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A COMPOSITIONAL APPROACH TO  
THE ENGLISH TENSE SYSTEM

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November, 1999

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# INTRODUCTION

## 0.1. Aim

This thesis is devoted to the construction of a new theory of tense in English from a compositional point of view and the demonstration of the validity of the theory. It is certain that the English tense system has been a major topic which has been taken up by many grammarians and linguists, but most of them tend to construct "autonomous" tense theories, and thus regard the English tense system as an independent grammatical field, not introducing other grammatical devices and theories into the tense system constructively. Some of them, respecting the generative and structural aspects of the tense theory too much, do not take semantico-pragmatic information into consideration, resulting in not well-motivated theories or too simple theories to explain complex tense phenomena. Others deal with some specific tense phenomena, but fail to give systematic explanations for them from the point of view of a general theory of (English) tense. Still others seem to assume more explanatory devices and primitives restricted to the field of tense than necessary, resulting in too complicated tense theories.

The aim of this thesis is to construct an English tense theory which is intended to reduce explanatory devices and primitives of the field of tense proper to the minimum, by making the best use of explanatory devices, primitives, principles and hypotheses belonging to theories of other grammatical fields. Among this kind of studies, which is few, is Nakau's theory of the (English) tense system,<sup>1</sup> which tries to construct a compositional tense theory by making use of other grammatical fields' explanatory devices such as the AUX-as-Main-Verb hypothesis, the traditional distinction between finite and nonfinite forms and his theory of modality, and which thus constitutes part of his general theory of linguistics called Hierarchical Semantics Model. This thesis, thus, tries to explore, along the lines of Nakau's spirit, the possibility of developing a new

compositional English tense theory from a point of view different from the ones that previous studies are based on.

## 0.2. Outline

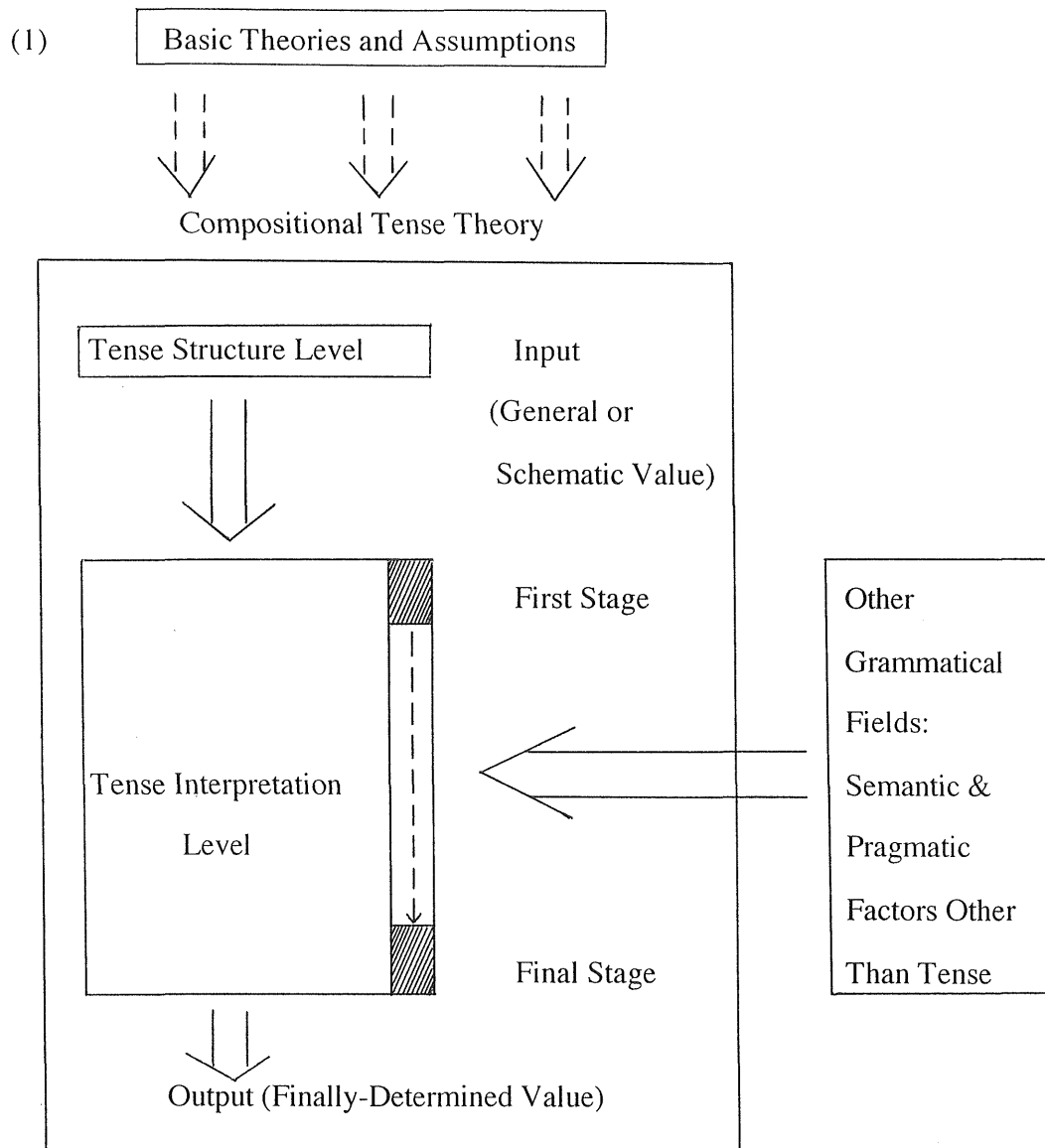
This subsection sketches the outline of a compositional tense theory which I will present in the following chapters in great detail and the mechanism of its interaction with semantic and pragmatic factors belonging to other grammatical fields.

The compositional tense theory to be proposed in this thesis is based on the following five theories and assumptions: (i) the traditional distinction between finite and nonfinite predicates, (ii) an AUX-as-Main-Verb hypothesis based on a prototype analysis, (iii) an English-as-Two Absolute Tense Language hypothesis, (iv) a quadripartite temporal notation system, and (v) a theory of modality.

The tense theory to be presented contains two different levels of the field of tense, i.e. the level of "tense structure" and the level of "tense interpretation." The former is a tense level at which the tense structure represented by a temporal unit, i.e. a "temporal template," expresses the very general (or schematic) temporal value. The latter is a tense level at which in interaction with semantic and pragmatic information conveyed by elements (or factors) such as characteristics of referents in subject and object position, lexical properties of relevant predicates, time adverbials, contexts and syntactic environments, the original schematic value of a given temporal template is processed to arrive at a finally-determined temporal interpretation, or a temporal output. At the tense-structure level, as a rule a temporal template expresses only its original general (or schematic) temporal value. (In cases where a temporal template is composed of more than one word or element (e.g. *be going to*, *be about to*, *have to*), it is considered to have what I call a conflated temporal value as an original value: for example, the temporal template *be going to* expresses a conflated value consisting of the information conveyed

by the progressive form of the verb *go* and that conveyed by the preposition-like particle *to*.) At the tense-interpretation level, under the influence of various semantico-pragmatic factors other than tense structure, the original temporal value of a given temporal template (i.e. tense form) manifests itself as it is (i.e. it is not further specified), is further specified, or changes into an apparently different value (of course, such a change is highly restricted and is possible only in a motivated way); that is, this level of tense interpretation serves as an interface between the grammatical field of tense and other grammatical fields. It should be noted here that the level of tense interpretation is composed of at least two stages when a given temporal template is processed. The first stage of the tense-interpretation level is a level at which the time of orientation (or the computational pivot) for the processing of the value of a given temporal template is decided or fixed on the time line; at this stage a temporal template represents its basic semantic structure from which various pragmatic interpretations of a sentence containing the template at issue are derived. Thus, it is possible that at this stage, the temporal value of a given template is different from that of the same template in different syntactic environments (e.g. *is* in *Tom is a spy* vs. *is* in *If it is fine tomorrow, I'll go*). From the second stages on, on the basis of basic semantic structures, together with semantico-pragmatic factors other than tense structure, the value of a temporal template is processed to reach a finally-determined temporal value which is generally regarded as a particular pragmatic use or function; it is the final stage of the tense-interpretation level that the computational process ends.

The outline of these mechanisms is schematically represented as follows:<sup>2</sup>



Before closing this subsection, two remarks are in order. First, in the case where at the tense-interpretation level the basic temporal structure of a temporal template differs from that of the same temporal template, the two templates are viewed as being in a polysemous relation because they share the same schematic value. Second, a temporal schema-based analysis based on this compositional tense theory not only has a potential for giving an integrated account of some synchronic and diachronic aspects of a tense form, but also can predict how the value of a given temporal template is determined.

### 0.3. Organization

This thesis consists of three parts. Part I, which is composed of chapters 1-3, is devoted to presenting a new compositional English tense theory, on the basis of which temporal schemata of five basic finite tense forms are established. Chapter 1 surveys five basic theories and assumptions on which a compositional tense theory to be proposed depends. Chapter 2 presents a compositional tense theory which contains two levels of tense, i.e. the tense-structure level and the tense-interpretation level, as shown in (1). This chapter sketches out how both finite and nonfinite tense forms (i.e. temporal templates) are dealt with at each tense level, and how the original schematic value of temporal templates, especially that of nonfinite forms, arrives at a finally-determined temporal value. Here, it is of great importance to note that a finite predicate, i.e. an absolute tense form,<sup>3</sup> consists of two tense components, i.e. the A(bsolute tense)-component, which is related to the notion of "time-sphere" established in the speaker's and/or the hearer's mind by a tense morpheme, and the R(elative tense)-component, which is related to the notion of "time point" or "time interval (or period)" at which a relevant part of the situation talked of in an utterance holds; on the other hand, a nonfinite predicate, i.e. a relative tense form, consists only of the R-component. Chapter 3 is devoted to constructing the temporal schemata of two simple tenses consisting only of finite predicates, i.e. present and past tenses, and three complex tenses consisting of finite and nonfinite predicates, i.e. forms of future reference containing *will* and nonfinite predicates, perfect forms, and progressive forms.

Part II, which comprises chapters 4-8, is intended to demonstrate that a temporal schema-based analysis which is in turn based on the compositional tense theory proposed in chapters 1-3 is useful for explaining some major tense and tense-related phenomena in English. Chapter 4 is spared for a comprehensive analysis of English present perfect

tenses. In this chapter, the interpretation process of a temporal template which starts from its original schematic value and ends with its finally-determined value is clarified by analyzing the present perfect form. The goal of chapter 5 is to prove that the past perfect form (or the pluperfect) is parallel to the present perfect form in temporal structure (including both tense structure and basic semantic structure) by showing that the pluperfect does not represent the basic semantic structure of the past-in-the-past tense, i.e. the past tense anterior to a past time of orientation; the result supports our compositional analysis of perfect tenses. Chapter 6 deals with the compatibility of certain tense forms and certain types of time adverbials; it is shown there that by postulating a general constraint which is based on the compositional tense theory proposed in Part I, the reason why certain types of tense forms cannot go with certain types of time adverbials can be explained in a systematic and motivated way. Chapter 7 explains, based on a temporal schematic analysis within the framework of the tense theory proposed in this study, a number of differences in meaning and syntactic environment between sentences containing *be going to* and sentences containing *will*. This chapter also shows that the same analysis can account for how pragmatic uses and/or functions of both sentences have extended to be what they are in contemporary English. Chapter 8 shows that the compositional tense theory, together with a theory in another grammatical field, i.e. the field of reported speech, can give a unified account of a variety of tense and tense-related phenomena in indirect speech complement clauses.

Part III, which is composed only of chapter 9, is concerned with representative previous studies on the (English) tense system. This chapter briefly surveys them and points out problems with them, giving solutions to the problems within the framework of the compositional tense theory presented in this study.

## NOTES TO INTRODUCTION

<sup>1</sup> Nakau's (1985, 1994) tense theory per se, which is also a compositional tense theory based on such explanatory devices as the AUX-as-Main-Verb hypothesis and the traditional distinction between finite and nonfinite forms, is simpler than the compositional tense theory to be proposed in this thesis in that the former requires only two time notions as primitives, i.e. the speech time and the event time, and two major rules, Event Time Determination Rule and Temporal Linking Rule, which are shown in (i) and (ii), respectively.

- (i) Event Time Determination Rule: Event time (E) is determined on TENSE, finite or nonfinite.
- (ii) Temporal Linking Rule: Replace  $S_n$  with  $E_{n-1}$ .

To illustrate the computational mechanism of Nakau's tense system, consider (iii) for example:

- (iii) The frog had jumped over the fence.

First, by rule (i) above, both the finite verb *had* and the nonfinite verb *jumped* are viewed as having the following semantic structures:

- (iv) a.  $V_1$  (had):  $E_1 -- S_1$
- b.  $V_2$  (jumped):  $E_2 -- S_2$

Here, he assumes that the past participle represents intrinsic pastness. Second, by rule (ii) above, the semantic structure of  $V_1$  is combined with that of  $V_2$ . The upshot is:

- (v)  $V_1 + V_2$  (had jumped):  $E_2 -- E_1 -- S$

For details, see especially Nakau (1994: Ch.19).

It is worth noting that Nakau's tense theory does not assume two different tense levels, let alone the absolute tense component and the relative tense component of predicates. The differences between Nakau's tense theory and the tense theory to be

proposed will be clear in the following chapters.

<sup>2</sup> It is of course possible that the compositional tense theory can affect interpretation processes as to other grammatical fields; thus, the arrow bridging the section of the tense-interpretation level and other grammatical fields should be bidirectional, rather than unidirectional. However, this thesis is intended to concentrate on the investigation into the mechanism of (English) tense interpretation, and only for that reason is the arrow at issue unidirectional.

<sup>3</sup> In this thesis, I use the term *tense* for the semantic (tense) content (or temporal value) as well as for the form which expresses it. I will reserve the term *tense* for the former, and use the term *tense form* for the latter, if misunderstanding could arise.



**PART I: TOWARD A COMPOSITIONAL THEORY OF TENSE IN ENGLISH**

# CHAPTER 1

## BASIC ASSUMPTIONS AND THEORIES

### 1.0. Introduction

This chapter presents some basic assumptions and theories which the tense theory to be proposed presupposes. They are shown as follows:

- (1) a. the traditional distinction between finite and nonfinite forms
- b. the Aux-as-main-verb hypothesis
- c. the two absolute-tense hypothesis
- d. a quadripartite temporal notation system
- e. a theory of modality

In the following sections, each of these basic assumptions and theories will be considered one by one.

This chapter is organized as follows. Section 1.1 introduces the traditional distinction between finite and nonfinite forms. Section 1.2 argues for the Aux-as-Main-Verb hypothesis on the basis of a prototype analysis, claiming that auxiliaries, especially modals, perfect *have* and progressive *be*, express their own situations, just as full or lexical verbs do. Section 1.3 shows that English has only two (absolute) tenses. In section 1.4, a new temporal notation is proposed which consists of four temporal notions. Section 1.5 provides a theory of modality.

### 1.1. Finite vs. Nonfinite Forms

This section outlines briefly the traditional distinction between finite and nonfinite forms. Following the traditional definitions of finite and nonfinite forms (Huddleston (1984:81-88), Palmer (1988:12-13), and Quirk et al. (1985:149-155)), we regard a finite predicate as a verb form which inflects according to person, number and tense and a

nonfinite predicate as a verb form without such an inflection.<sup>1</sup> Finite predicates occupy the left-most position of finite verb phrases, whereas nonfinite predicates not only occupy the positions other than the left-most one in finite verb phrases, but also constitute nonfinite verb phrases. A sentence almost always requires at least one finite predicate; and in almost all cases, whenever a nonfinite predicate exists in a sentence, a finite predicate necessarily does.

Consider the following:

- (2) a. Mana likes to play the *koto*.  
b. I made her go.  
c. Calling early, I found her at home.

In (2), *likes*, *made* and *found* are finite verbs while the infinitives *to play* and *go*, and the present participle *calling* are nonfinite verbs. In (2a), for example, *likes* is a third person present form and occupies the left-most position of the finite verb phrase; thus it is a finite predicate. On the other hand, *to play* is a nonfinite predicate because it does not occur in the left-most position of a finite verb phrase nor does it inflect according to the third person singular subject (i.e. Mana).

## 1.2. Aux-as-Main-Verb Hypothesis

In this section, on the basis of the Aux-as-main-verb hypothesis (Ross (1969), Huddleston (1974), and Nakau (1994), among others), I argue that auxiliary verbs have the same status as main verbs.

Before going further, we should clarify in what sense and for what reason we can say that auxiliaries have the same status as main verbs, for one might argue that modal auxiliaries like *can* and *may* are not main verbs because some syntactic restrictions are imposed on the use of modals; that is, modals neither inflect in the case of the present tense form nor take a noun complement. In order to avoid this objection, we have to add

the following two provisos. The first is that modal auxiliaries have completely lost their inflection system whereas full verbs have not (note that in English even full verbs have only two regular inflectional forms, i.e. the *-s* and *-ed* forms). Note in passing that in this connection other auxiliaries like perfect *have* and progressive *be* do not raise any problems.<sup>2</sup> The second is that modal auxiliaries (and others) necessarily require bare infinitive complements.

Why, then, can we say that modals are main verbs? Is it possible to say that modals and other auxiliaries are main verbs? We can give an answer to the question by adopting a prototype theory (Taylor (1989, 1994)). In this theory, the central members of a certain category share a large number of attributes, while the peripheral members share less attributes. With this in mind, let us consider the fact that although modals cannot inflect or take a noun complement, modals and full verbs have some similarities even with respect to syntactic phenomena: for example, they can both share the left-most position of finite verb phrases; as for other auxiliaries such as perfect *have* and progressive *be*, they can also inflect according to person, number and tense, so it can be said that they share more syntactic characteristics with main (or full) verbs. Taking these characteristics into consideration, we can say that under a prototype analysis, modal auxiliaries are peripheral members of the category "main verb," full (or lexical) verbs are most typical members of this category and auxiliaries like *have* and *be* come between the two types of members.<sup>3, 4</sup> What is important here is that irrespective of the degree of typicality, they can all be subsumed under the category of main verb.

This implies that as with a full or lexical verb, an auxiliary verb is expected to express one situation if it has semantic content.<sup>5</sup> Thus, it is expected that just as the full verb *run* expresses an action of a creature's fast movement, the root modal *may* expresses permission and the epistemic modal *may* possibility. For a better understanding of this, consider (3):

- (3) a. Nancy can play tennis.  
b. Rocky must be a real champion.

In (3a), the modal verb *can* will be considered to describe Nancy's ability to do something. In (3b), the modal verb *must* will be viewed as describing logical necessity in the speaker's mind.

The next task is to find evidence that auxiliary verbs can also represent their own situations. If it is demonstrated that modals express the same kind of situation as full verbs, then it follows that modals have the same semantic status as full verbs in this respect. The fact is that the view that a modal can express one situation in the same way that a full verb does is justified in at least two ways.

