when a solution *may* be found.

2.4

Sentences with no close temporal connection between HC and NP-RRC

2.4.1

If the HC expresses or implies reference to the post-present, the NP-RRC may use either the Future Perspective System or the Present Perspective System:

(45)

- (a) I'm looking forward to the day when she *{has left/will have left}* the house.
- (b) I'm looking forward to the day when she *{is/will be}* my teacher.

The following are some further examples with the Present Perspective System and the Future Perspective System, respectively, in the NP-RRC:³

(46)

- (a) I shall wait for you for ever if I have to. I only live for the day when you *come back* to me. (DR-NORM)
- (b) I have a vision of Huddersfield of the not-too-distant future when the great schemes, some already nearing completion, *have come* to fruition. (LOB)
- (c) Now for your instructions. Snatch a moment when the house *is* unoccupied—but don't send the servants out too obviously—then go upstairs to the attic. (LOB)

(47)

- (a) So obvious are these advantages that nearly 95 per cent of the population of New York State now has access to a system, and enthusiastic librarians foresee the day, not too distant, when all the libraries in the state *will belong* to a co-op. (BR)
- (b) I long for the day when Alec Issigonis *will trigger off* the next... (LOB)
- (c) In the colder climes, for instance, you will have to live through the many unglamorous winter months when your pool *will hardly look* its best. (BR)

As before, the Future Perspective System is the normal system if the HC does not express or imply future time reference:

- (i) Fortunately, Martin will have purchased an electrical shaving device against the day when the first rude hair *should break* the alabaster purity of his cheek, and soon he will be rubbing an after-shave lotion, which presumably he will have bought for the same eventuality, all over the legs of Tarquin...(SEU)

(48)

- (a) What we're seeing now is the wrenching readjustment of asset values to a future when speculative-grade debt *will be* hard to obtain rather than easy. (WSJ)
- (b) God has already set the day when you *will be* in His hands. (BR)

³ Occasionally, *should* is used (as is also possible in canonical WCs—see section 1.2 of Chapter 7):

- (c) She thought about the day ahead. It was Wednesday, a grey day. Not a black day when she *wouldn't see* her father at all, but a yellow day like Sunday. (DEW 15)

On the other hand, the Present Perspective System is the rule in sentences like the following:

(49)

- (a) If I catch a pike tomorrow, I will take a photograph of it. This will remind me for ever of the day when I *caught* it.
 (b) When this boy, who is now a baby, is old, I hope he will cherish the memories of the time when he *was* young and living happily together with us.

In sentences like these we cannot replace the past tense by the present perfect (as Present Perspective System tense), nor by the future perfect (which is a Future Perspective System form). The italicized preterites are Present Perspective System forms because they express a relation in the post-present domain established in the HC: they locate their STOs in the 'pseudo-past' which is defined relative to the central TO of the post-present domain (which is treated as if it were t_0).

If the WC-STO is W-posterior to a past TO, the WC is usually bound indirectly, by means of the conditional tense:

(50)

- (a) She had looked forward to the time when she *would be* free. (TPH 105)
 (b) She didn't dare think ahead, to the day when she *would have* to tell about Arthur. (LOB)
 (c) And the women sighed for the day when their men *would be expelled* from the womb for the last time... (BM 45)
 (d) On the third panel were all the details, specifications and costs and—more to Charles's interest—the projected dates when work on the building *would commence* and when be finished. (TSM 253)
 (e) For a while he had believed that his interview with Jennifer marked the last occasion on which they *would ever meet* and this certitude returned to him now. (TSM 198)

However, occasional examples can be found in which the past tense (effecting direct binding) is used:

(51)

- (a) I had placed the beer in a strategic position on the hall chest outside my son's door so that I could listen for the moment when childish thirst

overcame caution and the time *arrived* for the ginger ale to be wielded as a defensive weapon. (LOB)

- (b) He suggested that they left sightseeing in Arles for a cooler day, a day when they *were* less tired, any other day that she chose. (Edgren 1971:105)

In the following example, the two possibilities are combined:

(52) At least he would put off the moment when she *had to meet* all those people and the worse moment when she *would be* alone with Paul. (Edgren 1971:105)

If the WC-STO is anterior to a WC-ITO which is itself W-posterior to a past TO, the tense of the WC is usually the conditional perfect (effecting indirect binding):

(53)

- (a) I looked forward to the day when she *{would have left/²had left}* the house.

- (b) A few more days to the shortest day, the longest night. A few more days to the solstice when the sun *would have moved* to its extremest limit from this part of the earth. (SHF 317)

However, direct binding sometimes does not appear to be impossible. The following is acceptable in conversation, though the conditional perfect is generally preferred:

- (54) I longed for the moment when the guests *had left*.

2.4.2

Like canonical WCs, Adv-RRCs and the other types of NP-RRC, NP-RRCs of the kind under discussion cannot normally use the present tense to locate a single situation at t_0 . The following sentence is unacceptable on a nonhabitual interpretation:

- (55) He is talking of the time when John is here.

However, as in the case of Adv-RRCs and the other types of NP-RRC, reference to t_0 is possible if the function of the NP-RRC is not to locate a situation in time but rather to comment on the present:

- (56) Do you realize what kind of time we live in? I am talking now of a time when people no longer *respect* each other's property, when a lot of youngsters *are addicted* to drugs, when...

2.4.3

Whereas a canonical WC cannot normally depend on an HC using an indefinite perfect, a WC used as NP-RRC of the type under discussion does allow this possibility. In that case it uses a relative past tense to express simultaneity in the pre-present domain:

(57)

- (a) I've just been reminded of the time when we *were* together.
- (b) I did my best for you but President Kassan has never forgotten that day over two years ago, when you *let* him have the butt of your rifle right across his face. (LOB)
- (c) That, after all, is a human trait which most of you will understand. I know, because I have passed through the phase when all the birds in my birdroom *appeared* to have all the virtues of great winners. (LOB)

The reason why the WC is not incompatible with the indefinite perfect in the HC is that the WC does not specify the time of the HC-situation.

2.4.4

Like canonical WCs, this kind of NP-RRC cannot use the present perfect to refer to a single situation that actualized before t_0 :

(58) This reminds me of the year when I *{was/*have been}* in India.

However, if the HC uses the present perfect and refers to a repetitive situation, the NP-RRC can use either the past tense (effecting temporal subordination) or the present perfect (creating a new pre-present domain). In this respect this type of NP-RRC resembles all other types of WC discussed until now:

(59)

- (a) This letter has reminded me of the many times when we *{were/have been}* together.
- (b) The few occasions when I've *had* a personal interest in a salvage claim—even when all added together—haven't produced enough even to buy a coffee stall. (LOB)

2.4.5

WCs that are NP-RRCs that show no close temporal connection with the HC can easily shift the domain. Thus, the following examples show a shift from the present or post-present to the past, which is a type of shift which is never possible in canonical WCs, Adv-RRCs or NP-RRCs showing a close temporal connection with the HC:

(60)

- (a) I recollect the time when one *stood* for a lady as a matter of course. (DR-STOR)
- (b) Gone are the days when Cossacks *galloped* across the grassy steppe on superb horses. (LOB)

- (c) They're still living the days when sex always *carried* the threat of conception. (DR-TAYL)
- (d) I will never forget the day when she *came* into my life.

2.4.6

Unlike canonical WCs and Adv-RRCs, WCs that are NP-RRCs that show no close temporal relation with the HC can use an epistemic modal:

- (61) He is already thinking of the day when he *may be elected* chairman of the club.

3

INTERROGATIVE WHEN-CLAUSES

3.1

Interrogative WCs, whether dependent or independent, as a rule use the Future Perspective System when the reference is to the post-present:

(62)

- (a) When *will we be* able to relax?
- (b) I wonder when we'll *be able* to relax. (WSJ)
- (c) The company said it isn't clear when or if any write-down *will be taken*. (WSJ)
- (d) The Arizona real estate market continues to be depressed, and there is still uncertainty as to when values *will recover*. (WSJ)

Similarly, dependent interrogative WCs use the conditional tense (for indirect binding) when their STO is W-posterior to a past TO:

(63)

- (a) A Ramada spokesman said he couldn't state when the restructuring *would be completed*. (WSJ)
- (b) The spokeswoman said she was 'unsure' when Crazy Eddie *would* permanently *close* its doors. (WSJ)
- (c) But the old Dodger slugger wisely offered no prediction about when good times *would return* to his side. (WSJ)

3.2

Interrogative WCs cannot normally refer to t_0 . The following are unacceptable on a single-event reading if the speaker is in London at t_0 :

(64)

- (a) When am I in London?
- (b) I told him when I am in London.

3.3

Interrogative WCs can depend on an HC with an indefinite perfect:

- (65) He *has* just *asked* me when the accident happened.

3.4

Like canonical WCs and any other type of WC that receives a temporal interpretation, interrogative WCs cannot use the present perfect, except on a repetitive or 'existential perfect' interpretation. Compare:

(66)

- (a) When {*did* he *die*/**has* he *died*}?
- (b) It is impossible to determine when the practice {*arose*/**has arisen*} of covering this by an ornament of precious metal. (LOB)

(67)

- (a) When *have* I ever *told* you a lie?
- (b) The book does not say when he *has been* in Africa.