First, it is possible that the situation denoted by a modal auxiliary is specified by a time adverb, just as the situation denoted by a main verb is.

- (4) a. We can now leave tomorrow as planned. (Duffley (1992:5))  
b. Now you may go skiing tonight.  
c. Now Tom must be there tomorrow.

In (4b), for example, *now* specifies the situation described by the modal *may*, and *tonight* the situation described by the main verb *go*. It is a general view that the situation specified by a time adverbial constitutes an independent situation. Therefore, we can claim that a modal represents one independent situation different from the one described by a full verb.

The second argument for the view in question is that the content which modals, epistemic or root, express can be negated (see Palmer (1988:100-101)). Observe (5):

- (5) a. We can't not go with them. (Araki, Ono and Nakano (1977:340))  
b. I simply cannot not come to his defence. (Duffley (1992:5))  
c. You just wouldn't not sunbathe on such a beautiful day.  
d. I couldn't just not paint it; I'll have to put some clean varnish on it or

something.

(c-d; Murata (1984:60))

In (5), each sentence contains two verbs and two negatives; in (5a), for example, the content denoted by the modal *can* is negated. It is a general understanding that what can be negated by a negative corresponds to a predicate from a semantic point of view (see Araki, Ono and Nakano (1977:340)). Thus, we can say that semantically, modals have the same status as main verbs.

Let us turn now to perfect *have* and progressive *be*. We can argue that they can also express their own situations in a similar way that modals can because they can be specified by time adverbials, as shown in (6):

(6) a. When I arrived at the airport, she had already gone to Singapore.

b. Yesterday you were coming tomorrow. (Huddleston (1969:782))

In (6a), the adverbial clause specifies the auxiliary *had* because it is often said that a preposed time adverbial tends to modify the reference time which is said to be related with *had*. In (6b), the adverbial *yesterday* exclusively specifies the time represented by the progressive auxiliary *were*. For further discussion, see section 3.4 and chapter 4.

From the above observations, we can conclude that modals, *be* and *have* are main verbs, at least semantically: an auxiliary verb expresses one situation, thus having the same semantic status as a full or lexical verb.<sup>6</sup> It is this conclusion that is important to the tense theory proposed in this study.

### 1.3. Two Absolute Tenses

This section demonstrates that English has only two absolute tenses, i.e. the past and the present tense (Harder (1996), Huddleston (1995a), Lyons (1977), Nakau (1994), Quirk et al. (1985) and Smith (1978, 1981b)), arguing that the auxiliary *will* is viewed not as a future tense marker, but as a finite verb in the present tense.<sup>7, 8</sup> In what follows,

I will provide some pieces of evidence for this position.

First, English has only two tense morphemes, i.e. the present and the past tense morpheme. If it is assumed that only a tense morpheme can represent a tense, then it is possible to say that English has only two (absolute) tenses.

The second argument for our position is that not only *will* but also other modals such as *can* and *may* can be used in sentences referring to future time.

- (7) a. You can come to my office this evening.
- b. Tom may leave tomorrow.
- c. I must leave Paris tomorrow. Can we have dinner tonight?

(S. Sheldon, *Master of the Game*, p.233)

Thus, it is not a unified treatment to regard only *will* as a future tense marker.

The third piece of evidence is that *will* shares some syntactic properties with other modal auxiliaries (cf. Huddleston (1995a:414-415)). First of all, modals have only tensed or finite forms, possessing no base forms and nonfinite forms. Secondly, they have no person/number contrast. Thirdly, they always require the bare infinitive as their complement. In syntactic terms, there is no reason to treat only *will* as a tense marker, but not as a modal auxiliary.

The fourth argument concerns the close semantic relationship between the future use of *will* and the modal use of *will*, namely, that futurity and modal connotations cannot easily be separated from each other.<sup>9</sup> First, futurity is closely related to prediction (see also Coates (1983:Ch.7) and Palmer (1990:137-142)), as (8a) below shows. Secondly, we often cannot easily distinguish the future use of *will* from the volitional use of *will*, as (8b) below illustrates.

- (8) a. It will rain tonight.
- b. I will go camping next Sunday if the weather is fine.

In (8a), *will* can be said to express the speaker's prediction about the future actualization

of raining; the prediction itself holds at the speech time (S). In (8b), we can regard *will* as representing the subject's volition holding at S as well as futurity.<sup>10</sup> This means that in cases like those in (8), the situation described by *will* is characterized by both futurity and a modal element. Since no one may argue against the view that a modal element expressed by *will* is closely related to the present tense (in independent clauses), it is plausible to assume that the auxiliary *will* represents the present tense. Since future *will* is based on a modal element (e.g. the speaker's prediction or the subject's volition), the future use of *will* cannot easily be separated from the modal use of *will* (in this respect, see chapter 7 for details).

If we regard future *will* as a future tense marker, then it follows that future *will* and modal *will* are homophonous because a modal verb and a future tense marker constitute two grammatical-conceptually different categories. Under this view, we cannot explain the phenomenon at issue, namely, that future *will* is more or less accompanied by some modal connotations,<sup>11</sup> for homophonous categories are not semantically related to each other. (For how to explain this in our theory, see chapters 7 and 9.) From the above observations, we can claim that future *will* is also a member of the category of modal verbs (in this connection, see chapter 9).

The final argument is that just as other modals have their past tense counterparts (e.g. *could* and *might*),<sup>12</sup> *will* has its morphological past tense counterpart *would*.<sup>13</sup> Observe the contrast in (9):

- (9) a. [Mark my words:] in a few months' time their love will change to hate.  
b. Only a few months later their love would change to hate.

(Huddleston (1995:411))

Notice that *would* in (9b), which requires a future-in-the-past situation, is the past tense counterpart of *will* in (9a). If we treat *will* as a future tense marker, we must tackle the problem of how to handle this parallel between *will* and *would*. If we treat *will* as a main



verb in the present tense describing a present situation like prediction, we do not face such a problem. Even if we admit the presence of the future tense in English, it does not have the same status as the present and past tenses; i.e., the future tense system does not belong to the absolute tense system, but rather belongs to what is called the secondary tense system (cf. Harder (1996)). (In our theory, the future tense system is connected with the relative tense component of finite predicates. See chapters 2 and 7 for details.)

From the above arguments, we can conclude that English has only two absolute tenses, i.e. the present and the past tenses.

#### **1.4. Four Temporal Notions**

This section defines the following four temporal notions: the speech time (S), the event time (E) or the time of the situation, the time of orientation (O) and temporal focus (TF). In what follows, I will define the four temporal notions one by one. Readers might be familiar with Reichenbach's (1947) tripartite temporal notation. Thus, every time I introduce one temporal notion, I will refer to the relation between the introduced notion and one of Reichenbach's three notions: the point of speech, the point of reference and the point of an event.

First of all, the speech time is defined as the moment at which a given sentence is uttered. This definition is equivalent to Reichenbach's definition of the point of speech.

Let us turn to the definition of the event time or the time of the situation. The event time is defined not as the time of a whole event or situation itself, but as the time point or period of a relevant part of the event or situation which is talked of in a sentence.<sup>14</sup> To illustrate this point, consider (10):

- (10) a. Mana is studying French now.
- b. Ryoko had a headache yesterday.

In (10a), the speaker may represent only a portion (or subinterval) of the situation of

Mana's being in the state of studying French as relevant to the situation where the sentence under consideration is uttered, relating only that portion to the time line: the length of the event time may be a few minutes or three hours, while the full time length of the event at issue may be more than five hours. What is important here is that the event time in (10a) is not necessarily equal to the time of the whole situation of Mana's being in the state of studying French; the length of the event time depends on the speaker's subjective judgment. (Of course, such a subjective judgment is not arbitrary, but rather semantically motivated.) The same applies to (10b). If sentence (10b) is uttered to explain why Ryoko was absent from school yesterday, the event time may be the time length of the relevant part of the situation (e.g. the event time may correspond to the length of time which stretches from nine to five on a school day if the speaker has an ordinary schooltime in mind).

Our definition of event time is different from its traditional definition including Reichenbach's one, for the traditional event time seems to be defined as the full length of time of the situation described by a verb phrase. I do not regard the event time as the full length of time of the situation described by a verb phrase partly because if it is so, we cannot deal with cases of stative predicates.

(11) a. Mary was kind.

b. Yoko was playing tennis.

Although it is possible that in (11a), the situation of Mary's being kind continues up to the present, all that sentence (11a) intends to convey is that the situation under consideration holds at a certain time in the past. The same applies to (11b). If the speaker intends to say that Yoko was playing tennis a few minutes ago when he or she saw her, it may be the case that Yoko is still playing tennis now. Thus, we can claim that the event time is not equal to the time of the whole situation (see Declerck (1991b:256-269) for further discussion).

The third notion, the time of orientation, is defined as a "base time" from which the speaker or/and the addressee(s) evaluate or compute the event time(s) when interpreting the temporal relation(s) in a given sentence. This notion is a kind of functional time (or discourse time), usually working at the level of tense interpretation, as we will see in chapters 2 and 3. The time of orientation corresponds to one of the temporal notions constituting Reichenbach's point of reference. As is pointed out by many linguists (e.g. Bertinetto (1986), Declerck (1986; 1991b:250-253) and Harder (1996:398-404)), Reichenbach's point of reference is a complex notion and thus should be divided into more than one basic notion: one is the time of orientation,<sup>15</sup> and another is the time established by time adverbials or by the context,<sup>16</sup> which I will omit from the notation to be proposed because the time in question is always simultaneous with an event time in the sense proposed above.

Let us illustrate the point by considering (12):

- (12) a. Miyako moved to Canada.  
b. Miyako has moved to Canada.  
c. Miyako had moved to Canada when I wrote to her last year.

In both (12a) and (12b), the time of orientation is located in the present; more precisely, when we interpret the sentences under consideration, the speech time (S) functions as the time of orientation in that S can be considered to be the starting point for any kind of temporal calculation (see Declerck (1991a, 1991b)). In these two sentences, the pastness associated with the event time is computed from S, so S, by definition, serves as the time of orientation. When we interpret sentence (12c), by contrast, the event time of the speaker's writing to Miyako functions as the time of orientation for the main sentence;<sup>17</sup> and, the event time of Miyako's moving to Canada is evaluated from that time of orientation (see also section 3.2.2).

I now turn to a consideration of the fourth notion, i.e. temporal focus (TF).

Temporal focus is defined as follows:<sup>18</sup>

- (13) Temporal focus is a speaker's focus which is fixed on the time point (period) of a situation on the time line to which the speaker pays/is paying special attention.

Note that basically, temporal focus (TF) is also a kind of functional time, and is fixed on the event time. Temporal focus can be regarded as a third way of interpreting Reichenbach's point of reference.<sup>19</sup> This notion is basically equivalent to Declerck's (1991a, 1991b) "temporal focus," except that the temporal focus in my sense can refer to a sub-part (or portion) of the relevant event time (see, for example, section 3.4).<sup>20</sup> Temporal focus works at the tense-interpretation level (see section 2.2 and chapter 3).

To clarify this notion, compare (12a) with (12b) again. In the past tense version (12a), the TF is directed at the event time in the past. On the other hand, in the present perfect version (12b), the TF is directed at a certain time simultaneous with S, i.e. the time of the resultant state following the preceding event of Miyako's moving to Canada.<sup>21</sup> Temporal focus is directed at the most salient temporal part that the speaker has in mind when uttering a given sentence.

## 1.5. Modality

The final basic assumption to be examined is a theory of modality. Let us define the notion of modality as follows:<sup>22</sup>

- (14) Modality is a speaker's subjective mental state or attitude at the time of his or her utterance or thought.

This definition of modality consists of some basic characteristics common to the definitions of modality supplied by many grammarians and linguists; and it is enough for the purpose of the present thesis because our main concern here is neither the detail characterization of modality nor the construction of an alternative theory of modality. It

should be noted here that following many previous studies, I assume that the meaning of a sentence as an utterance consists of two components, i.e. the modality domain (the subjective domain) and the proposition domain (the objective domain). It should also be noted here that the time of the speaker's utterance or thought is considered to be an instantaneous time.<sup>23</sup>

Let us clarify, step by step, what the statement in (14) conveys. First, consider (15), i.e. cases of modality in independent clauses:

- (15) a. They will marry soon.
- b. Bruce loves Mary.

In (15a), *will* denotes the modality of prediction; the speaker predicts that their marriage will happen soon. The sentence in (15a) thus consists of the modality of prediction and the proposition of their getting married soon. In (15b), on the other hand, *loves* represents the modality of assertion (strictly speaking, the zero element associated with *loves* represents the modality of assertion);<sup>24</sup> the speaker makes an assertion about the state of Bruce's loving Mary. Sentence (15b) consists of the modality of assertion and the proposition of Bruce's loving Mary. Note that in English, the modality of prediction is typically represented by the modal verb *will*, whereas the modality of assertion is not explicitly represented by a special form, but implied in the predicate (e.g. *loves* in (15b)). Note also that assertion is regarded as the unmarked case of epistemic modality for declarative sentences because it also represents the degree of commitment by the speaker to the proposition.<sup>25</sup>

It should be noted here that root modals which are subject-oriented do not belong to modality in our sense.<sup>26</sup> In this study, such root modals are seen as objective elements and thus belong to the proposition domain. Observe (16):

- (16) a. Nao will go to the *koto* concert held at Tokyo National University of Fine Arts and Music.

- b. Sachiko can sing like a professional.

In (16a), the modal verb *will* can be construed as expressing the will of the subject. In this case, the relevant modality is an assertion; the speaker asserts that the subject, i.e. Nao, has the will to go to the concert. The same line of argument applies to (16b):<sup>27</sup> *can* expresses the ability of the subject, accompanied by the modality of assertion. This is because modality is defined as the mental state or attitude of a speaker, but not of a subject, in this thesis.

Note, in passing, that basically, semi-modals such as *be going to*, *be able to* and *have to*, which are all viewed as inseparable temporal units, are treated as belonging to the proposition domain.

- (17) a. Makiko is going to swim across the river.
- b. Makiko is about to swim across the river.
- c. Makiko has to swim across the river.

The reason is simply ascribed to the fact that these semi-modals are composed of main (non-modal) verbs (e.g. *be* and *have*) and other elements. Since non-modals can generally be viewed as objective elements belonging to the proposition domain, semi-modals are elements of the proposition domain in this theory of modality.<sup>28</sup>

Let us now turn to cases of modality in dependent clauses. The statement in (14) above implies that in indirect speech, "a speaker" can be viewed as referring not only to the reporter (i.e. the speaker of the whole sentence), but also to the original speaker or the original subject of thinking; and "the time of a speaker's utterance or thought" can be viewed as the time of the original utterance or thought. Thus, consider (18):

- (18) a. John said that Nancy would help him.
- b. Mary thought that Nancy was pregnant.

In (18a), *would* represents the prediction of the original speaker John at the time of John's utterance. In (18b), *was* represents the assertion of the original subject of thought

(i.e. Mary) at the time of Mary's thought. The reporter's modality cannot enter into the indirect speech complement clause because the complement clause constitutes a "mental world" or "subjective domain" of the original speaker. Note in passing that in (18a), for example, the matrix verb *said* represents the reporter's modality of assertion because the matrix clause does not constitute the mental world of the original speaker John. (This topic will be discussed in great details in chapter 8.)

Before concluding this section, it should be noted here that in certain syntactic environments, verbs are neutral with respect to modality, though they have the same morphological form as verbs in the assertive form. Observe (19):

- (19) a. When I arrived there, she had already left the town.
- b. If you take over the job, you will be rich.

Although they have the same forms as their assertive counterparts, both *arrived* in (19a) and *take* in (19b) are neutral with respect to modality. The reason why *arrived* and *take* are viewed as neutral forms, but not as assertive forms, is that they are objective elements and belong to the proposition domain.<sup>29</sup> As Lyons (1977:170-171) states, propositions in temporal clauses and *if*-clauses combine with propositions in main clauses to form an *intensional domain*, i.e. a set of propositions. Since modality is by definition subjective, it usually cannot enter into such objective realms as temporal clauses and *if*-clauses. Therefore, *arrived* and *take* in (19) are seen as being in the neutral form which is not accompanied by any modality.

## 1.6. Summary

In this chapter, we have seen the five basic assumptions and theories on which the tense theory to be proposed is based. First, I have briefly seen the traditional distinction between finite and nonfinite forms. Secondly, I have defended the Aux-as-main-verb hypothesis in terms of a prototype theory and verified that modals have the same semantic

status as full verbs, expressing their own situations. Thirdly, I have demonstrated that English has only two absolute tenses, providing the five pieces of supportive evidence. Fourthly, I have defined the four time notions, i.e. the speech time, the event time, the time of orientation and temporal focus, which are necessary for the tense theory to be proposed. Finally, I have outlined a theory of modality.



## NOTES TO CHAPTER 1

<sup>1</sup> In this study, not only verbs, but also adjectives, nouns and the copula can serve as predicates.

<sup>2</sup> The auxiliaries *have* and *be* share the so-called NICE properties (Negation, Inversion, Code, Emphasis) with modal auxiliaries.

- (i) a. Negative Form with *n't* (*can't, isn't*).
- b. Inversion without DO (*can I?, am I?*).
- c. 'Code' (*Makiko {can swim/is a student} and so {can Ryoko/is Ryoko}*).
- d. Emphasis (*Rieko MAY come, Rieko HAS come*).

These syntactic characteristics are said to draw a dividing line between auxiliaries and main verbs. However, on our prototype analysis, these characteristics count as attributes of main verbs which are shared by more typical members of the category main verb. See the following parts of the text.

<sup>3</sup> The claim that the category of main verb should be analyzed in terms of a prototype theory is partly supported by the fact that *need* and *dare* have not only both the full-verb use (e.g. (ia)) and the modal use (e.g. (ib)), but also the blending of the two uses (e.g. (ic) and (id)), and Duffley's (1994) observation that the three uses are semantically related and the derivation from the full-verb use to the modal use via the blending use is well-motivated. Observe examples of the three uses of *dare*, for example:

- (i) a. He dares to accuse me of dishonesty! (Duffley (1994:217))
- b. No one dare disturb the sound of silence.  
(cited from Simon and Garfunkel's 'The Sounds of Silence')
- c. By God, if he dares come here again, ...  
(requoted from Duffley (1994:238))
- d. No self-important college professor would dare admit ignorance of such an obviously important figure, ...

(N.H. Kleinbaum, *Dead Poets Society*, p.113)

Although the above three *dares* are syntactically (or morphologically) different from one another, their semantic relation is motivated (for the discussion of how they are semantically related to one another, see Duffley (1994)). The above-mentioned fact and observation suggest that the distinction between full verbs and modals is not sharp, but fuzzy, implying that the category "main verb" is gradable. Hence a prototype analysis of the category "main verb" is tenable.

4 A prototype approach to auxiliaries is also implied in Heine (1993:22).

5 I use the term *situation* as a cover term for an action, event, state of affairs, process, whatever described by a predicate.