(68)

- (a) I can't remember when I *didn't pester* my mother to teach me to cook. (BR)
- (b) A glance at the gauge marks at the bottom end reveals when the required amount *has been removed*. (LOB)

In (66 a-b) the past tense must be used because the speaker is concerned with the time of a single past situation. In (67 a-b) the present perfect is used because the speaker is concerned with the question whether the WC-situation has ever actualized in a period leading up to t_0 . (This is what we have called an 'existential perfect' reading.) In (68 a) the speaker conceives the instances of the repetitive WC-situation as past instances and therefore uses the past tense. However, he could also have used the present perfect, to represent the instances as lying in a period-up-to- t_0 . Sentence (68 b), finally, receives an interpretation paraphrasable as (69 a) or (69 b). This is a potentially repetitive reading in which *when* is used to refer to cases, and is therefore an instance of 'atemporal' *when*:

(69)

- (a) A glance at the gauge marks at the bottom end reveals when it is the case that the required amount has been removed,

- (b) A glance at the gauge marks at the bottom end reveals in which cases the required amount has been removed.

3.5

Dependent interrogative WCs can easily shift the domain from the present to the past:

- (70) The letter *does* not *say* when the meeting *was called*.

3.6

Interrogative WCs may use an epistemic modal:

(71)

- (a) Mr Breeden contended that uncertainty over when the SEC *might* act could worsen volatility in the markets. (WSJ)
 (b) The trust isn't commenting on when it *might* need to liquefy its Manville stock. (WSJ)
 (c) It wasn't immediately clear when negotiations *might* resume. (WSJ)

4

WHEN-CLAUSES USED AS NP-NRCs

NP-NRCs have been defined as nonrestrictive relative clauses modifying an NP which does not function as, or form part of, a temporal adverbial.

4.1

NP-NRCs referring to the post-present invariably use the Future Perspective System:

(72)

- (a) Later on I will give you instructions concerning next Tuesday, when the weather {*will* probably *be*/**is* probably} bad.
 (b) Whereas the raiders were the primary catalysts over the last few years, 1992, when internal European trade barriers *will fall*, is becoming a far more important catalyst for takeovers. (WSJ)
 (c) Indeed how President Bush reacts to getting his first budget from Congress will very likely set the political tone for the entire term. If congressional Democrats can make him eat all this 'extraneous' junk, they will set the stage for next October, and the next after that, when the same process *will recur*. (WSJ)

Similarly, the conditional tense (effecting indirect binding) must be used when the STO of the NP-NRC is W-posterior to a past TO:

(73) He looked forward to the evening, when he *{would not feel/*did not feel}* lonely any more because Jill *{would keep/*kept}* him company.

4.2

WCs used as NP-NRCs can refer to t_0 because the function of an NP-NRC in the present tense is always to comment on the present rather than to locate the HC-situation in time:

(74)

- (a) I am specifically referring to the present, when many people *do not trust* politicians.
- (b) I am specifically referring to the present meeting, *{at which/when}* the topic of euthanasia is being animatedly discussed.

4.3

NP-NRCs can easily depend on an HC with an indefinite perfect:

(75) He *has just told* me about his youth, when he was living in Brighton.

4.4

NP-NRCs cannot use an indefinite present perfect (on a single-event reading) if the HC refers to a specific past time:

(76) This is a story about the beginning of the century, when many Irish people *{emigrated/*have emigrated}* to the United States. We might expect the present perfect to be possible in NP-NRCs that comment on the present. However, it appears that WCs cannot be used in this way:

(77) Things are difficult for her these days, *{now that/*when}* her husband has died.

4.5

WCs that are NP-NRCs can easily shift the domain from the present time-sphere to the past:

(78)

- (a) He never *refers* to his youth, when he *was living* in Brighton.
- (b) He *will* no doubt *tell* you about last time, when he *was laughed at* by everybody.

4.6

NP-NRCs may use an epistemic modal:

(79)

- (a) Was it true that Pauline had dashed in in response to a shout from him when everything cascaded down off the top of the bookcase? Or had there been a love scene, when some clumsy movement of Marks *might* have caused the accident? (LOB)
- (b) She thought about the day ahead. It was Wednesday, a grey day. Not a black day when she wouldn't see her father at all, but a yellow day like Sunday, when, unless on call, he *might* be there most of the time. (DEW 15)

5

WHEN-CLAUSES USED AS ADV-NRCs

These are WCs used as NRCs modifying (the head of) a temporal adverbial.

5.1

Adv-NRCs as a rule use the Future Perspective System when the reference is to the post-present:

(80)

- (a) So, one analyst said, even though the long-term production problems may be easing, there will still be a significant need for copper over the next three months, when inventories *will remain* relatively low. (WSJ)
- (b) The almanac will be making new friends and enemies on Oct. 27, when an updated version *will be released*. (WSJ)
- (c) Anyway, I will leave all further news till I reach my final destination some time this week, when I *will transmit* all. (SEU)

This use of the Future Perspective System distinguishes Adv-NRCs from canonical WCs that are in nonrestrictive apposition, which use the Present Perspective System. Thus, in (81 a) the WC is an Adv-NRC, whereas in (81 b) it is an appositive canonical WC (see also Hirtle 1981:222):

(81)

- (a) I will work in the garden this evening, when it *will be* cooler,
- (b) I will work in the garden this evening, when it *is* cooler.

Adv-NRCs similarly use the conditional tense (for indirect binding) when their STO is W-posterior to a past TO:⁴

(82)

- (a) He fixed the appointment at 7 p.m., when he *would have* plenty of time to discuss the matter.
- (b) I decided to say nothing to her until the next Wednesday, by when it *would be* too late for her to do anything about it.
- (c) Lunched at Peter Jones and bought new lamp for Henry's study. ... Afterwards went to a news cinema in Piccadilly.... Nothing to do till seven when Henry *would be* back. (ENDAF 101)
- (d) The Cannes conference also took the unprecedented decision however, of declaring what amounted to 'fares freeze' for a period of two years, agreeing that there would be no further traffic conference until the autumn of 1962, when fares *would be fixed* for the traffic year starting April 1, 1963. (LOB)
- (e) Every year between the Passion Plays, an interval of ten years, another play would be performed at the small theatre in the village, when new talent *would be discovered* and trained. (LOB)

5.2

Adv-NRCs referring to the present are usually unacceptable:

(83)

- (a) ?I cannot help you now, when I am short of cash.
 - (b) ?At present, when his friend is abroad, he is staying at his sister's.
-
- (i) Most politicians want to defer making a decision until next month, when there *are* municipal elections in most districts,
 - (ii) Graham and Keith were only here until tomorrow when they *were* off to join their parents, newly home from Saud. (TSM 83)

This use of the present tense and its past counterpart was discussed in section 11 of [Chapter 4](#). The present tense in (i) results from a shift of temporal perspective: the post-present is treated as if it were the present, which means that the present tense really establishes a post-present domain.

However, occasional exceptions can be found, in which *when* is not paraphrasable as 'at which time' but as 'now that' or 'when it is the case that'. These WCs have an explanatory or commenting (rather than purely temporal) function:

(84)

⁴ What is possible in Adv-NRCs is using the present tense or past tense to express an 'arranged future':

- (a) It is a great joy to meet them now fifty years afterwards when so many *are* parents or even grandparents. (LOB)
- (b) When East Germans fled to the West by the thousands, paeans of joy rose from the throats of Western publicists. They are less vocal now, when it *is* the West Berliners who are migrating. (BR)
- (c) Traders said market participants will be watching to see whether the dollar climbs further in New York today, when financial markets in Japan *are closed* for a holiday. (WSJ)
- (d) ‘Consumer CDs from major banks are still resisting a fall’, said Norberto Mehl, Banxquote’s chairman. He said the resistance is a result of ‘this very heavy rollover period’ of October, when a huge amount of CDs *is maturing* and banks *are trying* to lure depositors with attractive yields. (WSJ)

5.3

It would seem to be (marginally) possible for a Adv-NRC to combine with an HC using an indefinite perfect:

(85)

- (a) I have seen him before, when he did not yet have a beard.
- (b) ?I have met him this morning, when he came out of the bank.

However, it is difficult to say whether the WC is really an Adv-NRC here, and not a canonical WC in nonrestrictive apposition. The fact that the WC refers to the time of actualization of the HC action rather than comment on the time referred to by *before/this morning* suggests that the latter analysis may well be the correct one.

5.4

The indefinite perfect cannot normally be used in the Adv-NRC itself:

(86) He left on Sunday, when I {*had/*have had*} no time to see him off.