6 On our prototype approach, main verbs (including auxiliaries) form a typicality scale from a semantic point of view, i.e. how rich the semantic content of a given main verb is. From this point of view, such verbs as the copula *be* and *seem* are regarded as more peripheral members of main verbs because their semantic content is very poor or general in comparison with lexical verbs like *play* or *run*, and even in comparison with modal verbs like *must* or *may*. This point is relevant to the discussion about the notion of *orientational event time*, which is to be proposed in chapter 3.

7 Proponents of the assumption that English has three (absolute) tenses or more view *will* as a future tense marker (see Davidsen-Nielsen (1990), Declerck (1991a, 1991b), Hornstein (1977, 1990), Klein (1994), Reichenbach (1947), Wekker (1976), among others).

8 The auxiliary *shall* is also said to function as a future tense marker. Although there are some differences in syntactic environments between *will* and *shall* (this is the case especially with British English), I regard *will* as a representative of the alleged future tense markers in this thesis.

9 In this connection, Palmer (1990:137-138) notes that in his corpus *will* seldom

represents a pure future sense. This suggests that in most cases *will* expresses a modal element holding at the speech time. This also enables us to say that *will* is, in principle, a modal verb.

<sup>10</sup> Strictly speaking, this kind of futurity can be seen as accompanied by conditionality.

<sup>11</sup> Coates (1983:Ch.7) also observes that there are many cases of merger of a future use and a modal use of *will*. This poses a serious problem with the *will*-as-future tense marker analysis, for such an analysis requires that future *will* and modal *will* be homophonous.

<sup>12</sup> For example, in indirect speech complement clauses *could* and *might* can serve as the past tense counterparts of *can* and *may*, respectively.

<sup>13</sup> It is certain that the epistemic use of *would* expresses remoteness or politeness, not pastness, holding at the time of utterance, but such a use of *would* is ignored here because it is irrelevant to the discussion at issue.

<sup>14</sup> This definition corresponds to that of Declerck's (1995, 1997) "situation-TO," which is the time when what Declerck (1997) calls the predicated-situation, but not the full situation, holds. For further details, see Declerck (1997:105).

<sup>15</sup> This notion corresponds to Prior's (1967) "reference time" and Smith's (1978, 1981) "orientation time."

<sup>16</sup> This notion corresponds to Bertinetto's (1986) "localization," Declerck's (1991a, 1991b) "time established," and Smith's (1978, 1981) "reference time."

<sup>17</sup> I consider that any event time has a potential ability to serve as a time of orientation (cf. also section 3.3).

<sup>18</sup> As far as I know, it is Fenn (1987) that first used the term *temporal focus*. But Fenn does not define it clearly. Declerck (personal communication) defines it as the time on which the speaker focuses his attention.

<sup>19</sup> That temporal focus can be seen as a third way of interpreting the Reichenbachian reference time can be shown in the following manner. In the Reichenbachian system, since in the use of the past tense, both the reference time and the event time are located in the past, the reason why the past tense is said to express a definite past is due to the position of the reference time simultaneous with the event time; whereas since in the use of the present perfect, the reference time is located in the present, but the event time is in the past, the reason why the present perfect represents an indefinite past is ascribed to the difference between the position of the reference time and that of the event time (cf. Dinsmore (1981, 1991) and McCoard (1978)). Recall that what is definite is what is identifiable to both the speaker and the addressee. This implies that when using the past tense, the speaker can pay his or her own attention to, and orients the addressee's attention to, the past event time, which is simultaneous with the reference time in the Reichenbachian system. Within our framework, the temporal focus, by definition, substitutes for the reference time in this sense. Thus, the temporal focus can be viewed as a kind of reference time.

<sup>20</sup> Although my definition of temporal focus is almost equivalent to Declerck's, it is of course possible that the way the notion is used in my theory results in differing from Declerck's original way of using it because my system and his system are different from each other in some basic assumptions and points.

<sup>21</sup> The notion *resultant state* represents a broader sense than it is generally said to represent. The notion used in this study contains not only the direct result stemming from the occurrence of the situation described by the past participle, but also the indirect result, i.e. a state of affairs not directly stemming from, but inferred indirectly from, the occurrence of a corresponding preceding situation. Both types of results are subsumed under the notion of "current relevance." It will be shown in Chapter 4 that the reason why an English present perfect is associated with either type of result comes necessarily

from the dual structure of the perfect tense.

<sup>22</sup> Modality has been defined and dealt with in various ways by many grammarians and linguists (e.g. Bybee, Perkins and Pagliuca (1994), Haan (1997), Hofmann (1993), Lyons (1977, 1995), Nakano (1993), Nakau (1979, 1992, 1994, 1997), and Palmer (1979, 1988, 1990)).

<sup>23</sup> My definition of modality may be similar to Nakau's one in that with respect to the definition of modality, the instantaneousness of the time of the speaker's utterance or thought is highlighted. Nakau defines modality as follows:

- (i) Modality is defined, prototypically, as (i) a mental attitude (ii) on the part of the speaker (iii) only accessible at the time of utterance, where the time of utterance is further characterized as the instantaneous present (as opposed particularly to the durational present and the past). (Nakau (1992:5))

He notes that the three conditions are ranked in order of priority; conditions (i) and (ii) are necessary for a given element to be regarded as modality, while condition (iii) is not. That is, typical members of modality must share all of the three conditions, whereas less typical members of modality do not have to share condition (iii). Note here that the instantaneous present corresponds to the speech time in this paper, while the durational present corresponds to the time interval when present stative situations including habitual and generic ones hold.

A main difference between modality in my sense and modality in Nakau's sense is that in the former, modals in indirect speech complement clauses can express modalities associated with the original speaker or the original subject of thought, while in the latter, they are defined as objective elements, belonging to the proposition domain. See Nakau (1997) for details.

<sup>24</sup> In this thesis, I use the term *assertion* in the sense of 'assertion with (full) confidence'.

25 Cf. also Lyons (1977), Haan (1997:6) and Palmer (1986:51).

26 This type of modals corresponds to what is called dynamic modals, which express the subject's ability, the subject's volition, and so on. See Palmer (1986, 1990) for details. Thus in this thesis, epistemic and deontic modals, both of which are deeply related with the notion of the speaker's subjectiveness, belong to the modality domain, whereas dynamic modals belong to the proposition domain.

27 If a modal can be interpreted ambiguously, the hearer may decide, from the context, which use the speaker has in mind.

28 It should be kept in mind that although semi-modals themselves belong to the proposition domain, they can represent the modality of assertion as with main (or lexical) verbs.

29 This statement is verified by taking into account the fact that it is generally the case that epistemic modality does not actualize in such subordinate clauses as temporal or *if*-clauses, together with the fact that in our system the modality of assertion is the unmarked member of epistemic modality.

## CHAPTER 2

### A COMPOSITIONAL TENSE THEORY

#### 2.0. Introduction

This section, based on the basic assumptions and theories shown in chapter 1, presents a compositional tense theory which consists of the level of tense structure and the level of tense interpretation, and examines each level in great detail. At the level of tense structure, the tense (or abstract semantic) structure of a tense form represents its original general temporal value. The tense structure of a tense form serves as the "template" for determining the temporal value at the tense-interpretation level. The level of tense interpretation is the interface where the information conveyed by the tense structure of tense forms and the information conveyed by elements and factors other than tense structure interact with each other, so that tense forms receive appropriate interpretations. In other words, at the tense-interpretation level elements such as characteristics of referents in subject and object position, lexical properties and aspects of relevant predicates, time adverbials, contexts and syntactic environments can influence the determination of the temporal value of a tense form at the stage of practical use; that is, the original (general) temporal value of a given tense form manifests itself as it is (i.e. is not further specified), is further specified (and thus is fixed at a certain value), or changes into another value when the base time for the calculation of the event time of the predicate at issue changes from one time of orientation to another. The output of the tense-computational process is a finally-determined value.

#### 2.1. Tense Structure

In this section, I will clarify what the tense-structure level is by examining sentences with both finite and nonfinite predicates. I assume that English has two types

of finite forms, i.e. the present and past tense forms, and five types of nonfinite forms, i.e. the bare and *to*-infinitives, the present and past participles, and the gerund.<sup>1</sup> On this basis, I present the following hypothesis pertaining to the tense structure of English predicates:

- (1) In English, a finite predicate consists of both the absolute tense component (A-component) and the relative tense component (R-component), whereas a nonfinite predicate consists only of the R-component.

It should be noted here that henceforth, a finite predicate can be referred to as an absolute tense form because it contains the A-component and a nonfinite predicate as a relative tense form because it contains only the R-component. With the hypothesis in (1), I will show what temporal value a given predicate, finite or nonfinite, has at the tense-structure level in the next two subsections.

#### 2.1.1. Finite Predicates

First of all, let us examine the A- and the R-component of finite predicates in detail. I will start with the above statement with respect to the A-component. The A-component is the one represented by a tense morpheme, and thus only finite predicates contain the A-component. Since there are two tense morphemes in English, i.e. the past and the present (or non-past) tense morpheme, English finite predicates necessarily establish either the past or the present time-sphere in the speaker's (and the hearer's) mind; the past time-sphere is an indefinite time-span which lies entirely before the speech time (S) and the present time-sphere is an indefinite time-span which includes S.<sup>2</sup> In semantic (or cultural) terms, time is divided into three deictic temporal areas, i.e. the past, the present, and the future, in English. In terms of English grammar, however, we can divide time into two deictic temporal areas, i.e. the past and the present time-sphere, because the notion of time-sphere is an abstract concept representing linguistic time.<sup>3</sup> The past time-



sphere covers only the past area while the present time-sphere covers both the present and the future areas. This component is absolute because at the tense-structure level, the establishment of a time-sphere is exclusively based on a direct relation to the speaker's point of view, which usually adheres to the speech time (S), i.e. the absolutely-fixed base time for the calculation of all the temporal relations (Strictly speaking, the speech time is shifting constantly, but we define it the way I do conventionally.)

Let us now move to the above statement as to the R-component. The R-component is represented by the event time in the sense proposed in section 1.4. With finite predicates, the event time must be properly included (or always obtain somewhere) in a time-sphere associated with the A-component.<sup>4</sup> This component is relative because if we take a tense morpheme away from a finite predicate, we can get the base form associated with the event time whose position on the time line is not established in a direct relation to the speaker's point of view: only after the establishment of a time-sphere can the event time be situated in that time-sphere.

To clarify what I have stated, consider (2):

- (2) a. Mana played the *koto*.  
b. Hitomi is happy.

In (2a), *played* contains a past tense morpheme, establishing the past time-sphere in our mind. Because of the presence of a past tense morpheme, the realization of the event time is confined to the past time-sphere. Put another way, the A-component has the value of the past time-sphere and the R-component has the value of simultaneity (inclusion).<sup>5</sup> The tense structure of *played* per se represents its event time as obtaining anywhere in the past time-sphere. This is the original temporal value of past-tense predicates at the tense-structure level. The same line of observation applies to (2b). The present tense morpheme of *is* establishes the present time-sphere, to which the realization of its event time is restricted. The tense structure of *is* itself represents its event time as being

included in the present time-sphere. This is the original temporal value of present-tense predicates.

At the tense-structure level, all a finite predicate does is to represent its original (general) temporal value. Which position on the time line the event time of a given predicate is set down on is finally determined at the tense-interpretation level. This mechanism will be discussed in great detail in section 2.2. Note in passing that in (2b), the event time of *is* is construed as being located in the same time position as the speech time, but not as being located in the future. The reason will also be explained in section 2.2.1.

### 2.1.2. Nonfinite Predicates

I now turn to nonfinite predicates. Since the tense structure of nonfinite predicates does not contain any tense morpheme establishing a time-sphere in our mind, by definition, it consists only of the R-component, as shown in (1). There are five nonfinite forms in English: the bare infinitive, the *to*-infinitive, the present participle, the past participle, and the gerund. The temporal value of nonfinite forms is "relational," and three types of relations are possible: anteriority, simultaneity, and posteriority.<sup>6</sup> Each nonfinite form expresses one, two or all of the three temporal relations at the tense-structure level.

Let us now consider, in turn, what kind of temporal value these five forms possess. I will first look at the bare infinitive. I assume that the semantic (or tense) structure of the bare infinitive can potentially represent all of the three temporal relationships, i.e. anteriority, simultaneity and posteriority, at the tense-structure level.<sup>7</sup> In other words, the temporal value of the bare infinitive is undefined at the tense-structure level. This is ascribed to the nature of the bare infinitive. Duffley (1992, personal communication) convincingly states that the nature of the bare infinitive is to evoke "an abstract image of

the integral actualization of its event" and thus "it is not situated in containing in time in any particular time-sphere [in the sense of 'time area']." This means that the event time of the bare infinitive can potentially be situated on any time point or period on the time line; and given a base time, it is logically possible for the event time of the bare infinitive to express any of the three temporal relations with respect to the base time.<sup>8</sup>

Thus, observe (3):

- (3) a. The letter will arrive tomorrow.
- b. Rieko must be at home now.
- c. You may play tennis here.

As the sentences in (3) show, the bare infinitive itself can potentially represent any kind of temporal relations with respect to a potential base time. We cannot determine, at this level, which temporal value the predicate in the bare infinitive form finally has. Only at the tense-interpretation level is the temporal value of the bare infinitive further specified under the influence of, say, time adverbials (see section 2.2.2).<sup>9</sup>

I will next consider the *to*-infinitive. I assume that the tense structure of the *to*-infinitive represents posteriority relative to a potential base time. This is due to the nature of the *to*-infinitive. As stated in Duffley (1992:Ch.5), the *to*-infinitive can be divided into two parts: the preposition-based particle *to* and the bare infinitive. This kind of *to* expresses the goal of an abstract movement on the time line; and the bare infinitive can potentially express any kind of temporal relationship, as we have already seen. Thus, given a potential base time, the property of *to* requires that the bare infinitive time be restricted to the after-position of the abstract movement which starts from that base time.

Observe (4), for instance:

- (4) a. I asked Mana to play the *koto* for me.
- b. I hope to see you this evening.
- c. He grew up to be rather selfish. (Close (1975:71))

In (4a), for example, *to play* represents its event time as coming after a potential base time (which will be identified with the time of asking at the tense-interpretation level). Only at the tense-interpretation level can we finally determine the temporal relation of the nonfinite-predicate time to the base time, i.e. the finite predicate time, in this case (see section 2.2.2).

Let us now move to the gerund.<sup>10</sup> In this thesis, the gerund is assumed to represent non-posteriority, i.e. the area consisting of both anteriority and simultaneity, because of its nature. As stated in Declerck (1991a:503), a gerund tends to be used "when the reference is to a (present, past or temporally unspecified) experience." Put another way, the gerund can not only refer to a situation in a general way, but also suggest fulfilment of an action. It is safe to ascribe this tendency to the nature of the gerund, namely the nature of representing an experience; in order for a situation to be experienced at a certain time, the situation must have occurred or obtain at that time.

Consider (5):

- (5) a. I like swimming.
- b. I remember traveling to Italy with her.
- c. I was dismayed at the editor rejecting my article. (Declerck (1991a:495))

At the tense-structure level, the tense structure of the gerund itself represents a relationship of non-posteriority: the gerund itself represents the area consisting both anteriority and simultaneity because no contexts or syntactic environments are given at this level. The temporal value of the gerund can be further specified at the tense-interpretation level (see section 2.2.2).

Finally, let us take a look at the present and past participles. Following Cowper (1995) and Nakau (1994), I assume that the present participle itself expresses simultaneity and the past participle itself expresses anteriority because of the lexical properties of the morphemes *-ing* and *-en* (cf. also Parsons (1990) and Kageyama

(1996)).<sup>11</sup>

Observe (6) and (7):

- (6) a. Sitting here in the sun, I still feel cold. (Nakau (1994:222))  
b. They stood talking about what should be done. (Declerck (1991a:455))  
c. He was the last member of the family really deserving the epithet of 'writer.' (Declerck (1991a:454))
- (7) a. The job finished, we went straight home. (Nakau (1994:222))  
b. A shot heard at a distance can be mistaken for the noise of an exhaust.  
(Declerck (1991a:454))  
c. Used economically, one tube of toothpaste should be sufficient for at least three weeks. (Declerck (1991a:456))

In (6a), the present participle *sitting* represents simultaneity, i.e. an ongoing situation at a potential base time, while in (7a), the past participle *finished* represents anteriority, i.e. a completed situation. Which times the temporal relationships of the present and past participles are based on are determined at the level of tense interpretation (see section 2.2.2). In these cases, the base times will be identified with the main-clause times which serve as the times of orientation for the calculation of the subordinate times at the tense-interpretation level.

## 2.2. Tense Interpretation

In this section, I will briefly consider how we can finally fix the temporal value of both finite and nonfinite tense forms at the level of tense interpretation. At this level, a lot of factors other than tense structure (i.e. the original general temporal value of a given tense form) can influence the temporal interpretation of a given predicate, as we will see later on. As I have shown in Introduction, this level includes at least two stages, i.e. the first stage and the final stage. The former is the stage at which what I call the basic

semantic structure of a given tense is established where the base time (or the time of orientation) for the calculation of the event time(s) of the tense at issue is determined. The latter is the stage at which the finally-determined temporal value, i.e. a pragmatic use or function, of the tense at issue is arrived at. In many cases, intermediate stages can be assumed in order for us to compute (or process) the temporal value of a given tense. In this way, the tense-interpretation level is composed of both semantics and pragmatics.

At this tense-interpretation level, two kinds of interpretations are possible with respect to a relation to the speech time. Here is my hypothesis with respect to English tense interpretation:

- (8) In English, both finite and nonfinite predicates can be interpreted either deictically or non-deictically under the influence of elements such as characteristics of referents in subject and object position, lexical properties of relevant predicates, time adverbials, syntactic environments and contexts.

In a deictic interpretation, the event time of a predicate is interpreted in a direct relation to the speech time, while in a non-deictic interpretation, it is interpreted in relation to another event time functioning as a time of orientation or an implicit time of orientation implied by the context.<sup>12</sup> (Whether or not the event time is finally related to the speech time does not matter.) Both finite and nonfinite predicates can receive deictic and non-deictic interpretations, as we will see later on.

### 2.2.1. Finite Predicates

This subsection examines how finite predicates are interpreted at this level of tense interpretation. First of all, let us examine the case where modality influences the temporal interpretation of finite predicates. Consider (9) again:

- (9) a. Hitomi is happy. (=2b)  
b. Mana likes the Orion.

c. I live in Mito.

In (9a), for example, the time of Hitomi's being happy is construed as simultaneous with the speech time. As we have seen, all the predicate *is* represents at the tense-structure level is that its event time obtains somewhere in the present time-sphere established by the present tense morpheme. It is at the tense-interpretation level that the event time is interpreted as simultaneous with the speech time as the time of orientation. This interpretation is, by definition, deictic. And this is usually the basic semantic structure of a present-tense predicate in unembedded clauses.

Why, then, is the event time construed as coinciding with the speech time? Such a question arises because it might seem possible that the event time in question is related to an implicit time other than S, i.e. a future time, which is also in the present time-sphere. The answer lies in the fact that the predicate *is* is in the assertive form: the modality of assertion makes the event time coincide with the speech time. Since the future is an unrealized temporal area, we usually cannot make an assertion about a future situation. What we can make an assertion about in the present time-sphere is a present situation because the present is a realized temporal area. Therefore, the predicate *is* is interpreted as referring to the present, i.e. simultaneous with the speech time.

This line of argumentation is strengthened by the contrast in grammaticality between the following two sentences:

(10) a. Everything will be all right tomorrow.

b. \*Everything is all right tomorrow. (Declerck (1991b:61))

Sentence (10b) is ungrammatical because we usually cannot make an assertion about a future state of a certain situation.

The following sentences might appear to undermine the above explanation, but in fact they do not. Rather, they support the explanation.

(11) a. The parcel arrives tomorrow. (Leech (1987:56))

b. The train leaves at 7:30 this evening. (Leech (1987:65))

c. I really need you tonight.

(cited from Bonnie Tyler's 'Total Eclipse of the Heart')

d. I'd give anything to be able to be there, but I have a broad meeting the day after tomorrow in Johannesburg and there's no way I can miss it.

(S. Sheldon, *Master of the Game*, p.232)

In (11b), for example, although the verb is in the assertive form, the actualization of the train's leaving comes in the future. Why is this so? We can explain this as follows. This is because it can be said that if at the speech time we are certain of the future actualization of a given situation, we can make an assertion about that situation, thus using the assertive form. In this case, the situation is already predetermined by the timetable when the speaker utters this sentence. Therefore the speaker can make an assertion about the future situation of the train's leaving. This line of explanation also accounts for why sentences (11a), (11c) and (11d) are also grammatical.

For a better understanding of the level of tense interpretation, let us now consider somewhat more complicated examples, where a syntactic environment in which a given predicate appears can influence the determination of the position of the event time, i.e. the temporal interpretation, of the predicate involved. Observe (12):

(12) a. If you come with me, you will enjoy the party.

b. Grannie will walk home if she misses the last bus tonight.

(Hornstein (1977:77))

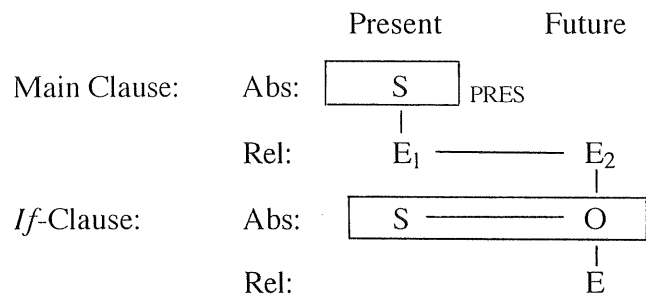
The finite predicate *come* in (12a) represents its event time as being located somewhere in the present time-sphere established by the A-component at the level of tense structure. It is at the tense-interpretation level that the event time of *come* is interpreted as almost simultaneous with (more precisely, coming just before) the event time of the addressee's enjoying the party, which is interpreted as posterior to the event time of *will* simultaneous



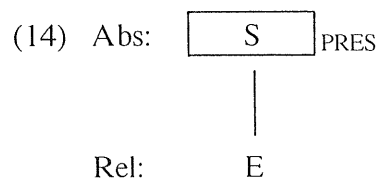
with the speech time.

Schematizing the temporal relation between the main clause and the *if*-clause in (12a) helps us to understand the point.

(13) Tense Interpretation Level:



S, E and O symbolize the speech time, the event time and the time of orientation, respectively, and the rectangle with the subscript PRES means the present time-sphere (see chapter 3 for details). E<sub>1</sub> in the main clause is the event time of *will*, and E<sub>2</sub> in the main clause is the event time of *enjoy*, while E in the *if*-clause is the event time of *come*. The point to be noted here is that the basic semantic structure of *come* represents its non-deictic interpretation where its event time is simultaneous with a certain future time, i.e. the time of enjoying in the main clause; i.e., the *come* comes to have the semantic structure of future time reference.<sup>13</sup> This basic semantic structure is different from that for the deictic interpretation of the present-tense predicate (e.g. (9a-c)), which also works at the tense-interpretation level, as shown in (14):



I consider both interpretations of the present tense form, i.e. the basic semantic structure of present-time reference and that of future-time reference to constitute "interpretive variants" in the sense of 'variants which occur at the tense-interpretation level.'<sup>14</sup>

Why we interpret the temporal relation at issue this way is due to the syntactic

environment where the predicate at issue occurs. In particular, this non-deictic interpretation of *come* is ascribed to the property of *if*-clauses (see section 1.5). Since the situations of the *if*-clause and the main clause form an intensional domain, the position of the *if*-clause time is determined based on that of the main-clause time as the relevant time of orientation (in this case the time of enjoying) because of the nature of cause-effect relations. In this case, the time of the actualization of the main-clause situation in question is in the future, so the *if*-clause time is also located in the future. I note in passing that the intensional domain as a whole is interpreted as being within the scope of the modality of prediction associated with *will* at the tense-interpretation level; that is, sentence (12a) is interpreted under the influence of the scope theory of modal logic at the tense-interpretation level. (I will examine the temporal mechanism of sentences with the future use of *will* in detail in section 3.2.1.) I must say here that time adverbials can help us to interpret the *if*-clause event time as coming in the future relative to the speech time, as shown in (12b).

Let us move to another type of complicated examples, i.e. examples of past-tense predicates whose event time is interpreted non-deictically. Observe (15):

(15) One day, Naomi said to Oscar that she saw him the day before.

The matrix-clause verb *said*, whose event time is included in the past time-sphere at the tense-structure level, is interpreted as referring to a specific time because of the presence of the time adverb *one day*. Like the matrix-clause verb, at the tense-structure level the complement-clause verb *saw* represents its event time as being located somewhere in the past time-sphere. It is at the tense-interpretation level that we can finally interpret the event time of the complement clause as being anterior to the matrix-clause time by virtue of the property of the relative time adverbial *the day before*. The event time of the matrix clause functions as the time of orientation for the calculation of the event time of the complement clause. These two types of past tenses constitute "interpretive variants" in

my sense and thus express different basic semantic structures at the first stage of the tense-interpretation level. This phenomenon will be discussed in great detail in chapter 8.

### 2.2.2. Nonfinite Predicates

This subsection deals with nonfinite predicates. I will first examine basic examples of five types of nonfinite predicates one by one, and then consider some complicated examples.

#### 2.2.2.1. Basic Examples

Let us first consider the *to*-infinitive. Observe (4) again, which is repeated here as (16):

- (16) a. I asked Mana to play the *koto* for me.  
b. I hope to see you this evening.  
c. He grew up to be rather selfish. (Close (1975:71))

As we have seen, the *to*-infinitive in (16a) only expresses posteriority at the tense-structure level. It is at the tense-interpretation level that the posteriority in question is interpreted relative to the event time of the finite verb *asked* functioning as the time of orientation. The properties of the finite verb match the posteriority relation represented by the *to*-infinitive. This is how the event time of the nonfinite verb *to play* is interpreted as coming after the time of asking.

Let us move to the case of bare infinitives. This is a bit complicated case in order for us to interpret. Consider (17):

- (17) a. The letter will arrive (tomorrow).  
b. Rieko must be at home.  
c. Makiko may leave tomorrow.

Recall that the present discussion is based on the assumption that a modal auxiliary can

express one situation (see section 1.2); moreover, the temporal value of the bare infinitive is finally fixed at a certain value (i.e. anteriority, simultaneity or posteriority) at the tense-interpretation level.

However, it should be noted here that the bare infinitive with a modal can potentially represent only two temporal relations, i.e. simultaneity and posteriority (cf. note 9). Following Duffley (1992:98), I ascribe the reason to the interaction between the nature of the modal and that of the bare infinitive: used with a modal, the bare infinitive can be analyzed as representing a potentiality coinciding in time with the potentiality represented by the modal's event.<sup>15</sup> Thus in (17b), by virtue of the potentialities of the bare infinitive *be* and the modal *must*, together with the stative property of *be*, the time associated with the bare infinitive *be* is interpreted as simultaneous with the time associated with *must*, i.e. the time of the speaker's mental state of certainty. If the time adverb *now* is added to the sentence at issue, the simultaneity relation between the two predicates is further clarified. Sentence (17c) can express the temporal relation of posteriority between the event time of the modal *may* and that of the bare infinitive. This can be derived from the view that the potentiality represented by the bare infinitive's event (i.e. leaving) coincides in time with the state of potentiality represented by the modal *may* (i.e. possibility), for saying that at a given time a certain situation has a potential to occur amounts to saying that such a situation can actualize in the future relative to that time (if it actualized at all). In the case of (17c), the non-stative property of *leave*, together with the lexical property of the time adverb *tomorrow*, helps us to interpret the event time of *leave* as coming temporally after the event time of *may*. As for (17a), see section 3.2.1.

I now turn to the case of gerunds. Let us reconsider (5), repeated as (18).

- (18) a. I like swimming.  
b. I remember traveling to Italy with her.  
c. I was dismayed at the editor rejecting my article.

(Declerck (1991a:495))

As we have already seen, the original temporal value of the gerund is assumed to be the value of non-posteriority (at the tense-structure level). Only at the tense-interpretation level can we finally determine the temporal value of the gerund, i.e. which temporal value the gerund expresses, anteriority or simultaneity.<sup>16</sup> In (18a), for example, the gerund *swimming* can be construed as expressing a general experience holding at the speech time, so it is interpreted as representing simultaneity relative to the event time of the finite predicate *like* as the time of orientation. In (18b), on the other hand, the temporal value of *traveling* is finally fixed at anteriority relative to the finite-predicate time as the time of orientation because of the lexical property of *remember*.

The same line of explanation can be extended to the case of the present and the past participle. Observe (19):

- (19) a. Sitting here in the sun, I still feel cold. (=6a))  
b. The job finished, we went straight home. (=7a))

At the tense-structure level, the nonfinite predicates merely represent their original temporal values: the present participle represents simultaneity and the past participle anteriority. It is at this tense-interpretation level that the simultaneity represented by the present participle *sitting* and the anteriority represented by the past participle *finished* are connected to the event time of the main-clause verb *feel* and that of the main-clause verb *went*, respectively. The event times in the main clauses serve as the times of orientation for the calculation of the subordinate-clause times.

Finally, I will briefly look at the case where nonfinite predicates can receive deictic interpretations. Consider (20):

- (20) a. The people working in the factory asked for a pay increase last month.

(Nakau (1994:223))

- b. The man writing the obituary is my friend.

(Yasui, Akiyama and Nakamura (1976:67))

c. Those sitting on the benches were asked to leave. (Comrie (1985:22))

d. The passengers awaiting flight 26 proceeded to departure gate 5.

(Comrie (1985:57))

Take (20a) for example. The nonfinite predicate *working* can be construed as expressing either the simultaneity with respect to the time of the people's asking for a pay increase in the past or the simultaneity with respect to the speech time.<sup>17</sup> The former reading corresponds to a non-deictic reading and the latter to a deictic reading. In (20b), the nonfinite predicate *writing* can refer to the past, the present, or the future, according to the context. In the case of the predicate's reference to the present, both the deictic and non-deictic readings are possible: in the former, the event time of *writing* is related directly to the speech time, while in the latter, the event time is connected first with the main-clause time.

Having examined all the possibilities, i.e. finite predicates with deictic readings (e.g. (9)), finite predicates with non-deictic readings (e.g. (12) and (15)), nonfinite predicates with deictic readings (e.g. (20)), and nonfinite predicates with non-deictic readings (e.g. (16), (17), (18), and (19)), we can say that the hypothesis in (8) is verified. It should be noted here that in the case of nonfinite predicates, a deictic reading is considerably a marked case, while in the case of finite predicates, a deictic reading is normal. This can be explained by our proposal that finite predicates consist of both the A- and the R-component, whereas nonfinite predicates consist only of the R-component: since finite predicates contain the A-component, which is in a direct relation to the speaker's point of view adhering to the speech time, they basically receive deictic readings; by contrast, since nonfinite predicates do not contain the A-component, they can freely be related to times other than the speech time such as those of the upper predicates which syntactically govern the nonfinite predicates in question, and tend to

receive non-deictic interpretations because of that syntactic government.

#### 2.2.2.2. Complicated Examples

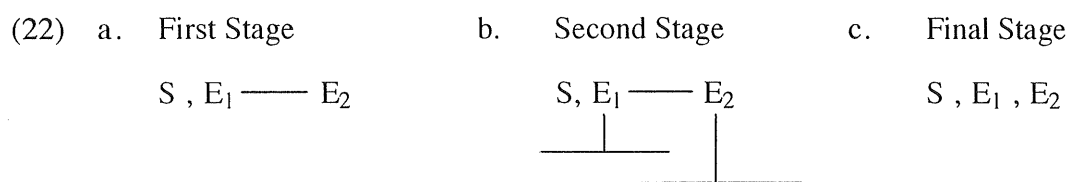
Let us now look at some complicated examples of nonfinite predicates. In particular, I will consider the case where the original temporal value expressed by a nonfinite predicate is reanalyzed to be interpreted as having an apparently different temporal value from the original one. Let us first observe (21):

- (21) a. Rieko seems to be sick.  
b. She seems to remember meeting him somewhere. (Nakau (1994:358))  
c. He appears to be wise.

In (21a), for example, the event time of the *to*-infinitive is construed as simultaneous with that of the finite verb *seems*. On the other hand, we have seen that in our tense theory, the *to*-infinitive expresses posteriority at the level of tense structure, and is determined to represent the posteriority relative to a certain time at the tense-interpretation level. How can we resolve this apparent discrepancy? If it were not for any explanation for this phenomenon in terms of semantic relevance, it might be the case that the *to*-infinitive has two unrelated temporal values at the tense-structure level: the *to*-infinitive expressing posteriority and the *to*-infinitive expressing simultaneity are homophonous. But there is good reason to argue that they are interpretive variants at the level of tense interpretation. To put it another way, we can explain, in terms of semantic relevance, why at the tense-interpretation level sentences like those in (21) are interpreted as the way they are.

My explanation for (21a) goes as follows. If we proceed along the lines I have suggested in the previous subsection, it should be the case that because of the property of *to*, the event time of *be sick* comes after that of *seems*. But this is not the case. Why is this so? To answer the question, we should notice the fact that both the finite and the nonfinite predicate are stative. Stative predicates are usually viewed as unbounded and

limitless, being what is called homogeneous. Recall that in our system, especially with stative predicates, an event time does not necessarily correspond to the time of the whole period of a given situation (see section 1.4). Thus, it is possible within our framework to argue that at the first stage the *to*-infinitive represents a relation of posteriority between two event times and a reanalysis is carried out at the second stage at which the time of the whole period in which the finite situation holds stretches forward in time, while the time of the whole period in which the nonfinite situation is true stretches backward in time, as the following schema shows:



E<sub>1</sub> and E<sub>2</sub> represent the event times of *seems* and *be sick*, respectively. A line connected with an event time denotes the whole time-period when a given situation can be true. As is clear from (22b), the part of the situation associated with *seems* can be viewed as overlapping the part of the situation associated with the stative predicate *be sick*. (Nakau (1994:358) notes that the "NP seem to V" construction, used with the present tense, requires that its infinitive complement be stative (cf. Ross (1969:80)).) It is this nature of stative predicates that enables us to reinterpret a sentence like (21a). Therefore, we can explain the discrepancy at issue by arguing that E<sub>2</sub>, which is construed as posterior to E<sub>1</sub> at the first stage of the tense-interpretation level, is reinterpreted as simultaneous with E<sub>1</sub> at the final stage, as shown in (22c) above.

This is how, in a syntactic environment like (21a), the *to*-infinitive, which represents posteriority at the tense-structure level, can finally receive a simultaneous reading at the tense-interpretation level.<sup>18</sup> The same line of explanation applies to (21b) and (21c).

Let us next consider the case of passive sentences.<sup>19</sup> Consider (23):<sup>20</sup>



- (23) a. The window was broken.  
b. They are married.

Take sentence (23a) as a sample case. This sentence describes the past state of the window's being broken; on the other hand, as we have seen, the past participle describes a situation prior to a potential base time (which will be identified with the time associated with *was*) at the tense-structure level. How can we explain this apparent discrepancy?

The explanation goes as follows. It is safe to say that like the copula *be*, the passive auxiliary *be*, in combination with elements that come after *be*, contributes to representing a state or characteristic of the subject at a certain time (cf. section 3.4). If so, the past participle cannot express the preceding event itself without contradicting the property of passive *be*; for the past participle has to refer to a state or characteristic holding at the time associated with *be* in order for the property of passive *be* to be preserved. This might seem contradictory to the claim that the past participle represents anteriority. Note, however, that the state of the window's being broken presupposes that the event of the window's breaking has occurred previously.<sup>21</sup> This means that the resultant state in question comes next to its preceding event described by the past participle on the time line. Therefore, it is possible that a metonymy permits the situation described by the past participle to refer to its resultant state.<sup>22</sup> Given these observations, we can say that in a syntactic environment like a passive form, the resultant state of the event at issue, but not the preceding event itself, is profiled in order for the property of passive *be* to be preserved, and thus the past participle is interpreted as representing the resultant state at issue which holds at the event time of *be*. This is how the past participle in the passive form is interpreted as expressing simultaneity at the tense-interpretation level.

Let us finally examine sentences expressing mental reactions. Observe (24):<sup>23</sup>

- (24) a. I am glad to know that he is safe.

- b. I am happy to see you here.
- c. I'm pleased to see you here.

(Duffley (1992:123))

Consider (24a), for example. In this sentence, the time of knowing is interpreted as anterior to the time of being glad. This might appear contradictory to our claim that the *to*-infinitive represents posteriority, but in fact it does not. How, then, can we explain this fact?

The explanation is as follows. Note first Duffley's (1992:124) statement that sentence (24a) "presupposes that the person referred to by *I* has been waiting for news about someone whom he thought to be in danger." If this is correct, we can say that sentence (24a) contains one implicit time, i.e. the time of the speaker's waiting for the news, which is interpreted as coming before the time of the *to*-infinitive. This temporal relation is schematically represented in (25):

(25) the *to*-infinitive: O ————— E<sub>2</sub>

The nonfinite predicate *to know*, represented by E<sub>2</sub>, is interpreted as posterior to the time of the speaker's waiting for the news, which functions as the time of orientation (O) for the calculation of the nonfinite time. Thus, we can say that at the first stage of the tense-interpretation level, the original temporal value of the *to*-infinitive (i.e. posteriority) shows up by default.