However, the present perfect can be used after *since when* (as in *He left on Sunday, since when I haven’t seen him*), as well as in Adv-NRCs whose function is to comment on the present:

(87)

- (a) Of course I could try once more?—No, it might not be wise at this point, when you’ve *knocked* three times and there’s no answer. (DR-BAX)
- (b) Today, in this hour of triumph, when all men *have rushed* for their armbands and their Phrygian bonnets, he is still dressed as a soldier of the king. (DR-UST)
- (c) Today, when the demand for more and more recruits in the different branches of science *has become* so insistent, it is of the highest importance

that the interest of potential scientists should be early aroused by having accounts of current trends in scientific research presented in a readily intelligible style. (LOB)

5.5

Adv-NRCs cannot shift the domain from the present to the past time-sphere, except after *before when* (which is acceptable to most speakers, though others insist on using *before which*):

(88) I went to bed at 10, before when I was reading for an hour. (*Longman Dictionary of Contemporary English*, 1978, p. 1253)

A shift from the past to the pre-present is only possible if the Adv-NRC is introduced by *since when*:

(89) I arrived here an hour ago, since when I have been waiting in vain for someone to serve me.

5.6

Unlike canonical WCs, WCs functioning as Adv-NRCs may use an epistemic modal:

(90)

- (a) 'We will discuss this matter later', he said, 'when we *may* be private.'
(LOB)
- (b) Analysts expect Federal's earnings to improve again in its fiscal third quarter ending Feb. 28, when the company *should* begin benefiting from Tiger's extra flights, back-up planes and landing rights. (WSJ)
- (c) For example, if a company posted a loss of \$100 million from buy-out interest payments, the existing rule would allow the concern to be able to receive a refund from the tax it paid from 1986 through 1989, when it *may* have been a profitable public company. (WSJ)

5.7

As noted in [Chapter 10](#), Adv-NRCs functioning as continuative relative clauses push forward the action:

(91)

- (a) At about seven o'clock she makes some excuse to go out, when she gives the key to Bowman himself, who's waiting somewhere near the annexe...
(SOA 194)
- (b) At 4.30 we three went to Lulas and wandered round the garden till Acheson turned up, when Clare and he wandered round together and Ma and I kept out of the way. (LOB)

6

WHEN-CLAUSES USED AS NONRESTRICTIVE RELATIVE CLAUSES WITHOUT OVERT ANTECEDENT

When a WC is used as an NRC without there being an overt temporal antecedent, it links up with the time which the speaker implicitly refers to when describing the situation of the HC: the covert antecedent is the time of actualization of the situation in question. WCs of this type are automatically continuative NRCs, i.e. NRCs that push forward the action.

6.1

NRCs of this type use the Future Perspective System:

(92) He will no doubt tell his parents everything, when the fat will be in the fire.

6.2

This type of NRC cannot refer to the present:

(93) *I am opening the ulcer with a needle, when the fluid is running out.

6.3

NRCs of this type cannot depend on an HC with an indefinite perfect:

(94) *In the end he has made the matter public, when there {has been/was} a terrific scandal.

6.4

As is clear from the above example, the NRC itself cannot use the present perfect.

6.5

This kind of NRC cannot shift the domain from the present to the past.

6.6

The NRC can use an epistemic modal:

(95) He left the house together with Jill, when he may have forgotten to lock the door.

7

**WHEN-CLAUSES USED AS FREE RELATIVE
CLAUSES (NOUN CLAUSES)**

7.1

Since nominal WCs can have independent time reference, they can use the Future Perspective System when the reference is to the future:

(96) I will no doubt often dream of when I {*will finally have finished*/^{*have finally finished*}} my dissertation. However, in many cases the Present Perspective System is also acceptable:

(97)

- (a) I will save my money for when I {*need/will need*} it.
- (b) I am dreaming of when I {*get/will get*} promoted.
- (c) I am waiting for when Johnny *comes back*. (DR-WEL)

If the nominal WC forms part of a specificational sentence (such as a cleft or pseudo-cleft—see section 5.2 of [Chapter 2](#)), it can use either the Future Perspective System or the Present Perspective System. The former is preferred when the HC is in the present tense, the latter when the HC is in the future tense:

(98)

- (a) Five o'clock? That is when it {*will be*/^{*is*}} time to fetch Aunt Jane from the station.
- (b) Next Tuesday. That *will be* when I {*will hand in*/*hand in*} my paper.

(99)

- (a) When he {*will do/does*} it *will be* tomorrow, not tonight,
- (b) When he {*will do*/^{*does*}} it *is* tomorrow, not tonight.

(100)

- (a) What will upset her most *is* when they {*will throw*/*throw*} a stone at her window.
- (b) What will upset her most *will be* when they {*throw*/*will throw*} a stone at her window.

(101)

- (a) Tomorrow *will be* when I {*will tell*/*tell*} him the truth,
- (b) Tomorrow *is* when I {*will tell*/*tell*} him the truth.

(102)

- (a) It *will* be August, not July, when the work {*will be/is*} finished,
- (b) ?*It *is* August, not July, when the work *will be* finished.

(103)

- (a) The best time to do it {*will be/*is*} when mother {*is/*will be*} out.
- (b) (No one of these five is known to the other four.) Their first knowledge of one another's identity {*will be/*is*} when they {*meet/*will meet*} for the first time under the floorboards of a typical suburban house somewhere in greater London. (DR-SIMP)

When the WC-STO is W-posterior to a past TO, a nominal WC may use either the conditional tense or the past tense (though not necessarily interchangeably):

(104)

- (a) I knew I would often dream of when I {*would finally have finished/*had finally finished*} my dissertation.
- (b) He wanted to save love-making for when they *were* married, for their wedding night. (TSM 97)

7.2

Nominal WCs can easily shift the domain from the present to the past time-sphere:

(105)

- (a) I still *have* memories of when I *was* a child.
- (b) She *has* always *been* like this, from when she *was* a child.

7.3

Nominal WCs cannot normally refer to t_0 . The following is unacceptable on a single-event reading if the speaker is in London at t_0 :

(106) I am having dreams of when I *am* in London.

7.4

Nominal WCs can depend on an HC with an indefinite perfect:

(107) This incident *has reminded* me of when I lived in India.

7.5

However, the nominal WC cannot itself use an indefinite perfect. In the following sentence, the present perfect is only acceptable on a habitual-repetitive interpretation:

(108) I am talking now of when I *{was/have been}* in India.

7.6

Nominal WCs can involve an epistemic modal:

(109) He is dreaming about when he *might* be promoted.

8

CASE-SPECIFYING *WHEN*-CLAUSES

Since case-specifying WCs are not time-specifying, we might expect them to be temporally independent of their HC. However, this expectation is not quite borne out.

8.1

Like canonical WCs, case-specifying WCs must use the Present Perspective System when the reference is to the post-present:

(110) In the near future people will be arrested when they *{fail/*will fail}* to observe this rule.

Similarly, case-specifying WCs cannot normally be bound indirectly by the use of the conditional tense when their STO is W-posterior to a past TO:

(111) He said that in future pupils would be punished when they *{came/*would come}* late.

Like canonical WCs, however, case-specifying WCs allow the use of *would* on a hypothetical interpretation:

(112)

(a) But *had* [of the past perfect] is seldom omitted when such omission *would make* its sentence ambiguous, or might even suggest a different meaning from the one intended. (Allen 1966: 169)

(b) Give more than one symbol when that *would be* appropriate.

8.2

Case-specifying WCs can refer freely to t_0 . However, because of their semantic function of specifying the cases for which the statement made in the HC is true, they never receive a single-event reading. Compare:

(113)

- (a) One cannot imagine how you live when you live those double and triple lives. (WSJ)
- (b) One cannot imagine how John lives when he lives a double and triple life.

The second sentence differs from the first in that the WC is interpreted as temporal rather than case-specifying.

8.3

Case-specifying WCs can be added to an HC using an indefinite present perfect without any of the restrictions pointed out in section 3.3 of [Chapter 5](#): (114) These children *have* sometimes *been beaten* when they refused to obey.

8.4

Moreover, the WC itself can easily use an indefinite perfect:

(115) It isn't fair to continue complaining about a calamity when *you've received* damages.

Note that, due to the nature of case-specifying clauses (which by definition specify an indefinite number of cases), WCs like these do not yield a single-event interpretation.

8.5

Case-specifying WCs can shift the domain from the present to the past or from one sector to another:

(116)

- (a) The state *is protected* when plans and designs for public structures *were approved* ahead of time or when structures *met* previously approved standards. (WSJ)
- (b) But if you're going to work 14 hours a day, it just isn't fair when you've *had* children. (WSJ)
- (c) There *are* far worse sins than to commit acts of violence—i.e. brutality—either when the cause *is* too trivial to justify it or when the almost-certain result of the violence *will be* to harm rather than to advance a major cause. (Wekker 1976:143)

In the last example, *when...will* means 'when it is the case that...will...'. The WC thus refers to a present case with future actualization.