This way of analysis means that I treat the *to*-infinitive phrase as a kind of adverbial sentence adjunct such as the *when*-clause in the sentence *Tom had left when Mary arrived*: the *to*-infinitive phrase and the rest of the sentence constitute different clauses and, thus, the former can have its temporal schema (25) at the first stage of the tense-interpretation level. This is supported by the following paradigm, which I owe to Patrick Duffley (personal communication), because even when we prepose the *to*-infinitive as in (26b) below, it conveys almost the same message as when it comes after the main

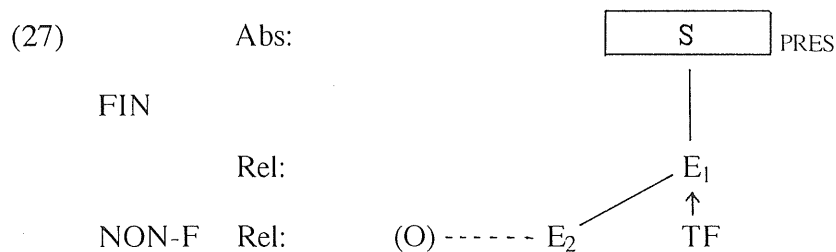
predicate as in (26a):

- (26) a. He was happy beyond all expression to see her there in perfect health.  
 b. To see her there in perfect health, he was happy beyond all expression.

This suggests that the *to*-infinitive phrase expressing mental reactions can have a characteristic of adverbial clauses, representing its own clause and thus its own situation.

Let us now move to the reason why in (24a), the nonfinite time is interpreted as anterior to the finite time at the final stage. To explain this fact, we have to remember that what motivates this interpretation is our knowledge about mental (or emotional) reactions. Since the time of being glad is directly relevant to the mental-reaction scene, the temporal focus is directed at that time, and, thus, the time at issue is profiled. In order to preserve our knowledge about mental reactions, the time of knowing must come before the time of being glad (i.e. E<sub>1</sub>). This is why in (24a), the *to*-infinitive is interpreted as expressing anteriority relative to the finite time.

Moreover, it should be noticed that since the finite predicate *am glad* is in the assertive form and expresses the present tense, E<sub>1</sub> is construed as simultaneous with the speech time (S). Thus, the final version of the temporal schema for the sentence in (24a) is as follows:



In (27), as elsewhere in this study, FIN and NON-F are short for finite and nonfinite predicates, respectively; Abs and Rel symbolize the A-component and the R-component, respectively. The tip of the arrow points to the target at which the speaker directs the temporal focus (TF). The vertical solid line represents the simultaneous relation of E<sub>1</sub> to the speech time. The horizontal broken line represents the posterior relation of E<sub>2</sub> to the

implicit time of orientation at the first stage of the tense-interpretation level; the slanting solid line represents the anterior relation of  $E_2$  to  $E_1$  at the final stage of the tense-interpretation level. The parenthesized O means that this time is not explicitly relevant to the temporal interpretation of the sentence under consideration at the final stage;  $E_1$  functions as the relevant time of orientation for the calculation of the *to*-infinitive at this stage. This is how we can interpret sentence (24a) appropriately. The same explanation can be extended to (24b) and (24c).

### 2.3. Summary

In this section, we have examined the two tense levels which play an important role in the new compositional tense theory: the tense-structure level and the tense-interpretation level; and we have also proposed the distinction between the tense structure of English finite and nonfinite predicates in terms of the A(bsolute tense)-component and the R(elative tense)-component.

By distinguishing the two tense levels, we can avoid ascribing too much to the semantic structure (i.e. the tense structure in this study) of a given tense form. Specifically, we do not have to assume two different types of present tenses (e.g. present tenses in independent clauses and subordinate clauses like *if*-clauses and temporal clauses) or three types of *to*-infinitives (e.g. *to*-infinitives expressing posteriority, simultaneity and anteriority); they are viewed as "interpretive variants" in the sense of 'variants at the tense-interpretation level.' Moreover, we can give a motivated answer to the question of why predicates in the same tense form can be interpreted ambiguously; at the tense-interpretation level, the information conveyed by a tense form per se interacts with the information conveyed by elements other than tense structure in order for the tense form to receive an appropriate interpretation.

By distinguishing finite and nonfinite tense structures in terms of the A-/R-

component, we can explain why the event time of finite predicates is restricted to a certain time area (e.g. in the case of a past tense form the event time must occur in the past area) while the event time of nonfinite predicates tends to be connected to a time other than the speech time (e.g. the time of a syntactically upper verb).

## NOTES TO CHAPTER 2

<sup>1</sup> Patrick Duffley (personal communication) considers that English has only three nonfinite forms: the infinitive, the *-ing* form, and the *-en/-ed* form. His claim is mainly based on his two papers. One is Duffley (1992), where he considers that since the *to*-infinitive is a construction consisting of the preposition *to* and the (bare) infinitive, the *to*-infinitive should not be viewed as an independent nonfinite form. The other is Duffley (1995), which considers that the present participle and the gerund are two realizations of the *-ing* form in discourse. Leaving the details aside, what is claimed in Duffley (1995) is that the *-ing* form temporally expresses the simultaneity relation; when one focuses on imperfectiveness, the function (or interpretation) as the present participle comes into play, whereas when one focuses on perfectiveness or treats the situation which the *-ing* form represents as a whole, the function (or interpretation) as the gerund comes into play.

Although a thorough discussion is necessary in order to finally determine how many nonfinite forms English has, I will show why I can possibly admit five nonfinite forms and how they can be treated in my compositional tense theory. First, I will be concerned with the *to*-infinitive. The reason why I regard it as an independent nonfinite form is that it is highly possible that in contemporary English, those who have acquired English recognize that the *to*-infinitive constitutes one independent grammatical unit because it seems that the *to*-infinitive is counted as an inseparable syntactic unit in most syntactic environments, and the distribution of the *to*-infinitive is not entirely complementary to that of the bare infinitive with respect to syntactic environments (e.g. *Naomi helped me to carry the piano out* vs. *Naomi helped me carry the piano out*). Thus, in my compositional tense theory, the *to*-infinitive as well as the bare infinitive is viewed as constituting one temporal template at the tense-structure level. (I note in passing that by this claim, I do not intend to say that the *to*-infinitive is an inseparable semantic unit which cannot be divided into two meaningful elements, i.e. *to* and the bare

infinitive, as Duffley claims.)

I now turn to the reason why I distinguish the gerund from the present participle. The reason is partly due to the fact that since in most syntactic environments the temporal value of the present participle seems to express simultaneity while that of the gerund sometimes expresses anteriority (e.g. *I enjoyed dancing with her*), and, thus, they tend to be viewed as two distinct temporal expressions, it is highly possible for people to acquire the gerund and the present participle as different grammatical units. Thus, in my compositional tense theory, both the gerund and the present participle are regarded as constituting their own grammatical units, i.e. temporal templates, at the tense-structure level. It seems that no one dare go against the view that the past participle constitutes its own grammatical unit. Given the above discussion, it follows that we can admit five nonfinite forms in English.

<sup>2</sup> My definition of the past and the present time-sphere is semantically (or conceptually) equivalent to Declerck's, but at the level of application, my use of the notion of time-sphere is different from Declerck's in some respects, especially in the case of so-called complex tenses like future time expressions and the perfect tense. See also note 3.

<sup>3</sup> Although Declerck (1991b:16-17) also states that the English tense system divides time into two time-spheres linguistically and considers that tenses belonging to the same time-sphere are "families" because they are marked by the same tense morpheme (Declerck (1995:4)), he does not connect the notion of time-sphere with a compositional tense theory in such a way that I do in this thesis. In particular, in sentences like *I will go*, only the auxiliary *will* is directly related to the present time-sphere in my theory, while the whole sequence *will go* is incorporated into the present time-sphere (more precisely, the post-present sector) in Declerck's theory (see section 9.3 for details). Thus, not only the way of using the notion in my tense theory is slightly different from

that in his theory, but also my tense theory bears some results different from his theory (see chapters 8 and 9 for details).

4 In this study, I use the term *obtain* in the sense of 'being in existence' or 'holding'.

5 The relationship of simultaneity can be divided into at least two subtypes: "strict coincidence" and "inclusion." Thus, the relation of inclusion is a kind of the relation of simultaneity.

6 It is possible that nonfinite predicates can represent their own tenses because of their "relational" characteristics. As stated in Klein (1994:35), a tense does not necessarily locate its event time in relation to the speech time (S), but can locate it in relation to a certain reference point other than S.

7 In Wada (1998a), I regard the bare-infinitive as representing a temporal relationship of non-anteriority, i.e. the area consisting of both simultaneity and posteriority. But after exchanging a few letters with Duffley, I was obliged to change the discussion as to the bare infinitive, claiming that the bare infinitive can potentially represent the temporal relation of anteriority, which is exemplified by (i):

(i) a. What! Me know the answer! (Duffley (1992:95))

b. What! Me forget my umbrella at your place yesterday! (Duffley (p.c.))

Duffley (1992:95) notes that in (ia) the time of knowing can be anterior to (as well as simultaneous with, or posterior to) the speech time as a reference point. I'd like to thank Patrick Duffley for letting me realize this fact.

8 A base time covers whatever provides a basis for the calculation of temporal relation(s), irrespective of the tense level. Thus, this notion can cover a pure event time (e.g. the event time associated with perfect *have* in the case of the perfect tense) and an orientational event time (e.g. the event time associated with progressive *be* in the case of the progressive form), as well as a time of orientation. This will be discussed in detail in



chapters 3 and 4.

<sup>9</sup> It should be kept in mind that I do not claim that in such syntactic environments as those in (3), i.e. in the position after modals, the bare infinitive still can potentially represent any of the three temporal relations; rather, in this case the bare infinitive is assumed to express either simultaneity or posteriority relative to the base time, i.e. the event time of a relevant modal. This is because the temporal interpretation of the nonfinite form is affected by the property or nature of the finite form. In this case, the nature of modals (i.e. states of potentiality) prevents the bare infinitive from representing its event time as anterior to the event time of the modal at issue (see also section 2.2.2.1). Note that this process is advanced at the tense-interpretation level, not at the tense-structure level.

<sup>10</sup> There are two types of gerund in English: the nominal gerund and the verbal gerund (cf. Wasow and Roeper (1972) and Declerck (1991a)). Some criteria which distinguish them from each other are shown as follows:

- (i) A gerund is a nominal one,
  - a. if it is preceded by a determiner (e.g. *the/their* constant changing).
  - b. if it is premodified by an adjective (e.g. the *piercing* screeching).
  - c. if it is postmodified by an *of*-PP (e.g. his pacing *of the pavement*).

These criteria and examples are cited from Declerck (1991a:496). In this thesis, we take only the verbal gerund into account.

<sup>11</sup> Not all the past participles are accompanied by the morpheme *-en*; but for convenience' sake, I use the morpheme *-en* as the past participle morpheme in order to distinguish it from the past tense counterpart for which I use the morpheme *-ed*.

<sup>12</sup> Readers should not confuse the absolute and relative tense components with the absolute and relative tense interpretations. Both finite and nonfinite predicates can receive absolute and relative tense interpretations. Let us first consider finite predicates, which

consist of both the A- and the R-component. Observe (i):

- (i) a. Ryoko was shy.
- b. Sachiko will say that Ryoko went home.

In (ia), the past tense form *was* is viewed as receiving an absolute tense interpretation because its pastness is directly related to the speech time. In (ib), by contrast, *went* is seen as receiving a relative tense interpretation because it represents anteriority relative to a future time, i.e. the time of Sachiko's utterance.

Let us next consider nonfinite predicates, which consist only of the R-component. Consider (ii):

- (ii) Those sitting on the benches were asked to leave. (Comrie (1985:22))

The nonfinite predicate *sitting* can represent its event time as simultaneous with the event time of *were* (the relative tense interpretation) or as simultaneous with the speech time (the absolute tense interpretation). (See also section 2.2.2.1.)

To avoid confusion, I will refer to absolute and relative tense interpretations as deictic and non-deictic interpretations, respectively.

<sup>13</sup> If we dare call this interpretation of a present-tense predicate a future tense, we can do so. But this does not amount to saying that the "future tense" under consideration has the same status as the two absolute tenses, i.e. the present and the past tenses, because the former cannot establish its own time-sphere, i.e. the future time-sphere, while the latter two can.

<sup>14</sup> Since Declerck (1999b:11-12) has pointed out that the present tense in *if*-clauses and that in main clauses are ambiguous, arguing that my claim that they are "interpretive variants" cannot explain the ambiguity phenomenon, I have come to think it necessary to add the relevant discussion to the text in order to avoid further misunderstanding.

<sup>15</sup> My position here is based on Duffley's (1992) analysis of the nature of the bare infinitive in the after-position of modals. For further discussion, see Duffley (1992:93-

99).

<sup>16</sup> Patrick Duffley (personal communication) has pointed out to me that my definition of the gerund as it stands cannot account for why the sentences in (i) and (ii) below are grammatical.

(i) He avoided crashing into the wall.

(ii) I am considering moving to Canada.

He claims that in (i) the gerund's event "cannot be claimed to have been experienced at or before the time of the main verb" because the gerund's event is interpreted as not coming into existence, and in (ii) the gerund's event represents its event time as posterior to the main verb's time. I will defend my position by explaining the two sentences above one by one.

First, let me start with (i). At the tense-structure level, the gerund *crashing* is assumed to represent a temporal relation of non-posteriority. At the tense-interpretation level, the base time for the calculation of the event time of *crashing* ( $E_2$ ) is determined to be simultaneous with an implicit time of orientation (O) in the future, and thus the gerund is viewed as still expressing non-posteriority because the relation of simultaneity is a kind of non-posteriority. The reason why sentence (i) assumes an implicit time of orientation in the future is as follows. The lexical property of the main verb *avoid* requires that a hypothetical time of orientation, at which the complement event is assumed to happen if nothing does prevent it from happening, come in the future relative to the event time of *avoid* ( $E_1$ ); and the gerund's event is assumed to be experienced at the hypothetical time of orientation. The implicit time of orientation must come in the future because we cannot avoid events which have already actualized before the time of avoiding. This way of reasoning seems convincing because when we say that some event will be avoided, we presupposes that the event at issue was assumed to happen if nothing prevents it from happening.



passing that Declerck (1999b:21) has also mentioned the same point as Duffley, which can basically be explained in the same way that I have done thus far.

<sup>17</sup> According to Comrie (1985:22), in the case where the main-clause tense is past, the base time for the calculation of the nonfinite-predicate time tends to be identified with the main-clause time.

<sup>18</sup> Patrick Duffley (personal communication) has pointed out the possibility that my analysis of sentences like those in (21) in terms of stativity cannot be on the right track, providing me with the following sentence:

(i) Rieko hopes to be ready.

He argues that although both *hope* and *be ready* are stative predicates, sentence (i) does not receive the simultaneity reading, and thus the analysis proposed here cannot explain this.

Furthermore, he claims that the reason why sentences like those in (21) require the *to*-infinitive is due to the properties of the main verbs, i.e. *seem* and *appear*.

(ii) a. Rieko seems to be sick. (=21a))

b. He appears to be wise. (=21c))

In order to explain this phenomenon, he suggests that a form of logical subsequence is operating here. In particular, he contends that "appearances and semblances are felt to be logically prior to the attribution of the states of wisdom or sickness to the subject"; i.e., in (ii), for example, since we judge Rieko's condition on the basis of her semblance, there arises a posteriority relation between the time of seeing her and the time of judging her condition. In Duffley's view, this is why the *to*-infinitive is required in (ii).

My reaction to Duffley's comments is as follows. First of all, I do not claim that all *to*-infinitive sentences containing two stative predicates necessarily receive the simultaneous reading. Like Duffley, I also think that the lexical properties of the main verbs play an important role in inducing us to reanalyze the sentences in question in terms

of stativity. The reason why sentences like (i) cannot be reanalyzed in terms of stativity is due to the fact that the main verb *hope* here requires that the complement situation (the state of being ready) come about in the future relative to the event time of *hope*. This is verified by the fact that sentence (i) is semantically equivalent to sentence (iii):

(iii) Rieko hopes that she will be ready.

Secondly, although Duffley's explanation for the sentences in (ii) might work, I believe that in contemporary English, we tend to judge them to receive the simultaneous reading. This is verified by the fact that the sentences in (ii) are semantically equivalent to the following sentences:

(iv) a. It seems that Rieko is sick.

b. It appears that he is wise.

As is clear from (iv), the event time of the main verb is viewed as simultaneous with that of the *to*-infinitive. Moreover, it seems that Duffley's explanation cannot give a unified explanation of the sentences in (v) below, which convey almost the same message as the sentences in (ii).

(v) a. Rieko seems sick.

b. He appears wise.

He cannot give a logical-subsequence explanation for the sentences in (v) because they do not contain the *to*-infinitive.

From the above discussion, it can be concluded that our reanalysis-based explanation has not been falsified yet.

<sup>19</sup> Here, I restrict myself to what Nakau (1994) calls *statal passives*, ignoring what he calls *processual passives*. One of the criteria that Nakau presents as to the distinction between *statal* and *processual passives* is as follows: whether or not the progressive passive form is allowed. Observe the following, cited from Nakau (1994:376):

- (i) a. The cathedral is totally destroyed.
- b. \*The cathedral is being totally destroyed.
- (ii) a. \*The town is destroyed house by house.
- b. The town is being destroyed house by house.

As is clear from (i), since the passive *is destroyed* is not allowed to be converted into the progressive form, as shown by (ib), the passive is a statal passive; by contrast, as (ii) shows, the passive is viewed as a processual passive because it can be used in the progressive form. For further discussion as to this distinction, see Nakau (1994:Ch.24).

<sup>20</sup> It is usually the case that real passives are distinguished from adjectival passives. Adjectival passives are said to fulfill the following criteria:

- (i) They may be used after verbs other than BE, such as SEEM and BECOME.
- (ii) They accept intensifiers like VERY, RATHER, etc., the markers of comparison MORE and MOST and negative prefixes.
- (iii) They may be coordinated with a true adjective.
- (iv) Insertion of ALREADY in sentences in which they occur does not necessitate the use of the perfect.

(Bache and Davidsen-Nielsen (1997:218))

In our theory, since the *-en* form in adjectival passives is seen as a pure adjective, it combines with the copula to form a predicate. Thus, we do not have to apply the explanation for the sentences in (23) shown in the text to sentences like adjectival passive sentences. The question, then, arises as to whether or not the *-en* form of real passives and that of adjectival passives are relevant to each other. But such a question is not directly relevant to the discussion. I will leave it open now.

<sup>21</sup> Wierzbicka (1975:501-505) also considers that the adjective *broken* refers not only to a certain state of affairs, but also to its preceding process of breaking.

<sup>22</sup> I consider this to be an instance of the cause-effect metonymy. See Seto (1997)

for details.

<sup>23</sup> The *-en* form (e.g. *pleased*) in this construction seems to be an adjectivised past participle, so it is assumed to have the same status as a real passive like *glad* or *happy* in this thesis.



# CHAPTER 3

## TEMPORAL SCHEMATA

### 3.0. Introduction

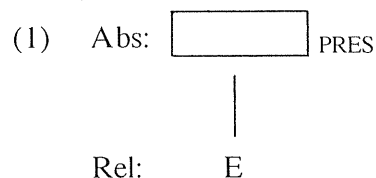
In this chapter, on the basis of the compositional tense theory proposed in chapter 2, I will formulate the basic temporal schemata of several typical sentences with finite predicates: sentences in the present and the past tenses, sentences referring to future time, and sentences in the perfect and the progressive form. The temporal schema associated with the tense structure of a given tense form (i.e. a temporal template) develops into an interpretive temporal schema with the help of the information conveyed by elements other than tense structure.

### 3.1. Simple Tenses

This section deals with the temporal schemata of sentences in the simple tenses, i.e. the present and the past tenses. They are simple tenses in the sense that they contain only one event time in a clause.

#### 3.1.1. Present Tense

I will begin with a description of the temporal schema of the semantic (or tense) structure of the present-tense predicate. This is shown in (1):



In the A-component, the rectangle with subscript PRES represents the present time-sphere. The R-component represents the event time (E) as being properly included in that time-sphere;<sup>1</sup> such a relationship is represented by the vertical line which expresses a

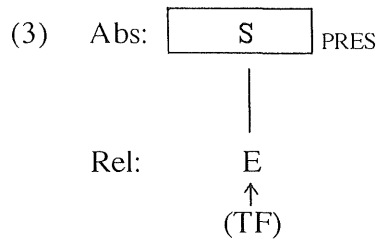
relationship of simultaneity because a relation of inclusion is a kind of relation of simultaneity.

Let us now move to an examination of sentences in the present tense in (2):

- (2) a. Hitomi is happy.
- b. Mana plays the *koto*.
- c. Whales are mammals.

Sentence (2a) describes the present state of Hitomi. By using (2a), the speaker can refer to either the specific situation of Hitomi or the permanent situation of Hitomi, i.e. her characteristic, though the latter interpretation is rather marked; in either case, the event time holds at the speech time. Sentence (2b), by contrast, is construed as describing Mana's habit of playing the *koto* on account of the property of non-stative predicates with the simple present tense: an English non-stative predicate in the present tense cannot express an ongoing or unbounded event (or situation) because of its characteristic of perfectiveness (cf. also Cowper (1998)), so a habitual reading manifests itself in order for the situation at issue to receive an appropriate interpretation (thus it is possible that Mana is not playing the *koto* when the speaker utters sentence (2b)).<sup>2</sup> Since a habit is a set of tokens of the same action or event implying an inherently unlimited time-span, it is construed as unbounded or homogeneous. In this sense, a habitual statement can be said to express a kind of stative situation. Sentence (2c), which is viewed as a generic sentence, also receives a stative interpretation: it exclusively represents the permanent situation of whales' character.

On the basis of the above observations, we can now represent the basic temporal schema of the present tense available at the tense-interpretation level, as in (3):



Since *is* and *plays* in (2a, b) are in the assertive form, their event times are construed as simultaneous with the speech time (S) (see section 2.2.1). In the case of generic readings like (2c), however, the speech time, i.e. a certain time on the time line, keeps itself in the background because of the nature of genericity. Recall that as we have stated in section 1.4, the length of the event time can vary according to the situation that the speaker has in mind. Thus, the event time can express either a limited time-span of a specific single situation (e.g. the unmarked reading of (2a)) or a longer time-span of a habitual situation (e.g. (2b)) or a (cognitively) limitless time-span of a generic reading (e.g. the marked reading of (2a) and (2c)).

It should be noticed that the temporal focus (TF) is an optional notion in the temporal schema; if the event time does not refer to a specific situation on the time line, the temporal focus is not directed at any part of the event time at issue. Thus, in a habitual reading like the one in (2b) and a generic reading like the one in (2c), the temporal focus is not operative, since the event time is associated not with a specific single event, but with an unspecified series of subevents or a permanent unchanged situation. The temporal focus works when the situation denoted by a present-tense predicate receives a specific reading (e.g. the unmarked reading of (2a)).

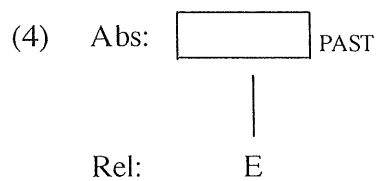
As for the distinction between a habitual and a generic reading, the speaker relates the event time to a certain time-span on the time line in the former case, whereas the speaker is not conscious of the time line.

To summarize, the present tense form per se establishes the present time-sphere (concerning the A-component) and represents its event time (concerning the R-

component) as being included in that time-sphere, as shown in (1). This is all the tense structure of the present tense form represents. At the tense-interpretation level, the event time is interpreted as simultaneous with the speech time, and we can clarify whether a given present tense expresses a specific or a habitual situation or a generic situation, as shown in (3).

### 3.1.2. Past Tense

Let us now turn to the past tense. The schema of the tense structure of the past tense form is shown in (4):



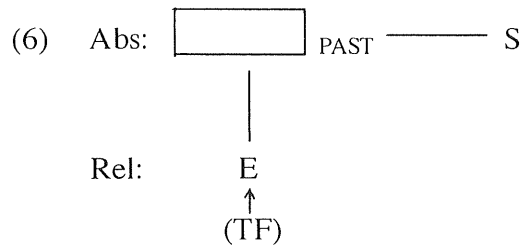
The A-component is occupied by the past time-sphere represented by the past tense morpheme and the R-component is occupied by the event time which is included in that past time-sphere.

I now turn to a consideration of some past tense sentences.

- (5) a. Rieko was kind.  
 b. Yoko played tennis.  
 c. Dodos were large birds.

A predicate in the past tense, stative or non-stative, can describe both a specific and a non-specific situation holding in the past, as (5a) and (5b) show. Thus, sentence (5b) can be interpreted as describing, say, the semelfactive situation of Yoko's playing tennis yesterday or as describing the past habit of Yoko's playing tennis. Sentence (5c) is usually interpreted as a generic sentence, suggesting that the situation at issue holds in the past and dodos are now extinct. This interpretation is brought about by our encyclopedic knowledge about dodos.

The basic temporal schema of the past tense at the tense-interpretation level is represented as follows:



As with the present tense version, when the event time denotes a specific single situation, the temporal focus is directed at it. The only difference between the past and present tense versions is that of the time-sphere.

It is worth noting that this schema can explain the following fact properly:

- (7) a. Mary was born in Mexico, but I don't know when.  
 b. He bought a red sports car, but I forgot when and where.

It is often said that the past tense expresses a definite past situation (cf. Comrie (1985), Leech (1987) and Quirk et al. (1985)). As (7) shows, however, the past tense does not always represent a definite situation: in (7), the situations holding in the past are not recognizable (or identifiable) to the speaker, as the second conjunct definitely shows (cf. Declerck (1991b:304-305), Fenn (1987:162-166) and McCoard (1978)). Here, I take a general view that what is definite is recognizable or identifiable to both the speaker and the hearer (i.e. the addressee). We can thus explain this issue in the following way. In the first conjunct, the temporal focus is not operative because the situations themselves are not recognizable to the speaker. That is, the situations involved are not specific. It is usually the case that what the speaker is not specific about is not recognizable to the addressee. Therefore, the past tenses of the first clauses in (7) can represent indefinite situations.

The past tense can of course represent a definite past situation, especially when it co-occurs with a definite time adverbial or when the position of the event time is clear

from the context:

- (8) a. Koji went skiing last Sunday.  
b. Ryoko was talking when I entered the room.  
c. Last week, I went to the annual festival held at Tokyo National University of Fine Arts and Music. I listened to Mana playing the *koto* there.

In both (8a) and (8b), the definite time adverbials *last Sunday* and *when I entered the room* make the past tenses definite. In (8c), by contrast, the event time of the predicate *listened* is definite because of the context: the adverb *last week* in the preceding sentence clarifies when the situation of the speaker's listening to Mana's playing the *koto* occurred.

To sum up, the past tense itself does not represent definiteness. All that the tense structure of the past tense form expresses is that it establishes the past time-sphere in which its event time is properly included, as shown in (4). Only at the tense-interpretation level can we interpret a given past tense as representing either definiteness (e.g. in the case of (8)) or indefiniteness (e.g. in the case of (7)) on the basis of the temporal schema in (6).

### 3.2. Complex Tenses

This section deals with the basic temporal schemata of sentences in the complex tenses, i.e. sentences referring to the future and those in the perfect tense. They are complex tense sentences because they contain more than one situation and accordingly more than one event time in a sentence.

#### 3.2.1. Future

As has been seen in chapter 1, *will* is considered to be a finite verb in the present tense. How, then, can we interpret sentences with *will* referring to the future (henceforth

future *will* sentences)?<sup>3</sup> In our system, a future *will* sentence is composed of the finite verb *will* and at least one nonfinite verb; the event time associated with the (first) nonfinite verb contributes to referring to future time (cf. also Nakau (1994:227-230)). For the sake of simplicity, in this section we will ignore the volitional use of future *will* sentences, confining ourselves to the pure future or non-volitional use (we will discuss the volitional use of *will* in detail in chapter 7).

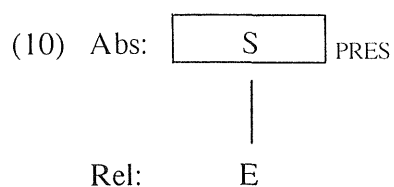
Before going into the analysis of future *will* sentences, we should recall that our theory is based on the assumption that a modal auxiliary, when expressing a semantically-filled situation,<sup>4</sup> can describe one situation and thus one event time, just as a full or main verb can. Thus, a future *will* sentence contains (at least) two situations and, accordingly, two event times: one is associated with *will* and the other(s) with the nonfinite verb(s).

We are now in a position to clarify the mechanism of future *will* sentences.<sup>5</sup> Consider (9):

- (9) a. They will go to Britain next spring.  
 b. Ken will be in New Zealand tonight.

(9a) and (9b) contain a non-stative verb (i.e. *go*) and a stative verb (i.e. *be*), respectively, though such a difference is irrelevant here.

Take (9a) for example. Let us start with a consideration of *will*. At the tense-structure level, the event time associated with *will* is included in the present time-sphere associated with the A-component. At the tense-interpretation level, in independent and matrix clauses *will* usually represents a speaker's mental state, i.e. prediction, which holds at the speech time. The tense structure of *will* at the tense-interpretation level is schematically represented, as in (10):

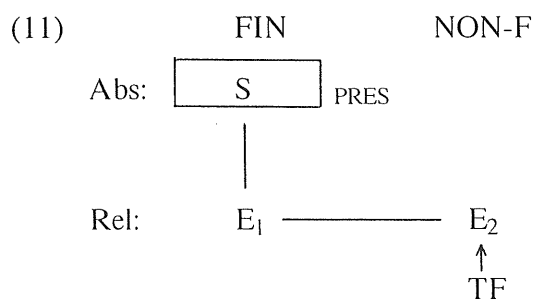


Here, the event time E denotes the speaker's prediction.

I now turn to the nonfinite verb *go*. Since *go* is in the bare infinitive form, it can express any kind of temporal relation with respect to a potential base time at the tense-structure level. At the tense-interpretation level, the temporal range which the bare infinitive *go* represents is restricted to the temporal area of non-anteriority in the after-position of the modal *will* (see section 2.2.2.1), and the nature of future *will* sentences, though their future reference is determined by, say, the context, makes the nonfinite verb *go* restrict itself to representing a relation of posteriority with respect to the event time of *will* as the time of orientation. As a result, the event time of *go* is interpreted as being located in the future.

It is a general view that future *will* sentences are future-oriented in comparison with sentences with *be going to* (cf. Coates (1983), Leech (1987) and Palmer (1988)). In our theory, this statement is interpreted in the following manner: in the case of future *will* sentences, the temporal focus (TF) is directed at the event time of the nonfinite verb referring to future time, while in the case of sentences with *be going to*, the temporal focus is directed at the event time associated with *be going to* expressing an ongoing situation at the speech time (this point will be discussed in detail in chapter 7).<sup>6</sup>

In view of these observations, we can now present the basic temporal schema of future *will* sentences as follows:



E<sub>1</sub> represents the event time of the finite predicate (e.g. *will* in (9a)) and E<sub>2</sub> the event time of the nonfinite predicate (e.g. *go* in (9a)). (If there are two nonfinite predicates, E<sub>3</sub> is



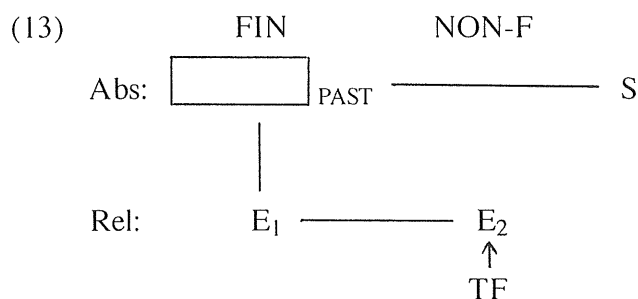
added to represent the second nonfinite predicate.) It must be kept in mind that future *will* sentences never establish the future time-sphere:  $E_2$  is posterior to  $E_1$ , which is properly included in the present time-sphere. The nonfinite predicate is not directly relevant to any time-sphere, so the event time of the nonfinite predicate is not included in the time-sphere established by a finite predicate.

The same line of argument is applied to sentences referring to the future-in-the-past. Consider (12), for example:

- (12) a. I thought that she would love me.  
 b. He told me that he would be free in a few minutes.

Take (12a) as a sample case. The complement clause contains two verbs, i.e. the finite verb *would* and the nonfinite verb *love*. *Would* first establishes the past time-sphere and then represents the mental state of the original speaker, i.e. his or her prediction, holding at the time of his or her utterance in that time-sphere.<sup>7</sup> On the other hand, the nonfinite verb *love*, which has only the R-component, represents its event time (i.e.  $E_2$ ) as following the event time of *would* (i.e.  $E_1$ ) by virtue of the interaction between the property of *would* and the context, thus expressing posteriority relative to  $E_1$ .

The temporal schema of sentences with *would* is schematically represented in (13):



The only difference between this schema and its present-tense counterpart (11) is that in (13) the time-sphere of the finite verb (i.e. *would*) is past. The schema in (13) implies that there is no direct relation between the speech time and  $E_2$ , so  $E_2$  can theoretically be anterior to, simultaneous with, or posterior to, the speech time. This means that the event

time of a nonfinite predicate (e.g. *love* in (12a)) is not always contained in the time area (e.g. the past area in the case of (12a)) associated with the time-sphere established by a finite predicate (e.g. *would* in (12a)).

### 3.2.2. Perfect Tense

This subsection deals with the perfect tense. As with future *will* sentences, I regard a sentence in the perfect tense (or a perfect tense sentence) as consisting of two situations: one is associated with perfect *have* and the other with the past participle complement (this point will be discussed in greater detail in chapter 4). In our system, perfect *have* is a finite verb and describes a resultant state which follows the event (or state) denoted the past participle complement.

Although a perfect tense sentence and a future *will* sentence both consist of two situations, there is a difference in the way that the two situations of both sentences are combined to form a dual situation. With future *will* sentences, the situation associated with *will* and that associated with an infinitive are combined at the tense-interpretation level. With perfect tense sentences, on the other hand, the process of combining the situation denoted by *have* with that denoted by the past participle is carried out at the tense-structure level. In other words, *have* + the past participle morpheme *-en* as a whole is considered to be a meaningful grammatical unit, i.e. a temporal template.

There are several pieces of supporting evidence for this claim. First, only the combination of *have* and the past participle can express a dual situation denoted exclusively by the English perfect tense.<sup>8</sup> A future *will* sentence, by contrast, is not a unique form expressing a future situation. In addition to future *will* sentences, modals such as *may*, *can*, and *must* with the bare infinitive, quasi-modals such as *be going to* and *be about to* with the bare infinitive, and even the present progressive form can refer to future situations.

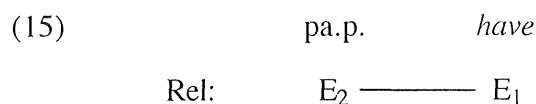
Secondly, a perfect tense sentence exclusively requires that the past participle complement express anteriority relative to the base time represented by *have*; sentences with *will*, by contrast, can be interpreted as expressing present-time situations (e.g. *That will be the postman*) as well as future-time situations (e.g. *She will be 35 next year*). The fact that an ambiguous (polysemous) relation is possible with respect to *will*-sentences is explainable by the claim that modal *will* and the bare infinitive combine to form a dual situation at the tense-interpretation level, because at this level different ways of combining the two predicates can lead to different "interpretive variants" in my sense, i.e. future *will* sentences and *will* sentences of present time reference.

Thirdly, future *will* sentences (and *be going to*-sentences) can be modified by two time adverbials referring to distinct times, whereas perfect tense sentences cannot, as shown in (14):

- (14) a. Yesterday Ken {would/was going to} play tennis tomorrow.  
 b. \* Yesterday at six, Ken had played tennis yesterday at five.

The difference in acceptability between these two sentences can be viewed as showing the degree of one situation's independence from the other situation. We can consider that this difference reflects the difference of tense levels where the two situations of the two types of sentences are combined (this intuition will be verified from the point of view of our tense theory in chapter 6).

The above observations imply that the form *have* + the past participle morpheme *-en* is a (frozen) grammatical unit expressing the temporal template of a particular tense, i.e. the perfect tense. Thus, the form under consideration has a composite tense structure, which is schematically shown in (15):<sup>9</sup>



In (15), E<sub>1</sub> symbolizes the event time associated with *have* and E<sub>2</sub> the event time

associated with the past participle (symbolized by pa.p.). The temporal relation of  $E_2$  to  $E_1$  is already fixed at the tense-structure level. (In the case of the present perfect form, the A-component represents the present time-sphere and in the case of the past perfect form, the A-component represents the past time-sphere.) The above conclusion is compatible with our general understanding that we cannot go to the interpretation stage without establishing the template for a given grammatical unit.

We are now in a position to consider some examples of perfect tense sentences in detail. Observe (16):

- (16) a. Mana has played the *koto*.  
b. The train has arrived.  
c. He has died.

In (16a), the past participle *played* represents its event time  $E_2$  as anterior to the event time  $E_1$ , associated with *has*, at the level of tense structure. Here,  $E_1$  denotes the event time of the resultant state following the event of Mana's playing the *koto*; e.g.,  $E_1$  can be the event time of the state of Mana's being exhausted. Since *has* is a finite verb in the present tense,  $E_1$  is located in the present time-sphere established by the present tense morpheme.