8.6

Unlike canonical WCs, case-specifying WCs may use an epistemic modal:
(117)

- (a) You can't ask one carrier to underwrite on social grounds when that *might* destroy it in the marketplace. (WSJ)
- (b) ...initial position may be selected, even when some repair is necessary, when there *might be* negative consequences if unit completion were signaled before the adverbial clause was produced. (Ford 1988:167)

The use of *may/might* is particularly frequent in case-specifying WCs that are preceded by *even*, which triggers a concessive connotation:
(118)

- (a) She described herself as having the same kind of 'irresponsible' feeling as she had once experienced under hypnosis. She ascribed her delight with both experiences to the effect they seemed to have of temporarily removing from her the controls which she felt so compulsively necessary to maintain even when it *might* seem appropriate to relax these controls. (BR)
- (b) In the first play the chorus are embodiments of right judgment in the abstract, applying the tests of religion to the situations before them and urging the characters to the proper actions even when these, mere individual human beings, *may* be torn by doubt. (LOB)

9

ADVERSATIVE WHEN-CLAUSES AND WHEN- CLAUSES EXPRESSING A CLOSED CONDITION

These are two types of atemporal WC that have fully independent time reference.

9.1

If the reference is to the post-present, the Future Perspective System must be used:

(119)

- (a) I won't waste my time trying to raise £100,000 for the Charity Fund when such a large sum of money *will* no doubt never *be found*.
- (b) Why shouldn't I tell him the truth when he *will hear* it from Tom anyhow?
- (c) Of course I haven't prepared a meal for you. You told me you wouldn't come today. You can't expect me to prepare a meal when you *won't come*.

- (d) We shouldn't be proud of ourselves when we *'re going to leave* him in the lunch.

WCs of these types similarly use the conditional tense (or *was going to*) when their STO is W-posterior to a past TO:

(120)

- (a) It would be silly to phone now when he *was going to see* him tomorrow. (LOD 22)
- (b) The Committee to Preserve Social Security...irritated many in Congress with what legislators said were distorted claims that many seniors would have to pay the maximum \$800 surtax this year, when in fact, only about 5% *would pay* the top amount. (WSJ)
- (c) He said he would not choose a respectable hotel as the scene for a killing when it *would be* so much safer to take his victim for a one-way ride on a lonely country road.

9.2

These types of WC can refer to t_0 without any restriction:

(121)

- (a) What the hell do I care for the dead knowledge of evil when I'm blessed with a sister as sweet as this? (DR-WESK)
- (b) Very considerate of you. Especially when we're *sending* one of our best men on a fool's errand. (DR-SIMP)
- (c) Mollie, there's no sense in stalling when we both *know* our own minds. (LOB)
- (d) 'How can they say that Americans are our stiffest competitors?' he asks, when the Japanese *'are absolutely killing* us in a number of areas'. (WSJ)
- (e) Why didn't you tell me? Then? When I could have come to you! Why tell me now when it's too late? (HOD 36)

9.3

Adversative WCs can depend on an HC with an indefinite perfect:

(122) He *has just told* me his name is Bill, when he is actually called Timothy.

9.4

WCs like these types can use an indefinite perfect on a single-event interpretation:

(123)

- (a) She's been punished enough.—Oh but how can you say 'punished enough' when she's *ruined* your life? (DR-COOP)
- (b) Even when full allowance *has been made* for the marvellous things which could happen in Fairyland, it is difficult to believe that a person without a head was not 'dead' in the first instance. (LOB)

9.5

Adversative WCs and WCs expressing a closed condition can easily shift the domain from the present to the past, or vice versa:

(124)

- (a) Indeed this is one of the reasons I don't go to the theatre: it's hard to believe in Pastor Manders when you *knew* him first as a somewhat below average window cleaner. (DR-BEN)
- (b) The report puts total sales at less than \$1 million when they actually *exceeded* \$29 million. (WSJ)
- (c) I realized I *couldn't waste* this water when there *are* people in Watsonville who don't have fresh water to drink. (WSJ)

9.6

WCs of these types may use an epistemic modal:

(125) He solemnly declared he didn't know anything about it, when the truth *might* be that he was the one who started everything.

10 CONCLUSION

In the preceding sections a large number of observations have been made in connection with many different types of WC. In this final section I will attempt to interpret the data and suggest an explanation for some of them.

10.1

Present Perspective System vs Future Perspective System

The distribution of the two systems over the various types of WC is as follows. The Future Perspective System cannot be used in canonical WCs, Adv-RRCs introduced by a conjunction-like definite phrase like *at/by the time that* and case-specifying WCs; both Future Perspective System and Present Perspective System are in principle possible in other Adv-RRCs, nominal WCs and NP-RRCs; the Future Perspective System must be used in interrogative WCs, NP-NRCs, Adv-NRCs, adversative WCs and WCs expressing a closed condition.

This distribution is the result of a historical development—there was a time when the Future Perspective System could be used in canonical WCs—and is therefore difficult to account for. Still, the following remarks may be illuminating.

The Present Perspective System is the rule in canonical WCs and Adv-RRCs that specify a definite time. Along with clauses introduced by *after*, *before*, *until*, etc., these two types of WC belong to the larger class of adverbial time clauses, all of which require the Present Perspective System in Modern English (if the HC establishes a post-present domain). This use of the Present Perspective System is not so much a logical requirement as something that has come to be conventionalized in English. In many European languages both the Future Perspective System and the Present Perspective System can be used in adverbial time clauses. The conventionalization in English is probably due to two factors. One is that it is precisely in sentences with an adverbial time clause that we find the closest possible temporal link between the HC-STO and the STO of the subclause: the time clause gives a value to the time variable in the open proposition corresponding to the HC. It is therefore understandable that the STO of the time clause is located in the same temporal and intensional domain as the HC-STO. (Because a Future Perspective System form creates a future possible world, a post-present domain is at the same time an intensional domain—see Declerck and Depraetere 1995.) The second factor is the parallelism between adverbial time clauses and conditional clauses expressing an open condition. (The latter also forbid using the Future Perspective System.) It is well known that in most languages there is a great deal of similarity between these two types of clauses (see e.g. Bowerman 1986: 300, Reilly 1986).⁵ As pointed out by Hirtle (1981: 220), an adverbial time clause expresses a kind of sufficient (but not necessary) condition for the HC: in *We shall light the lamp when it gets dark*, ‘the eventual getting dark is seen as prompting, as conditioning...the lighting.’⁶ It is therefore not surprising that the use of the Present Perspective System in time clauses has become conventional at the same time as its use in conditional clauses (viz. in the Modern English period).⁷

The fact that case-specifying WCs also require the Present Perspective System follows from the fact that the case-specifying use of WCs is a metaphorical extension of their time-specifying use. As explained in Declerck (1988b), the fact that a WC specifies the time variable in the open proposition corresponding with the HC means that the WC restricts, and hence helps to define, the ‘cases’ (in the sense of Lewis 1975) for which the HC-statement is true. This basic use has naturally extended to a use in which the WC restricts the relevant cases by specifying a value for a variable other than the time variable (e.g. the variable corresponding to the subject in sentences like *Children are orphans when they*

5 In many languages the same conjunction is used in conditional clauses and canonical WCs, e.g. German *wenn*, Dutch *als*, Polish *jak* (see Bowerman 1986:300).

have no parents). In this metaphorical use, the meaning of the WC is no longer temporal, but it is still specifying. Since ‘specifying’ (or ‘restricting’) is tantamount to ‘conditioning’, it should not come as a surprise that the Present Perspective System remains the rule in this kind of WC.

The types of WC in which the Present Perspective System cannot be used are those that have no specifying function whatsoever: (a) NRCs (whether Adv-NRCs or NP-NRCs) and adversative WCs, both of which have no semantic or syntactic function in the HC but represent an independent speech act; (b) interrogative WCs, which ask for a specification but do not themselves specify; and (c) WCs expressing a closed condition, which, as is clear from the examples given in Chapters 2 and 11, have a commenting rather than specifying function.

The WCs that allow either system, viz. nominal (free relative) WCs, NP-RRCs and Adv-RRCs introduced by a nonstereotyped (non-conjunction-like) phrase, in fact belong to clause types (viz. nominal clauses and RRCs) which are in principle compatible with either system. (For a fuller discussion, see Declerck and Depraetere 1995.)

6 I do not agree, however, with Hirtle’s explanation of the use of the present tense in time clauses. According to him, a condition necessarily precedes its consequent, and since the present precedes the future, it is therefore logical that we use the present tense to refer to the condition and the future tense to refer to the consequent.

7 Nieuwint (1986:378–9) offers another explanation. According to him, a WC in the future tense would not be interpreted as ‘at the time when the time clause situation holds’ but rather as ‘at the time when it is predicted that the time clause situation will hold’. In his opinion, this is illogical:

As the prediction of a future event always precedes the event predicted, the time ‘at which something will happen’ precedes the time ‘at which something happens’. Seen in this light, it makes perfectly logical sense for *will* not to appear after *when*: saying ‘when he will arrive the band will play the National Anthem’ would be tantamount to saying that the playing of the National Anthem will precede HE ARRIVE and would therefore constitute a reversal of the order of events intended by the speaker.

(Nieuwint 1986:378–9)

There are three problems with this analysis. First, it does not explain why the use of the Future Perspective System in WCs apparently does not have this illogical effect, and is therefore not ungrammatical, in many other languages, such as French, Dutch, etc. Second, the explanation crucially assumes that the WC-STO can only be temporally related to the implicit TO (referred to by *the time* in the paraphrase ‘at the time that’). And last but not least, it has been shown in Chapters 5–6 that the type of binding which Nieuwint claims to be logically impossible is in fact realized in the three configurations (viz. 3, 8 and 9) in which the WC-STO is represented as posterior to the WC-ITO. In that case the WC uses *be going to* or another form with prospective meaning.