It is at the tense-interpretation level that a given perfect tense sentence is interpreted as expressing a finally-fixed temporal value. In (16a), the nature of the assertive form *has* allows the situation to be related to the present, but not to the future (this process is carried out at the first stage of this level). At the following stage(s) of this level, a perfect tense sentence can be interpreted as expressing an instance of a certain use of the present perfect: under certain conditions, we may use the sentence in (16a) in the sense of Mana's having practiced the *koto* many times in order to explain why Mana is good at the *koto* now. In this case, the resultant state may be that of Mana's being good at the *koto*, i.e. a result inferred from the preceding event, so the present perfect at issue is viewed as an experiential perfect.<sup>10</sup> (With respect to the mechanism of classifying English present

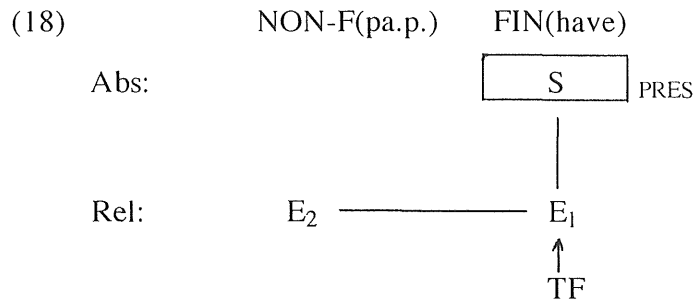
perfects into certain types of uses, see chapter 4.)

Let us now move to an establishment of the basic temporal schemata of finite perfect sentences at the tense-interpretation level. I will start with the present perfect. In the present perfect, the temporal focus is assumed to be directed at  $E_1$ , i.e. the resultant state holding at the speech time, because it is generally said that in comparison with the simple past, the present perfect is present-oriented (cf. Leech (1987), Palmer (1988), and Quirk et al. (1985), among others). (This point will be discussed in greater detail in chapter 5.) To clarify this notion, compare (17a) with (17b).

- (17) a. I've washed the car. (It looks lovely.)  
b. I washed the car. (But it may be dirty again now.)

In (17a), the temporal focus is directed at  $E_1$ , i.e. the event time of the resultant state described by the sentence in the parentheses, which is simultaneous with the speech time.<sup>11</sup> This is because the present perfect entails the resultant state as part of its semantics, and the speaker emphasizes that the event time of the resultant state stemming from the preceding event (symbolized by  $E_2$ ) obtains at the speech time (see chapter 4 for further discussion). This is why the present perfect is said to represent "current relevance." In (17b), by contrast, the temporal focus is automatically directed at the situation in the past itself because there is only one situation in the basic semantic structure of the simple past tense (see the schema in (6)); thus, whether or not its corresponding resultant state holds true at the speech time is irrelevant to the truth-conditions of the simple past tense.

We can now present the basic temporal schema of sentences in the present perfect operative at the tense-interpretation level:



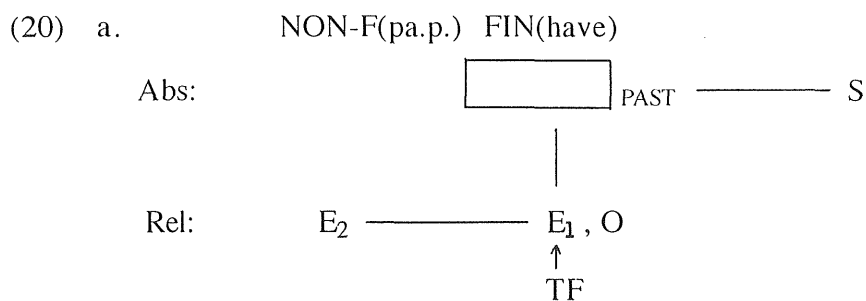
This schema shows that E<sub>2</sub> and E<sub>1</sub> are calculated from the speech time, i.e. the time of orientation in this case. In an independent clause, E<sub>1</sub> is construed as simultaneous with the speech time (S) on account of the nature of assertion expressed by the finite verb *have*. As a result, E<sub>2</sub> comes before S, being located in the past.

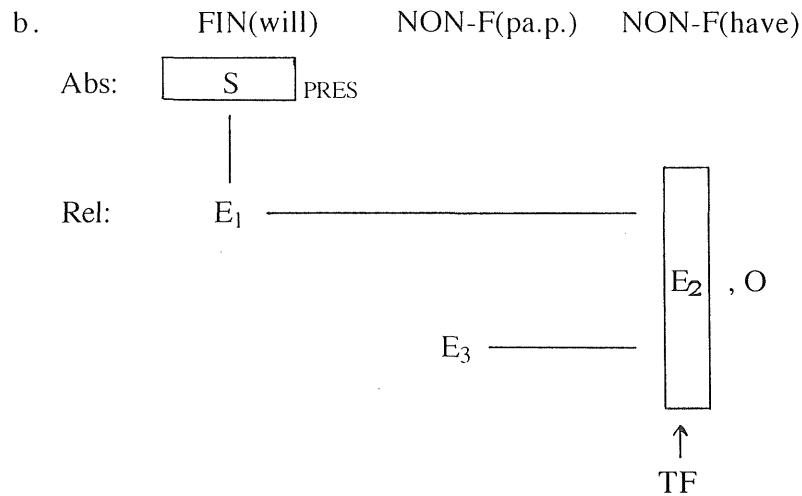
The same line of analysis is applicable to both the past and the future perfect. Consider, for instance, the following:

- (19) a. Mana had left the hall when I arrived there.  
 b. Mana will have left the hall when I arrive there.

In (19a), the main clause consists of two situations and, thus, it contains two event times, i.e. the one associated with *had* (E<sub>1</sub>) and the one associated with *left* (E<sub>2</sub>). In (19b), on the other hand, the main clause is composed of three situations and it thus has three event times: the finite verb *will* represents E<sub>1</sub>, the nonfinite verb *have* represents E<sub>2</sub>, and the nonfinite verb *left* represents E<sub>3</sub>.

The basic temporal schemata of the past and the future perfect, which are in operation at the tense-interpretation level, are represented schematically in (20):





The temporal schema of the past perfect in (20a) is parallel to that of the present perfect in (18) on the time line, except that in (20a) the A-component is marked by past while in (18) the A-component is marked by present. In (19a), E<sub>1</sub> denotes the time of the state of Mana's not being at the hall holding at the subordinate time of the speaker's arrival, which functions as the time of orientation (O) for the calculation of the past perfect; both times are located in the past time-sphere. In the case of the future perfect in (19b), there is greater complexity. E<sub>1</sub>, associated with *will*, denotes the time when the speaker's prediction obtains. E<sub>2</sub>, associated with *have*, denotes the time of Mana's not being at the hall. E<sub>2</sub> is posterior to E<sub>1</sub> because of the nature of future *will* sentences: future *will* sentences require the posteriority of their complement (i.e. the bare-infinitive) situation. E<sub>2</sub> holds true at the time of orientation in the future indicated by the temporal-clause verb *arrive*. E<sub>3</sub>, associated with *left*, comes before E<sub>2</sub>, but the relation between E<sub>3</sub> and the speech time is vague. The big difference between the present and past perfect, on one hand, and the future perfect, on the other, is that in the latter case, perfect *have* occurs in nonfinite position because *will* occupies the finite position, while in the former, *have* occupies the finite position. But the three kinds of perfects are equivalent to one another in that in each perfect, the perfect tense itself contains two situations, i.e. the resultant state and its corresponding preceding situation, and expresses an anterior relationship of

the latter situation to the former situation holding at a time of orientation (the time corresponds to the speech time in the case of the present perfect).

### 3.3. Orientational Event Time

Before going into the temporal schema of the progressive form, let us introduce a variant of an event time, which I call an *orientational event time*.<sup>12</sup> This type of event time is associated with a semantically-unfilled situation, or more precisely, a situation whose semantic content is very poor or general (cf. note 3), and thus functions merely as a base time (which also functions as a time of orientation at the tense-interpretation level).<sup>13</sup>

To clarify what an orientational event time is, consider (21):

(21) a. Tomorrow will be Sunday. (Hornby (1975:95))

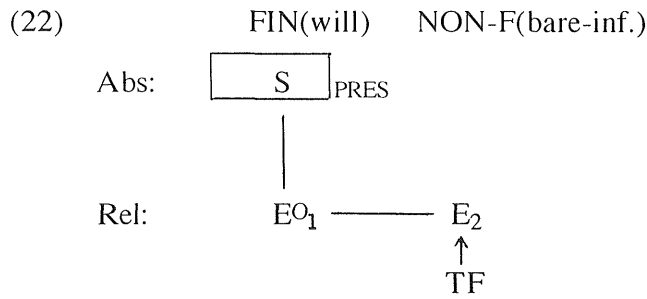
b. My babe-in-arms will be 59 on my 89th birthday.

(Palmer (1988:148))

In section 3.2.1, it has been argued that *will* describes a speaker's mental state, i.e. prediction, but it seems hard to think of the *wills* in (21) as describing a speaker's prediction. Take (21a) as a sample case. If it is uttered on Saturday, it is normally nonsense for the speaker to make a prediction about the situation described in (21a) because it is calculated automatically and objectively that the next day is certainly Sunday. The same applies to (21b). In this sense, the *wills* in (21) do not describe any semantically-filled situation.

Note, however, that although this type of *will* does not represent any semantically-filled situation, the time associated with *will* still has a temporal function, i.e. serves as a base time for the calculation of the position of the event time of the nonfinite verb (e.g. *be* in (21a)). Hence we speak of this type of event time as an orientational event time. The temporal schema of sentences like those in (21) is thus represented as follows:





EO represents an orientational event time which is related to one (semantically-unfilled) situation. I note incidentally that in the case of (21), it is not until the tense-interpretation level that the event time of *will* is interpreted as an orientational event time, because only with the information conveyed by the context can we view the *will* at issue as expressing either a semantically-filled or semantically-unfilled situation.

### 3.4. Progressive Form

Having introduced an orientational event time, we can now analyze the temporal schema of sentences in the progressive form (i.e. progressive *be* plus the present participle) in great detail. I argue that the temporal schema of the progressive form is composed of two event times. But unlike future *will* sentences (except for such *will*-sentences as those in (21)) and the perfect tense, the progressive form is not associated with two semantically-filled situations. That is, the progressive auxiliary *be* denotes an orientational event time while the present participle denotes a "pure" event time.<sup>14</sup>

The reason why progressive *be* does not express a semantically-filled situation is that the lexical property of progressive *be* is similar to that of the copula *be*. Observe:

- (23) a. Tom is big.  
       b. Sachiko and Ryoko are good friends.

In these sentences the copula *be* alone does not have any semantic content at all; the copula *be* is understandable only if it combines with the following elements (e.g. adjectives and nouns) to form a grammatically meaningful unit, i.e. a predicate or a verb

phrase. Progressive *be* is also understandable only when it combines with the present participle to form a grammatically meaningful unit. In this sense, both types of *be* are similar to each other. Hence progressive *be* merely serves as an orientational event time (cf. also the statement with respect to the passive form in section 2.2.2.2).

It should be kept in mind here that as in the case of the perfect tense, the conflation of the two situations constituting the progressive form also occurs at the tense-structure level; that is, the form *be* + the present participle morpheme *-ing* serves as the template with which we can combine further information to receive a certain interpretation. I argue that the progressive form also constitutes a temporal template at the tense-structure level for the following reasons. For one thing, since progressive *be* as well as the copula does not express a semantically-filled situation, it is nonsense to construct the tense structure of such a predicate alone. For another, only the combination of *be* and the present participle can represent an ongoing action or event denoted by the progressive aspect. From the above observations, it can be said that the form *be* + the present participle morpheme *-ing* is a grammatical unit designed exclusively for the progressive aspect. The composite semantic (or tense) structure of the progressive form is schematically represented in (24):

$$(24) \quad \begin{array}{ccc} & be & pr.p. \\ Rel: & E^{O_1} & , \quad E_2 \end{array}$$

$E^{O_1}$  represents the orientational event time associated with *be* and  $E_2$  represents the (pure) event time associated with the present participle (symbolized by pr.p.).

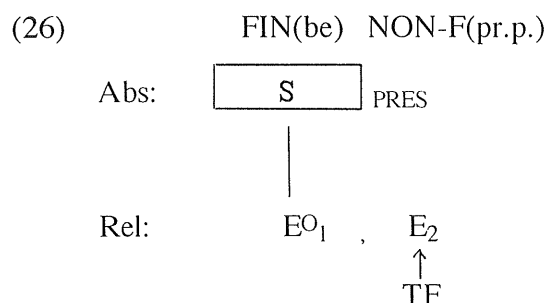
Let us turn to a consideration of some examples of the progressive form. Let us consider the case of the present progressive, as shown in (25):

- (25) a. Tom is cheating Huck.  
 b. They are playing tennis.

In (25a), for example, the predicate *is* represents an orientational event time, i.e.  $E^{O_1}$ , which serves as a base time for evaluating the event time of *cheating*, i.e.  $E_2$ . At the

tense-structure level,  $E_{O_1}$ , associated with *is*, and  $E_2$ , associated with *cheating*, are combined to form a template, i.e. the progressive form; the temporal relation of  $E_2$  to  $E_{O_1}$  is that of simultaneity. At the tense-interpretation level, the assertion accompanying the assertive form *is* requires that  $E_{O_1}$  coincide with the speech time. As a result,  $E_2$ , i.e. the event time of Tom's cheating Huck, is construed as holding at the speech time. (Note in passing that  $E_{O_1}$  counts as an orientational event time because at the tense-interpretation level the progressive *be* requires another predicate to form a meaningful unit in one independent clause.)

We can now provide the basic temporal schema of the present progressive at the tense-interpretation level, shown in (26):



A comma expresses simultaneity. The temporal focus (TF) is assumed to be directed at  $E_2$  for the following reasons. For one thing, it is natural that the TF tends to be directed at the event time of a semantically-filled situation. For another, in this case, since  $E_{O_1}$  and S share the same point (or period) on the time line, the role of  $E_{O_1}$  as a base time is of little importance; thus it is natural that the speaker pays little attention to such a time.

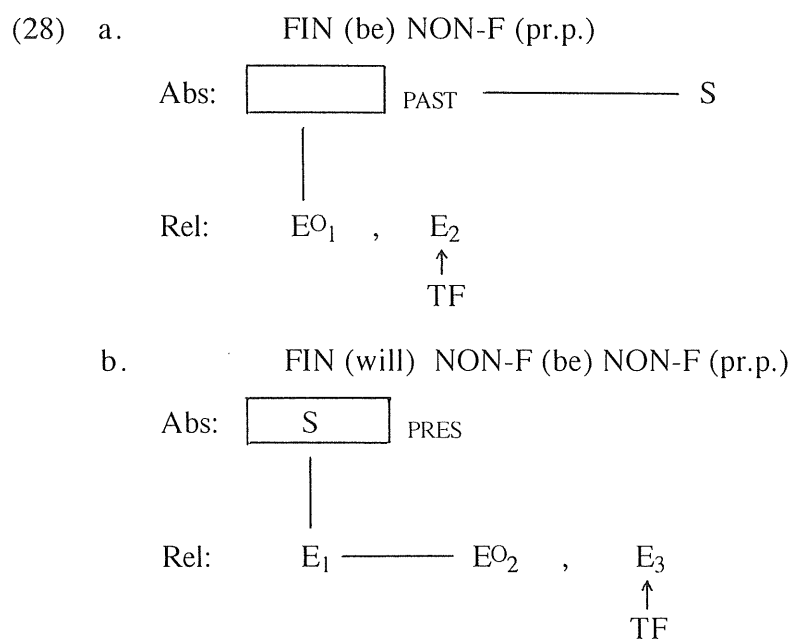
The same line of analysis applies to both the past and future progressives.

- (27) a. Mana was playing the *koto* at the new concert hall.  
 b. I will be waiting for you.

In both cases, the simultaneous relationship between  $E_{O_1}$  and  $E_2$  is already determined at the tense-structure level. Further temporal information is given at the tense-interpretation

level. In (27a), the predicate *was* represents  $E_{O_1}$  as holding somewhere in the past time-sphere. In (27b), the predicate *will*, associated with  $E_1$ , expresses the speaker's prediction which obtains at the speech time. The nature of future *will* sentences requires that  $E_{O_2}$ , associated with progressive *be*, occur in the future. (We have seen in section 3.2.1 that the combination of *will* and the bare infinitive is done at the tense-interpretation level.)

To clear up the temporal relations in (27), let us represent the temporal schemata of sentences in the past and future progressive forms in (28a) and (28b), respectively:



In (28b), the reason why the temporal focus (TF) is not directed at  $E_1$  is that as has been seen in section 3.2.1, the temporal focus is assumed to be directed at a future time relative to the event time of *will* (i.e.  $E_1$ ) in the case of future *will* sentences.

Let us now turn to the question of why a present participle can be viewed as expressing an event time independently of progressive *be*, while an adjective or noun following the copula *be* cannot. An answer to the question lies in the fact that the present participle has a more verb-like characteristic than pure adjectives and nouns. Since a verb

is generally assumed to represent a situation related to a time point or period on the time line, the present participle can also be seen as related to a given time point or period independently of progressive *be* because of its verb-like characteristic. In this view, the progressive can represent the situation where progressive *be* and the present participle are related to two different times.

This is verified by the fact that the event time represented by the present participle and the event time represented by *be* are specified by two different time adverbs.<sup>15, 16</sup>

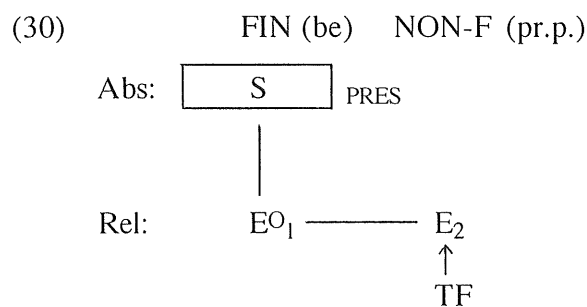
Consider (29):

(29) a. Now I'm flying down there tomorrow night.

(C. Webb, *The Graduate*, p.155)

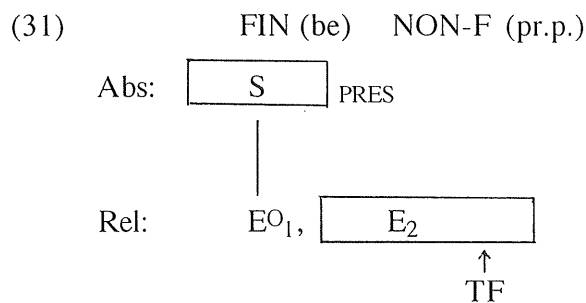
b. Yesterday you were coming tomorrow. (Huddleston (1969:782))

Take (29a) as a sample case. The adverbs *now* and *tomorrow night* specify the (orientational) event time of *be* and the event time of *flying*, respectively. The temporal schema of (29a) is like this:



There is one big difference between this schema and the schema in (26): in the latter schema, the present participle is interpreted as expressing simultaneity, while in the former, the present participle is reinterpreted as expressing posteriority. Since the present participle is assumed to represent simultaneity at the tense-structure level, it follows that at the tense-interpretation level, the present participle in (26) is construed as expressing its default value, whereas the present participle in (30) is construed as expressing a new temporal value derived from its original value.<sup>17</sup>

Why, then, is it possible that the use of the progressive expressing posteriority is derived from the original use of the progressive expressing simultaneity (at the tense-interpretation level)? We can explain this in terms of the temporal schema of the progressive in the following way. First, in the case of the progressive the temporal focus (TF) is directed at the event time of the present participle. Second, it is possible that the temporal focus is directed at a certain part of the event time, but not the whole event time, associated with the present participle. Given these, we can say that since the present participle expresses an ongoing situation which can potentially extend into the future, the temporal focus can be directed at a certain part of the psychologically extended situation which is located in the future. This process can be diagrammatically represented in (31):



E<sub>2</sub>, which is represented by a rectangle, indicates that the event time of the situation described by the present participle subjectively extends from now to the future in the speaker's mind. After the temporal focus is directed at the future part of E<sub>2</sub>, the part at issue is profiled, and thus the progressive is reinterpreted as expressing posteriority, as shown in (30).