10.2

WCs depending on HC with indefinite present perfect

There are three types of WC that cannot depend on an HC whose verb form is a present perfect that receives an indefinite interpretation: canonical WCs, Adv-RRCs (unless they have a commenting rather than time-specifying function) and Adv-NRCs. This incompatibility can be traced back to two different constraints. The first is a constraint on the use of the present perfect: for an indefinite interpretation it is required that the time of the pre-present situation remain unspecified ('indefinite'). This constraint prohibits combining an HC with an indefinite perfect with a WC that has a time-specifying function, i.e. a canonical WC or Adv-RRC. The second constraint concerns Adv-NRCs. In this kind of WC, *when* is interpreted as 'at which time'. This interpretation requires that the time of the HC-situation be known—a requirement which is obviously not satisfied if the HC uses an indefinite perfect.

10.3

Using an indefinite perfect in the WC

An indefinite perfect is ruled out (on a single-event interpretation) from any WC except atemporal WCs and Adv-NRCs in which *when* depends on the preposition *since*. The reason is obvious. All types of temporal WCs that receive a single-event interpretation refer to a specific time. Since an indefinite perfect by definition does not refer to a specific time, this means that no temporal WC can use an indefinite perfect. Adv-NRCs beginning with *since when* form an exception to this because they do not locate their STO at a specific time: they locate it at some unspecified time within the pre-present period identified by *since when*.

10.4

WCs referring to the present

Reference to the present is impossible (barring the usual exceptions) in all types of WC with a temporal meaning. It is systematically possible in atemporal WCs and in Adv-RRCs, NP-RRCs, Adv-NRCs and NP-NRCs that have a commenting rather than time-specifying function. The rationale behind this constraint is that since t_0 is the most definite TO possible, its location should not be indirectly specified by reference to the time of a particular situation.

10.5

WCs shifting the domain

All WCs can use absolute tenses freely, except canonical WCs, Adv-RRCs and NP-RRCs in T-existential sentences and identifying sentences. The four

exceptions are those in which the WC either specifies the time of the HC-situation (i.e. the former two cases) or identifies the time introduced in the HC (i.e. the latter two cases). That these cannot shift the domain freely from the present to the past follows from the fact that their function implies a close temporal link between the HC and the WC. This link is obviously absent if the two clauses locate their situations in different time-spheres.

10.6

WCs using an epistemic modal

All WCs can easily use an epistemic modal, except canonical WCs and Adv-RRCs. The constraint on the latter two probably has to do with the fact that they presuppose actualization of their situation in the world that is being referred to. For instance, the following presuppose that it was the case that I left:

(126)

- (a) John arrived when I left.
- (b) John arrived at the time that I left.

Since an epistemic modal represents the situations referred to as nonfactual, it is incompatible with the presupposition of actualization of these WCs. (This explanation also accounts for the fact that epistemic adverbs like *perhaps*, *maybe*, *possibly* are also excluded from these WCs.)⁸

8 In Declerck and Depraetere (1995:278) another explanation is suggested, which hinges on the observation that the WCs that do not allow epistemic modals do not allow the Future Perspective System either. Like Future Perspective System forms, epistemic modals express an evaluation which is temporally located at the zero-time. In the same way as *He will come* means 'I [now] predict his [future] coming', *He may come* means 'I [now] assert the possibility of his [future] coming'. (In other words, *may* is equivalent to 'It is possible that...will...'.) What *will* and *may* have in common is that they use the zero-time as evaluation time. It seems logical that this property excludes them from WCs that are subject to the constraint that they have to use the Present Perspective System when the reference is to the post-present, i.e. the constraint that their STO must be temporally subordinated to the post-present central TO rather than to the zero-time. The only drawback of this explanation is that it runs counter to the observation that case-specifying WCs must use the Present Perspective System but do allow an epistemic modal.

12

CONCLUSION

As stated in [Chapter 1](#), the main aim of the present study has been to make clear how in sentences involving an HC (head clause) and a WC (*when*-clause) tense forms are used in combination with *when* to locate situations in time. This subject was chosen not only because WCs constitute an interesting topic in themselves, which has never before been treated in the detailed way it has been done here, but also because I hoped that the findings of the study would corroborate the model of the English tense system presented in Declerck (1991a). Now that the study is completed, I feel it is justified to claim that this double aim has been achieved.

When collecting the data, I soon found that there are many different types of WC, and that there is a high degree of correlation between the various types of WC and the particular tense choices that can or must be made. It was therefore necessary to offer a typology of WCs on the basis of their syntactic, semantic and functional characteristics. This was done in [Chapter 2](#), where it was shown that WCs can be used not only as ‘canonical WCs’ but also as direct or indirect questions, NP-RRCs, NP-NRCs, Adv-RRCs, Adv-NRCs, nonrestrictive relative clauses without antecedent, nominal WCs, focalizing WCs, explicatory WCs, narrative WCs, case-specifying WCs and adversative WCs. For some of these classes a further distinction was made between various uses. In order to illustrate the relevance of the classification to the use of the tenses, it was noted for each type of WC whether it requires the Future Perspective System or the Present Perspective System when the reference is to the future, or is compatible with both.

In [Chapter 3](#) I had a closer look at what is generally known as the ‘temporal conjunction’ *when*. Evidence was presented, both synchronic and diachronic, that this ‘conjunction’ is really a free relative with an adverbial function, which is interpreted as ‘at *a/the* time at which’. The importance of this conclusion is that it leads to the hypothesis that the use of tenses in canonical WCs is exactly the same as that in relative clauses depending on phrases like *at the time when/that*—a hypothesis which would be put to the test and found to be correct in later chapters. The conclusion also proved relevant in that it helps to explain why there are so many different types of WC. Since *when* is a free relative and has developed from a question word, it should come as no surprise that WCs can be

used as direct or indirect questions, as relative clauses (either restrictive or nonrestrictive, and either with or without an overt antecedent) and as free relative clauses in adverbial function (i.e. as adverbial WCs).

Chapter 4 has offered a survey of the most important elements of the model of the English tense system presented in Declerck (1991a). This survey was necessary because an analysis of the temporal structure of WCs obviously requires a model providing the necessary descriptive tools for analysing the use of tenses in concrete sentences. Besides, it was one of the aims of the present study to put the model in question to the test.

In Chapter 5 I have dealt with the temporal structure of sentences involving a WC. I have gone into the various factors that contribute to the temporal interpretation of a sentence, and have investigated the temporal structure realized by a sentence consisting of an HC and a canonical WC. In the first section I have discussed such essential notions as Predicated Situation, STO (situation-TO), Full Situation, TFS (time of the Full Situation) and TE (time established by a temporal adverbial). I have shown that the notions Full Situation, Predicated Situation and TE may play a role in the temporal structure and interpretation of a sentence, but not in their tense structure properly speaking. A tense structure consists of TOs (times of orientation) (minimally an STO and t_0) and temporal relations holding between them. The TE includes the STO or another TO binding the STO. We can speak of 'STO-adverbial' and 'TO-adverbial' accordingly. In the second section of this chapter I have concentrated on sentences whose TE is a canonical WC or Adv-RRC. I have argued that *when* defines a common frame (common TE) which includes both a TO from the tense structure of the HC and a TO from the tense structure of the WC. The included TOs are referred to as 'ITOs'. Since the HC-ITO may be either the HC-STO or another TO binding the HC-STO in terms of anteriority or posteriority, and since the WC-STO may be represented as anterior, simultaneous or posterior to the WC-ITO, the result is nine different possible temporal structures, which I have referred to as 'temporal configurations'. In section 3, finally, I have gone into a number of constraints on the use of canonical WCs: barring some systematic exceptions (such as sentences in the historic present and sentences receiving a habitual interpretation), a canonical WC cannot refer to the moment of speech, cannot use the present perfect or depend on an HC in the present perfect, and cannot depend on an HC whose tense form expresses simultaneity.

Chapter 6 presents a detailed analysis of the system of tenses used to express temporal relations in sentences involving an HC and a canonical WC. In this chapter I have investigated how the nine configurations are expressed with reference to the past, the pre-present, the present and the post-present, respectively. In doing so I have also verified the hypothesis that this system is exactly the same as in clauses introduced by *at the time that*. This scrutiny of possibilities has confirmed this hypothesis. It has also corroborated that the analysis of the temporal structure of *when* offered in Chapter 5 is correct. Last

but not least, it has shown that the model of the English tense system presented in Chapter 4 is vindicated, as it systematically makes the correct predictions.

In Chapter 7 I have discussed some special uses of relative tense forms in canonical WCs. To begin with, I have had a closer look at two types of indirect binding, one concerning the use of the present perfect in post-present domains, the other the use of the past perfect in past domains. It has been shown that the latter is subject to the condition that the HC-ITO must be interpreted as W-anterior to a past or pseudo-past TO. The second special use is that which looks like the use of tenses to express 'sloppy simultaneity'. It has been shown, however, that in connection with canonical WCs we can speak of sloppy W-simultaneity, but not of tenses expressing sloppy simultaneity. That is, the sloppy W-simultaneity interpretation is not due to the tense forms used but must be traced back to the semantic structure of *when*. The third special use is that of the conditional perfect or the conditional tense to express irrealis. The use of *should*, imparting a hypothetical meaning to the WC, has also been briefly referred to.

Chapter 8 is a brief chapter devoted to the exceptional use of absolute tenses (such as the future tense) in canonical WCs. It has been shown that WCs systematically allow the use of absolute tenses in the 'Historic Present System', in sentences with a 'single-instance' reading and in habitual-repetitive sentences. In addition, a canonical WC may under certain conditions effect a shift of domain from the past to the present time-sphere or from the pre-present to the present, as well as (but very exceptionally) a shift of domain within the post-present sector.

Chapter 9 is a longer chapter in which I have examined the temporal interpretation of sentences involving a head clause and a canonical WC. It has been shown that the temporal interpretation of such sentences depends not only on the tenses used but also on the information structure and the thematic structure of the clauses, the time(s) specified by the time adverbial(s) (if any) in the HC and/or WC, the time (if any) that is given in the linguistic or extralinguistic context, the progressive or nonprogressive aspect of the verbs, the repetitive or nonrepetitive representation of the situations, the punctual or durative and telic or atelic Aktionsart (lexical aspect) expressed by the verb phrases, and the homogeneous or heterogeneous representation of the situations and of the time interval(s) indicated by the adverbial(s). I have also investigated the complex interplay of all these factors and offered a detailed discussion of how the interpretation of the temporal relations holding between the HC-TFS, the WC-STO, the TE, the WC-ITO, the WC-STO and the WC-TFS are determined by the (non)homogeneity and the (non)durativity of the intervals described by the WC and the HC.

Chapter 10 has been concerned with narrative WCs. I have begun by defining the concept, relying on the notions of sequentiality and prominence. After this I have presented a survey of the typical characteristics of narrative WCs, which distinguish them from canonical WCs. I have also discussed the tense system used in this type of WC, showing that this is the system used in HCs

rather than that typical of canonical WCs. Finally, I have examined the temporal structure and interpretation of narrative WCs.

Chapter 11, finally, has been devoted to a (necessarily brief) discussion of the tense system(s) used in the many types of WC that are neither canonical WCs nor narrative WCs. It has been shown that some (but not all) of these differ from canonical WCs in that they can use the future tense and/or a modal auxiliary, can shift the domain from the present to the past, and/or are not subject to the three constraints on canonical WCs that were referred to in Chapter 5. In the final section of this chapter I have suggested some generalizations accounting for at least some of the data.

REFERENCES

- Akmajian, A. (1979) *Aspects of the Grammar of Focus in English*, New York: Garland.
- Allen, R.L. (1966) *The Verb System of Present-day American English*, The Hague: Mouton.
- Aristar, A. and Dry, H. (1982) 'The origin of backgrounding tenses in English', in K. Tuitt, R. Schneider and R. Chametzky (eds) *Papers from the Eighteenth Regional Meeting, Chicago Linguistic Society*, Chicago: Chicago Linguistic Society. 1–13.
- Barense, D.D. (1980) *Tense structure and reference: a first-order non-modal analysis*, Bloomington: Indiana University Linguistics Club.
- Bartsch, R. (1988/9) 'Tenses and aspects in discourse', *Theoretical Linguistics* 15: 133–94.
- Bell, M. (1974) 'A note on conditional sentences in English', *York Papers in Linguistics* 4:129–39.
- Bennett, M. and Partee, B. (1978) *Toward the Logic of Tense and Aspect in English*, Bloomington: Indiana University Linguistics Club.
- Berezovsky, H.C. (1978) 'A paraphrastic analysis of the temporal relationships in the English verb system', Ph.D. dissertation, University of Pennsylvania.
- Bertinetto, P.M. (1982) 'Intrinsic and extrinsic temporal references: on restricting the notion of "reference time"', *Journal of Italian Linguistics* 7:71–108. (Reprinted in V. Lo Cascio and C. Vet (eds) (1986) *Temporal Structure in Sentence and Discourse*, Dordrecht: Foris. 41–78.)
- Binnick, R. (1972) 'Will and be going to IP', in P.M. Peranteau, J.N. Levi and G.C. Phares (eds) *Papers from the Eighth Regional Meeting of the Chicago Linguistic Society*, Chicago: Chicago Linguistic Society. 3–9.
- Binnick, R.I. (1991) *Time and the Verb: a Guide to Tense and Aspect*, Oxford: Oxford University Press.
- Bolinger, D. (1972) 'A look at equatives and cleft sentences', in E.S. Firchow (ed.) *Studies for Einar Haugen*, The Hague: Mouton. 96–114.
- Botne, R.D. (1981) 'On the nature of tense and aspect: studies in the semantics of temporal reference in English and Kinyarwanda', Ph.D. dissertation, Northwestern University, Illinois.
- Bowerman, M. (1986) 'First steps in acquiring conditionals', in E. Closs Traugott, A. ter Meulen, J.S. Reilly and C.A. Ferguson (eds) *On Conditionals*, Cambridge: Cambridge University Press. 285–307.
- Breithutová, H. (1968) 'The function of tenses in Modern English temporal clauses', *Brno Studies in English* 7:129–48.
- Bresnan, J. and Grimshaw, J. (1978) 'The syntax of free relatives in English', *Linguistic Inquiry* 9:331–91.
- Brown, G. and Yule, G. (1983) *Discourse Analysis*, Cambridge: Cambridge University Press.

- Bybee, J.L. and Dahl, Ö. (1989) 'The creation of tense and aspect systems in the languages of the world', *Studies in Language* 13:51–103.
- Bybee, J.L., Pagliuca, W. and Perkins, R.D. (1991) 'Back to the future', in E.Closs Traugott and B.Heine (eds) *Approaches to Grammaticalization*, vol. 2, Amsterdam: J.Benjamins. 17–58.
- Carlson, G.N. (1979) 'Generics and atemporal *when*', *Linguistics and Philosophy* 3: 49–98.
- Carlson, L. (1981) 'Aspect and quantification', in P.J.Tedeschi and A.Zaenen (eds) *Syntax and Semantics*, vol. 14: *Tense and Aspect*, New York: Academic Press. 31–64.
- Chafe, W. (1984) 'How people use adverbial clauses', *Proceedings of the Tenth Annual Meeting of the Berkeley Linguistics Society*, Berkeley: Berkeley Linguistics Society. 437–49.
- Clark, C. (ed.) (1958) *The Peterborough Chronicle, 1070–1154*, Oxford: Clarendon Press.
- Comrie, B. (1976) *Aspect*, Cambridge: Cambridge University Press.
- (1985) *Tense*, Cambridge: Cambridge University Press.
- (1986) 'Tense in indirect speech', *Folia Linguistica* 20:265–96.
- Contini-Morava, E. (1991) 'Negation, probability, and temporal boundedness: discourse functions of negative tenses in Swahili narrative', in J.Gvozdanovic and T.A.M.Janssen (eds) *The Function of Tense in Texts*, Amsterdam: North-Holland. 35–51.
- Cooper, R. (1986) 'Tense and discourse location in situation semantics', *Linguistics and Philosophy* 9:17–36.
- Couper-Kuhlen, E. (1989a) 'On the markedness of "narrative temporal clauses"', in O.Miseska Tomic (ed.) *Markedness in Synchrony and Diachrony*, Berlin: Mouton de Gruyter. 359–72.
- (1989b) 'Foregrounding and temporal relations in narrative discourse', in A. Schopf (ed.) *Essays on Tensing in English*, vol. II: *Time, Text and Modality*, Tübingen: Niemeyer. 7–29.
- Dahl, Ö. (1985) *Tense and Aspect Systems*, Oxford: Basil Blackwell.
- Declerck, R. (1979) 'Aspect and the bounded/unbounded (telic/atelic) distinction', *Linguistics* 17:761–94.
- (1988a) *Studies on Copular Sentences, Clefts and Pseudo-clefts*, Leuven: Leuven University Press; Dordrecht: Foris.
- (1988b) 'Restrictive *when*-clauses', *Linguistics and Philosophy* 11:131–68.
- (1989) 'Boundedness and the structure of situations', *Leuvense Bijdragen (Leuven Contributions in Linguistics and Philology)* 78:275–308.
- (1991a) *Tense in English: Its Structure and Use in Discourse*, London: Routledge.
- (1991b) *A Comprehensive Descriptive Grammar of English*, Tokyo: Kaitakusha.
- (1995a) 'The problem of *not...until*', *Linguistics* 33:51–98.
- (1995b) 'Is there a relative past tense in English?', *Lingua* 97:1–36.
- Declerck, R. and Depraetere, I. (1995) 'The double system of future time reference in English', *Journal of Semantics* 12:269–310.
- Declerck, R. and Seki, S. (1990) 'Premodified reduced *it*-clefts', *Lingua* 82:15–51.
- Depraetere, I. (1995) 'On the necessity of distinguishing between (un)boundedness and (a) telicity', *Linguistics and Philosophy* 18:1–19.
- Dik, S. (1978) *Functional Grammar*, Amsterdam: North-Holland.

- Dinsmore, J. (1982) 'The semantic nature of Reichenbach's tense system', *Glossa* 16: 216–39.
- Donnellan, K.S. (1966) 'Reference and definite descriptions', *The Philosophical Review* 75:281–304.
- Dowty, D.R. (1986) 'The effects of aspectual class on the temporal structure of discourse: semantics or pragmatics', *Linguistics and Philosophy* 9:37–61.
- Dry, H. (1983) 'The movement of narrative time', *Journal of Literary Semantics* 12: 19–53.
- Edgren, E. (1971) *Temporal Clauses in English*, Uppsala: Almqvist & Wiksell.
- Ejnerh Bræoe, E. (1974) *The Syntax and Semantics of English Tense Markers*, Stockholm: University of Stockholm, Institute of Linguistics.
- Emonds, J.E. (1976) *A Transformational Approach to English Syntax: Root, Structure-preserving, and Local Transformations*, New York: Academic Press.
- Enç, M. (1987) 'Anchoring conditions for tense', *Linguistic Inquiry* 18:633–57.
- Fabricius-Hansen, C. (1980) 'Sogenannte ergänzende wenn-Sätze: ein Beispiel semantisch-syntaktischer Argumentation', in M.Dyhr, K.Hyldgaard-Jensen and J. Olsen (eds) *Festschrift für Gunnar Bech* (Kopenhagener Beiträge zur Germanistischen Linguistik, Sonderband 1), Kopenhagen: Institut for germansk filologi, Københavns Universitet. 160–88.
- (1991) 'Frame and reference time in complex sentences', in J.Gvozdanovic and T.Janssen (eds) *The Function of Tense in Texts*, Amsterdam: North-Holland. 53–73.
- Farkas D.F. and Sugioka, Y. (1983) 'Restrictive if/when clauses', *Linguistics and Philosophy* 6:225–58.
- Fenn, P. (1987) *A semantic and pragmatic examination of the English perfect*, Tübingen: Narr.
- Fillmore, C. (1972) 'Ansätze zu einer Theorie der Deixis', in F.Kiefer (ed.) *Semantik und generatives Grammatik I*, Frankfurt-On-Main: Athenäum. 147–74.
- Fleischman, S. (1982) *The Future in Thought and Language: Diachronic Evidence from Romance*, Cambridge: Cambridge University Press.
- (1985) 'Discourse function of tense-aspect oppositions in narrative: toward a theory of grounding', *Linguistics* 23:851–82.
- Fodor, J.D. (1968) 'Nonspecific noun phrases in English', in *Mathematical Linguistics and Automatic Translation, ReportNSF-20*, Cambridge, Mass.: Computation Laboratory of Harvard University.
- Ford, C.E. (1988) 'Grammar in ordinary interaction: the pragmatics of adverbial clauses in conversational English', Ph.D.dissertation, University of California, Los Angeles.
- (1993) *Grammar in Interaction: Adverb Clauses in American English Conversations*, Cambridge: Cambridge University Press.
- Galton, A. (1984) *The Logic of Aspect: an Axiomatic Approach*, Oxford: Clarendon Press.
- Givón, T. (1978) 'Negation in language: pragmatics, function, ontology', in P.Cole (ed.) *Syntax and Semantics*, vol. 9: *Pragmatics*, New York: Academic Press. 69–112.
- Green, G.M. (1976) 'Main clause phenomena in subordinate clauses', *Language* 52: 382–97.
- Grimshaw, J. (1985) *English Wh-constructions and the Theory of Grammar*, New York: Garland. (Ph.D. 1977.)
- Haegeman, L. (1989) 'Be going to and will: a pragmatic account', *Journal of Linguistics* 25:291–317.

- Haiman, J. (1986) 'Constraints on the form and meaning of the protasis', in E.Closs Traugott, A.ter Meulen, J.S.Reilly and C.A.Ferguson (eds) *On Conditionals*, Cambridge: Cambridge University Press. 215–27.
- Halliday, M.A.K. (1967) 'Notes on transitivity and theme in English. Parts 1 and 2', *Journal of Linguistics* 3:37–81, 199–244.
- Hamann, C. (1989) 'English temporal clauses in a reference frame model', in A.Schopf (ed.) *Essays on Tensing in English*, vol. II: *Time, Text and Modality*, Tübingen: Niemeyer. 31–154.
- Harkness, J. (1985) 'On the semantic properties of English time adverbials', Ph.D. dissertation, University of Freiburg.
- Hatav, G. (1989) 'Aspects, Aktionsarten, and the time line', *Linguistics* 27:487–516.
- Heinämäki, O. (1978) *Semantics of English temporal connectives*, Bloomington: Indiana University Linguistics Club.
- Heny, F. (1982) 'Tense, aspect and time adverbials: part 2', *Linguistics and Philosophy* 5: 109–54.
- Herweg, M. (1990) *Zeitaspekte: die Bedeutung von Tempus, Aspekt und Temporale Konjunktionen*, Wiesbaden: Deutscher Universitäts-Verlag GmbH.
- Higgins, F.R. (1976) *The pseudo-cleft construction in English*, Bloomington: Indiana University Linguistics Club.
- Hirtle, W.H. (1981) 'Meaning and form in "when"-clauses', in A.Joly and W.H.Hirtle (eds) *Langage et psychomécanique du langage: études dédiées à Roch Valin*, Lille: Presses Universitaires de Lille; Laval: Presses de l'Université Laval-Québec. 217–28.
- Hooper, J. and S.A.Thompson (1973) 'On the applicability of root transformations', *Linguistic Inquiry* 4:465–98.
- Hopper, P.J. (1979) 'Aspect and foregrounding in discourse', in T.Given (ed.) *Syntax and Semantics*, vol. 12: *Discourse and Syntax*, New York: Academic Press. 213–41.
- Hornstein, N. (1975) 'As time goes by: a small step towards a theory of tense', *Montreal Working Papers in Linguistics* 5:73–112.
- (1977) 'Towards a theory of tense', *Linguistic Inquiry* 8:521–57.
- (1990) *As Time Goes By: Tense and Universal Grammar*, Cambridge, Mass.: MIT Press.
- Hu, Jiazhen. (1988) 'Temporal interpretation in English', Ph.D.dissertation, University of Arizona.
- Huddleston, R. (1969) 'Some observations on tense and deixis in English', *Language* 45: 777–806.
- Janssen, T. (1988) 'Tense and temporal composition in Dutch: Reichenbach's "point of reference" reconsidered', in V.Ehrich and H.Vater (eds) *Temporalsemantik*, Tübingen: Niemeyer. 26–51.
- (1989) 'Tempus: interpretatie en betekenis', *De Nieuwe Taalgids* 82:305–29.
- Jespersen, O. (1928) *A Modern English Grammar on Historical Principles*, part 3: *Syntax* (2nd volume), London: Allen & Unwin; Copenhagen: Ejnar Munksgaard.
- (1932) *A Modern English Grammar on Historical Principles*, part 4: *Syntax* (3rd volume), London: Allen & Unwin; Copenhagen: Ejnar Munksgaard.
- Keizer, M.E. (1990) 'A typology of copular sentences', *Linguistics* 28:1047–60.
- Kittredge, R.I. (1969) 'Tense, aspects, and conjunction: some inter-relations for English', Ph.D. dissertation, University of Pennsylvania.
- Klein, W. (1994) *Time in Language*, London: Routledge.

- Kruisinga, E. (1932) *A Handbook of Present-day English*, part II: *English Accidence and Syntax* 2, Groningen: Noordhoff.
- Labov, W. (1972) 'The transformation of experience in narrative syntax', in W. Labov, *Language in the Inner City*, Philadelphia: University of Pennsylvania Press. 354–96.
- Labov, W. and Waletzky, J. (1967) 'Narrative analysis: oral versions of personal experience', in J. Helm (ed.) *Essays on the Verbal and Visual Arts* (Proceedings of the 1966 Annual Spring Meeting of the American Ethnological Society), Seattle: University of Washington Press.
- Lakoff, G. (1970) 'A note on ambiguity and vagueness', *Linguistic Inquiry* 1:357–9.
- Larson, R.K. (1983) 'Restrictive modification: relative clauses and adverbs', Ph.D. dissertation, University of Wisconsin-Madison.
- Leech, G.N. (1969) *Towards a Semantic Description of English*, London: Longman.
- (1971) *Meaning and the English Verb*, London: Longman.
- Lewis, D. (1975) 'Adverbs of quantification', in E.L. Keenan (ed.) *Formal Semantics of Natural Language*, Cambridge: Cambridge University Press. 3–15.
- Linde, Ch. and Labov, W. (1975) 'Spatial networks as a site for the study of language and thought', *Language* 51:924–39.
- Lyons, J. (1977) *Semantics*, Cambridge: Cambridge University Press.
- McCawley, J.D. (1981) *Everything that Linguists Have Always Wanted to Know about Logic (but were ashamed to ask)*, Oxford: Basil Blackwell.
- McCoard, R. (1978) *The English Perfect: Tense-choice and Pragmatic Inferences*, Amsterdam: North-Holland.
- Matthiesen, C. (1983) 'Choosing primary tense in English', *Studies in Language* 7: 369–429.
- Metshkova-Atanassowa, S. (1983) *Temporale und Konditionale 'wenn'-Sätze: Untersuchungen zu ihrer Abgrenzung und Typologie*, Düsseldorf: Pädagogischer Verlag Schwann-Bagel.
- Michaelis, L.M. (1993) "'Continuity" within three scalar models: the polysemy of adverbial *still*', *Journal of Semantics* 10:193–237.
- Mitchell, B. (1987) *Old English Syntax*, vol. II: *Subordination, Independent Elements, and Element Order*, Oxford: Clarendon Press.
- Moens, M. (1987) 'Tense, aspect and temporal reference', Ph.D. dissertation, University of Edinburgh.
- Mommer, K.E. (1986) 'Theoretical issues concerning inherent aspect and the perfect in English, Cebaari and Swahili', Ph.D. dissertation, Northwestern University (Evanston, Illinois).
- Morgan, J.L. (1975) 'Some remarks on the nature of sentences', in R.E. Grossman, L.J. San and T.J. Vance (eds) *Papers from the Parasession on Functionalism*, Chicago: Chicago Linguistic Society. 433–49.
- Nieuwint, P. (1986) 'Present and future in conditional protases', *Linguistics* 24: 371–92.
- Palmer, F.R. (1988) *The English Verb* (2nd edition), London: Longman.
- Partee, B. (1984) 'Nominal and temporal anaphora', *Linguistics and Philosophy* 7: 243–86.
- Pasicki, A. (1972) 'An outline grammar of the English *while/when/as* temporal clauses', *Studia Anglica Posnaniensia* 4:93–105.
- (1987) *Temporal Adverbials in Old and Middle English*, Lublin: Redakcja Wydawnictw Katolickiego Uniwersytetu Lubelskiego.

- Poutsma, H. (1926a) *A Grammar of Late Modern English*, part II: *The Parts of Speech*, section I, B: *Pronouns and Numerals*, Groningen: P.Noordhoff.
- (1926b) *A Grammar of Late Modern English*, part II: *The Parts of Speech*, section II: *The Verb and the Particles*, Groningen: P.Noordhoff.
- (1929) *A Grammar of Late Modern English*, Part I: *The Sentence*, second half: *the Composite Sentence*, Groningen: P.Noordhoff.
- Prior, A.N. (1967) *Past, Present and Future*, Oxford: Clarendon Press.
- Quirk, R., Leech, G., Greenbaum, S. and Svartvik, J. (1972) *A Grammar of Contemporary English*, London: Longman.
- (1985) *A Comprehensive Grammar of the English Language*, London: Longman.
- Ramsay, V. (1987) 'The functional distribution of preposed and postposed "if" and "when" clauses in written discourse', in R.S.Tomlin (ed.) *Coherence and Grounding in Discourse*, Amsterdam: John Benjamins. 383–408.
- Reichenbach, H. (1947) *Elements of Symbolic Logic*, New York: Free Press; London: Collier-Macmillan.
- Reilly, J.S. (1986) 'The acquisition of temporals and conditionals', in E.Closs Traugott, A.ter Meulen, J.S.Reilly and C.A.Ferguson (eds) *On Conditionals*, Cambridge: Cambridge University Press. 309–31.
- Richards, B. (1987) 'Tenses, temporal quantifiers and semantic innocence', in E.LePore (ed.) *New directions in semantics*, London: Academic Press. 337–84.
- Richards, B., Bethke, I., van der Does, J. and Oberlander, J. (1989) *Temporal Representation and Inference*, London: Academic Press.
- Rigter, G.H. (1980) 'Time diagrams and rules for tense and perfect in English', in W. Zonneveld and F.Weerman (eds) *Linguistics in The Netherlands, 1977–1979*. Dordrecht: Foris. 411–58.
- Rijksbaron, A. (1986) *The Pragmatics and Semantics of Conditional and Temporal Clauses* (Working Papers in Functional Grammar 13), Amsterdam: University of Amsterdam.
- Ritchie, G.D. (1979) 'Temporal clauses in English', *Theoretical Linguistics* 6:87–115.
- (1980) *Computational Grammar: An Artificial Intelligence Approach to Linguistic Description*, Brighton: Harvester Press.
- Ross, J.R. (1970) 'On declarative sentences', in R.A.Jacobs and P.S.Rosenbaum (eds) *Readings in English Transformational Grammar*, Waltham: Ginn. 222–72.
- Rudanko, J. (1981) 'On a structural ambiguity in English subordinate clauses of time', *English Studies* 62:53–5.
- Salkie, R. (1987) Review of Ö.Dahl (1985) (*Tense and Aspect Systems*, Oxford: Blackwell), *Lingua* 72:79–108.
- Sampson, G. (1971) 'Subordinate future deletion and hyperclauses', *Linguistic Inquiry* 2: 587–9.
- Schiffrin, D. (1991) 'The proximal/distal temporal axis: the meaning and use of *then* in discourse', in J.Gvozdanovic and T.Janssen (eds) *The Function of Tense in Texts*, Amsterdam: North-Holland. 219–36.
- (1992) 'Anaphoric *then*: aspectual, textual and epistemic meaning', *Linguistics* 30: 753–92.
- Schopf, A. (1984) *Das Verzeitungssystem des Englischen und seine Textfunktion*, Tübingen: Niemeyer.
- Sharwood Smith, M. (1982) 'More on the time reference and the analysis of tense', *Papers and Studies in Contrastive Linguistics* 15:67–80.

- Silva, M.N. (1981) 'Perception and the choice of language in oral narrative: the case of co-temporal connectives', *Proceedings of the Seventh Annual Meeting of the Berkeley Linguistics Society*. 284–94.
- Smith, C.S. (1976) 'A new look at auxiliary *have* in English', *Montreal Working Papers in Linguistics* 6:213–24.
- Smith, N.V. (1989) *The Twitter Machine*, Oxford: Blackwell.
- Sperber, D. and Wilson, D. (1986) *Relevance: Communication and Cognition*, Oxford: Blackwell.
- Steedman, M.J. (1982) 'Reference to past time', in R.J.Jarvella and W.Klein (eds) *Speech, Place and Action: Studies in Deixis and Related Topics*, Chichester: John Wiley. 125–57.
- Steube, A. (1980) *Temporale Bedeutung im Deutschen*, Berlin: Akademie Verlag.
- Stump, G. (1985) *The Semantic Variability of Absolute Constructions*, Dordrecht: Reidel.
- Tedeschi, P.J. (1981) 'Some evidence for a branching-futures semantic model', in P.J. Tedeschi and A.Zaenen (eds) *Syntax and semantics*, vol. 14: *Tense and Aspect*, New York: Academic Press. 239–69.
- Thompson, S.A. (1987) "'Subordination" and narrative event structure', in R.S.Tomlin (ed.) *Coherence and Grounding in Discourse*, Amsterdam: J.Benjamins. 435–54.
- Tregidgo, P.S. (1979) 'Tense subordination', *English Language Teaching Journal* 33: 191–7.
- Vasudeva, H.N. (1971) 'Tense and aspect in English', Ph.D.dissertation, University of Michigan.
- Vendler, Z. (1967) 'Verbs and times', in Z.Vendler, *Linguistics in philosophy*, Ithaca, N.Y.: Cornell University Press. 97–121.
- Vermant, S. (1983) *The English Present Perfect: a Dynamic-synchronic Approach*, Antwerp: Universitaire Instelling Antwerpen, Dept. Germaanse, Afdeling Linguistiek.
- Vet, C. (1994) 'Future tense and discourse representation', in C.Vet and C.Vetters (eds), *Tense and Aspect in Discourse*, Berlin: Mouton de Gruyter. 49–76.
- Visser, F.T. (1970) *An Historical Syntax of the English Language*, Leiden: E.J.Brill.
- Wachtel, T. (1982) 'Some problems in tense theory', *Linguistic Inquiry* 13:336–41.
- Wald, B. (1987) 'Cross-clause relations and temporal sequence in narrative and beyond', in R.S.Tomlin (ed.) *Coherence and Grounding in Discourse*, Amsterdam: John Benjamins. 481–512.
- Weinrich, H. (1973) *Tempus*, Stuttgart: Kohlhammer (first published 1964).
- Wekker, H.C. (1976) *The Expression of Future Time in Contemporary British English*, Amsterdam: North-Holland.
- (1980) 'Temporal subordination in English', in W.Zonneveld and F.Weerman (eds) *Linguistics in the Netherlands 1977–79*, Dordrecht: Foris. 96–103.
- Wolfson, N. (1982) *CHP: the Conversational Historical Present in American English Narrative*, Dordrecht: Foris.
- Wood, F.T. (1967) *English Prepositional Idioms*, London: Macmillan.
- Yamakawa, K. (1969) 'The development of *when* as subordinate conjunction or relative adverb', *Hitotsubashi Journal of Arts and Sciences*, September: 6–42.

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