This kind of explanation is indirectly supported by the fact that the present progressive expressing posteriority usually relates to a situation in the near future (see Leech (1987)). Sentence (29a) is a good example of this. Note, however, that this proximity is not necessarily a physical one. Observe (32):

(32) Next Saturday night, we're sending you back to the future.

(C.S. Gardner, *Back to the Future*, p.135)

Sentence (32) is uttered after Doc Brown has just found out how to send Marty back to the future; the day when sentence (32) is uttered comes a week before the Saturday in question. But in Doc's mind, the procedure of sending Marty back to the future is clear enough, and the procedure is being carried out psychologically; the plan will be actualized at the end of the psychologically ongoing process stretching into the future.

From the above observations, our explanation in terms of the temporal schema can account for why the progressive can have both the use of simultaneity and that of posteriority in a systematic and motivated way. Since they are semantically related to each other, thus representing a polysemous relation, the same form (i.e. the progressive form) is used for both of the temporal relations, i.e. that of simultaneity represented in (26) and that of posteriority represented in (30).

### **3.5. Summary**

In this chapter, I have formulated the basic temporal schemata of sentences in the present and the past tense, future *will* sentences, and sentences in the perfect tense and the progressive form (as for the progressive form, we have also constructed a derived temporal schema representing posteriority). They provide a systematic explanation of the mechanism of interpreting English tenses.

## NOTES TO CHAPTER 3

<sup>1</sup> As shown in note 5 of chapter 2, the relationship of simultaneity is divided into two sub-relationships: "strict coincidence" and "inclusion." This relation holds between two time notions. For example, with the present tense, when the event time and the speech time share the same length of time, the temporal relation is the one of strict coincidence; on the other hand, when the event time includes the speech time, the temporal relation is the one of inclusion (cf. Declerck (1991b:313-319)). For example, (ia) expresses the relationship of strict coincidence and (ib) that of inclusion:

- (i) a. Nakayama scores!
- b. Today Ryoko is in her room from five to nine.

<sup>2</sup> In the case of sports commentaries and the patter or commentary of conjurers and demonstrators, we can use the simple present tense to refer to a specific single situation (cf. Leech (1987:6-7)).

<sup>3</sup> In this chapter, I consider only the future-reference use of *will*-sentences, which I refer to as future *will* sentences, for the sake of convenience. But this does not mean that I admit the future tense represented by future *will* and thus distinguish it from modal *will*. The relevant detailed discussion will be postponed till chapter 7.

<sup>4</sup> In this thesis, I use the term *semantically-filled situations* in the sense of 'situations whose semantic content is rich enough.' On the other hand, I use the term *semantically-unfilled situations* in the sense of 'situations whose semantic content is very poor or schematic'; i.e., a semantically-unfilled situation does not carry rich descriptive information, as in the case with a lexical verb such as *sleep* or *play*.

<sup>5</sup> Readers should distinguish the future use of *will* from the epistemic use of *will* representing a present prediction, as shown in (i):

- (i) a. Rieko will be at home now.
- b. John will be in his office.



This type of *will* sentence is analyzed in the same way as a sentence like *Rieko must be at home now*, as shown in section 2.1.2. But I emphasize again that the above statement does not amount to saying that I admit the category of "future tense" represented by the future tense marker *will*.

6 It will be discussed in chapter 7 why and how the temporal focus shifts from the event time of *will* to the event time of the nonfinite verb in the case of the future and predictive use. It will also be demonstrated there that the difference of the position of temporal focus between the two forms (i.e. *will* and *be going to*) reveals some syntactic and semantic differences between sentences with *will* and sentences with *be going to*.

7 As is shown in Hirose (1995, 1997a, 1997b, 1998) and will be shown in chapter 8, in indirect speech modal elements like modality or modal adverbials must be ascribed to the original speaker, not to the reporter. For further discussion, see Hirose (1995, 1997a, 1997b, 1998) and chapter 8.

8 It is often said that in a sentence like *He is gone*, the form *be* + the past participle morpheme *-en* represents a perfect tense (cf. Ota (1954:6-9)). This is true from a diachronic perspective, but some linguists consider such a past participle to be an adjective. Michaelis (1998:132-135) discusses this matter in detail. I do not enter into this and ignore the form *be* + the past participle complement in this paper.

9 One of the consequences stemming from this position is that we can explain, with a certain constraint, why the English present perfect cannot go with what I call adverbials of definite time-position such as *yesterday* and *at four*, which will be demonstrated in chapter 6.

10 What kind of resultant state a given sentence in the perfect tense expresses depends on the lexical property of the past participle, the context or the type of uses of the perfect (the experiential perfect tends to contain an indirect resultant state, but not a direct one, because of its nature). Consider (i), for example:

- (i) a. Yoko has gone to Singapore.
- b. I have visited Italy once.

Thus in (ia), the resultant state may be, say, the state of Yoko's not being at the Narita airport, and in (ib) the resultant state may be, say, the situation in which the speaker now knows much about Italy. This will be discussed in greater detail in chapter 4.

<sup>11</sup> As is stated in Schwenter (1994), it seems that in the "hot news" perfect, exemplified in (i), a speaker directs his or her focus at the event associated with the past participle.

- (i) a. The train station has burned to the ground! (Schwenter (1994:997))
- b. Malcolm X has just been assassinated. (McCawley (1971:104))

This type of present perfect sentence will be discussed in detail in chapter 4.

<sup>12</sup> Renaat Declerck (1999b, personal communication) criticizes my definition of an orientational event time, arguing that a semantically-unfilled situation cannot represent any kind of event time. But, along the lines of Heine (1993:89), we can consider that a certain event time expresses merely an abstract and image-schematic situation whose semantic content is very poor or general (see also note 4), and, thus, only its temporal function is focused on, such a situation providing a base time for the calculation of other event times. This line of explanation is possible because we take a prototype analysis of the category of main verb.

<sup>13</sup> It should be noted here that an orientational event time is distinguished from a pure event time functioning as a time of orientation. One of the reasons to distinguish between the two notions is that the former is necessarily an element of a target clause itself and is meaningless without a pure event time at the tense-interpretation level, while the latter can originally be an element of another clause and can occur alone in that clause at the tense-interpretation level. Observe (i):

- (i) a. Mana will say that she played the *koto* at the wedding.

b. Tomorrow will be Sunday. (=21a))

In (ia), the pastness represented by the complement verb is related to a future time denoted by the nonfinite verb *say* in the matrix clause at the tense-interpretation level. That is, the (pure) event time of *say*, which is originally an element of the matrix clause, functions as a time of orientation for the calculation of the event time of *played* in the complement clause. Moreover, the event time of *say* alone functions as an event time in the matrix clause. Therefore, the event time of *say*, by definition, is not regarded as an orientational event time. In (ib), by contrast, the event time associated with *will*, which serves as a time of orientation, is an element of the target clause itself (i.e. a future *will* sentence), and must be accompanied by at least one pure event time (i.e. the event time of *be Sunday* in this case) at the tense-interpretation level. Thus, the event time of *will* is regarded as an orientational event time.

<sup>14</sup> It should be noted that the event time associated with *will* in future *will* sentences like those in (21) is regarded as an orientational event time after a given sentence with *will* is regarded as a future *will* sentence at the tense-interpretation level, while the event time associated with *be* in the progressive form is already regarded as an orientational event time at the tense-structure level as well as is also regarded as an orientational event time at the tense-interpretation level, as I will see in the text.

<sup>15</sup> Pure adjectives, irrespective of the difference between stage-level and individual-level predicates, cannot be specified by two distinct time adverbs, as shown in (i):

- (i) a. \*Now the floor is dirty tomorrow.
- b. \*Now the door is wooden tomorrow.

The adjective *dirty* in (ia) is viewed as a stage-level predicate and the adjective *wooden* in (ib) is seen as an individual-level predicate. I am grateful to Masao Okazaki for bringing this point to my attention.

<sup>16</sup> One might argue that since progressive sentences like those in (29) can be modified by two different time adverbs, the conflation of progressive *be* and the present participle should be carried out at the tense-interpretation level as with the case of future *will*-sentences, but not at the tense-structure level, as I have stated in the text. However, besides the two reasons already mentioned in the text, we can adduce as further evidence for my position the fact that the progressive expressing simultaneity is generally viewed as a basic type of the progressive form in comparison with progressive sentences of future time reference such as those in (29) (cf. also note 17), and thus the progressive expressing posteriority is considered to be a derived version of the progressive under certain conditions, which is carried out at the tense-interpretation level in my theory.

<sup>17</sup> We can take the progressive expressing simultaneity as a basic type in comparison with the progressive expressing posteriority for the following reasons. First, only certain limited types of verbs are allowed to represent the progressive expressing posteriority. Secondly, without a time adverbial specifying a different time from the time associated with *be*, the present participle has a strong tendency to be interpreted as referring to the same time as the event time of *be*. See Declerck (1991a:92-93) for details.

## **PART II: APPLICATIONS**

## CHAPTER 4

### THE MECHANISM OF INTERPRETING PRESENT PERFECT\*

#### 4.0. Introduction

The English present perfect has received a lot of attention in linguistic literature. Previous studies on this topic can be divided mainly into two types in terms of how to treat its semantic structure. One type of analysis takes the position that the present perfect tense has only one meaning from which more than one use stems pragmatically.<sup>1</sup> The other type takes the position that the present perfect tense itself has more than one meaning (i.e. basic semantic structure).

In view of the results of the following two ambiguity tests, i.e. the proform *do so* test and the gapping test, we will adopt the former analysis.

- (1) Max has been fired, and so has Fred. (Bolinger (1977:19))
- (2) a. John has lived in Chicago from time to time since 1973, and Bill continuously since 1970.  
b. The democratic system really works. Republican candidates have won in past elections, and Mr. Carter in this one.  
c. The returns are just in. Republican candidates have won in past elections, and Mr. Nixon in this one.

(Inoue (1979:565))

The example in (1) shows vagueness results: the present perfect in the first conjunct can have a sense different from that in the second conjunct.<sup>2</sup> This is justified by the following examples:

- (3) a. Edith: Max has been fired!  
Ethel: So have I. Many times.  
b. I've been arrested but Ray just has.

(Bolinger (1977:19))

In (3a), for example, the present perfect in Edith's utterance represents the "hot-news" sense, while the present perfect in Ethel's utterance represents the experiential sense. The result means that the present perfect itself does not represent two or more meanings; but rather, it represents only one meaning from which several (pragmatic) uses or interpretations are derived by means of contexts.

The sentences in (2) show the same results. Take (2a) for example. The first conjunct is seen as expressing an experiential perfect because of the presence of the frequency adverb *from time to time*, while the second conjunct is viewed as expressing a continuative perfect because of the presence of the adverb *continuously*. Thus, it can be said that the present perfect itself has only one meaning and can receive several (pragmatic) interpretations.

The results of the above observations can be accounted for by our compositional tense theory in the following way. In the case of the present perfect tense, at the first stage of the tense-interpretation level, the base time of the present perfect form, which constitutes a temporal template and has the temporal value of 'anteriority to the base time in the present time-sphere' at the tense-structure level, is interpreted as simultaneous with the speech time; and thus, we can get the basic temporal schema of the present perfect tense which represents its meaning. At the following stage(s), the temporal value of the basic temporal schema, i.e. the meaning (or the basic semantic structure) of the present perfect tense, interacts with the information conveyed by time adverbials or contexts to lead to more specific pragmatic interpretations or uses such as experiential or continuative perfects.

In this connection, questions such as the following necessarily arise:

- (4) a. How many uses are derived from the basic temporal schema of the present perfect tense? What is the mechanism?

- b. Why can a certain use of the present perfect tense (e.g. an experiential perfect) be interpreted as it is? Why can or should the present perfect tense be regarded as representing a certain range of uses?

Few previous studies have given appropriate answers to these questions. The main purpose of this chapter, then, is to answer them within the framework of the compositional tense theory proposed in the previous chapters.

This chapter illuminates the mechanism of interpreting a given present perfect tense sentence as a case study of showing how the interpretation mechanism of a temporal template works at the tense-interpretation level. In particular, I will show that two cognitively-motivated criteria are operative when we interpret present perfect tenses. This will be an answer to the questions in (4a). I will also claim that the criteria presented above both consist of scales with two ends, but not of strictly binary systems; and each scale is composed of one necessary condition and (at least) one typicality condition, both of which consist of pairs of opposite notions. It should be noted that in this case, a member which is put on an end of a scale is viewed as a typical member. This means that both of the scales have two prototypical categories, respectively. Thus, by combining one scale with the other, we can get four prototypical categories (i.e. uses). Moreover, since the distinction between the two prototypical categories is viewed as describing the two end-points on a continuum, but not as strictly binary, our analysis will predict that some instances can be interpreted as coming in the middle part of the continuum at issue. Such instances are peripheral members which have both some characteristics of one prototypical perfect and some characteristics of the other prototypical perfect because the borderline between the two prototypical perfects located at the two ends of the same scale is supposed to be fuzzy. This will be an answer to the questions in (4b).

Furthermore, our analysis states that the so-called resultative perfect should not be treated as having the same status as the four prototypical uses (or pragmatic



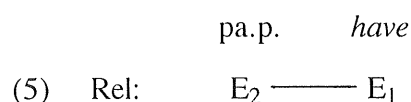
interpretations) implied above. It will be pointed out that most previous studies do not classify the resultative perfect into sub-types or sub-uses from the point of view of the same level or perspective, and, thus, they fail to analyze the resultative perfect appropriately.

This chapter is organized as follows. Section 4.1 justifies the claim that the perfect tense itself has a dual structure. Section 4.2 shows that the context is a decisive factor that finally determines which use a given (present) perfect tense is viewed as representing. In section 4.3, I will present two cognitive criteria, either of which is composed of a scale with two ends, and explain why the present perfect tense can and should represent a certain range of uses. Section 4.4 summarizes the results of our analysis. Section 4.5 deals with two more uses, i.e. the resultative perfect and the "hot-news" perfect, and demonstrates that their classification is based on certain criteria other than the above-mentioned two. Section 4.6 makes concluding remarks.

#### 4.1. Dual Structure of the Perfect Tense

In the previous chapter, I have constructed the basic temporal schema of the perfect tense on the assumption that the perfect tense consists of two (sub-)situations:<sup>3</sup> one is associated with the perfect auxiliary *have* and the other with the past participle. This conclusion comes from the Aux-as-Main-Verb hypothesis. While I have verified that modal auxiliaries can represent their own situations in section 1.2, I have not yet verified sufficiently that the perfect auxiliary *have* also expresses its own situation. Thus, this verification is the topic of this section.

For ease of reference, let us first re-present the temporal schema of the perfect tense per se:



Recall that  $E_1$  is the event time represented by *have* and  $E_2$  is the event time represented by the past participle complement. In the case of the present perfect tense,  $E_1$  is interpreted as simultaneous with the speech time; in the case of the past perfect tense,  $E_1$  is construed as simultaneous with a certain time of orientation in the past; and in the case of the future perfect tense,<sup>4</sup> the event time of *will* ( $E_1$ ) is added, and, thus, the subscript numbers of the event times of *have* and the past participle are changed accordingly. In the following two subsections, it will be demonstrated that the perfect tense per se, which belongs to the R-component, has the dual structure.

#### 4.1.1. Specification by Time Adverbials

First of all, as Frawley (1992:347) points out, the compatibility of the perfect with certain time adverbials supports the dual structure of the perfect tense. Observe (6):

(6) a. Tom had seen the movie by ten o'clock/before he arrived/etc.

(Frawley (1992:347))

b. By that time I had finished my work. (Progressive, 3rd., p.890)

c. By next Sunday, we will have moved into the new house.

Take (6a) for example. The time adverbials *by ten o'clock* and *before he arrived* presuppose two distinct times, i.e. the event time of Tom's seeing the movie and the time of an "understood" time (in general, the latter is called the reference time), implying that the latter serves as the base time for the former. It is thus possible to say that within our framework, the event time of Tom's seeing the movie and the understood time correspond to  $E_2$  and  $E_1$  respectively, for in the case of the perfect tense  $E_1$  functions as the base time for the calculation of  $E_2$ .

Secondly, the fact that adverbials of definite time position (henceforth DTP adverbials) such as *at ten o'clock* and *two weeks ago* can specify either a certain "understood" time or a time prior to the understood time supports the dual structure of the

perfect tense. Consider (7):<sup>5</sup>

- (7) a. Tom had seen the movie at ten o'clock. (Frawley (1992:348))  
b. John had left a week ago. (Hornstein (1990:31))

Take (7a) for example. The sentence can receive two readings as to the specification by the time adverb. On one reading, the situation of Tom's seeing the movie obtains at ten o'clock; on the other reading, the situation in question obtained before ten o'clock. This means that this kind of sentence presupposes two distinct times. Since in our theory there are two event times in a perfect form, i.e.  $E_1$  (associated with *have*) and  $E_2$  (associated with the past participle), it is possible to say that on the latter reading,  $E_1$ , which is related to the understood time, is modified by the DTP adverbial *at ten o'clock*, while on the former reading,  $E_2$  is modified by the same DTP adverbial.

One might argue that the above observations do not necessarily prove that the perfect tense, which I argue belongs to the R-component, consists of two situations and thus two event times, i.e.  $E_1$  and  $E_2$ , by saying this: the data I have presented are all those of finite perfects, which consist of both the A- and the R-component, so it is possible that one of the above-mentioned event times indicated in both (6) and (7) is related to the A-component. However, such a counterargument is not valid because nonfinite perfects with such time adverbials behave in the same way as finite perfects with them. Observe the following:

- (8) a. For John to have arrived at 2:00 yesterday surprises me.  
b. Next Sunday, we will have moved into the new house.  
c. John's having drunk a gallon of beer by now surprises me.  
(McCawley (1971:101))
- (9) a. John may have finished his book yesterday.  
b. Having finished his book the day before, John decided to take the day off yesterday.

- c. I believe John to have finished his book yesterday.

(Elsness (1997:19))

- d. This day week I hope to have finished my work. (Jespersen (1931:89))

The nonfinite perfect in (8a) can receive two interpretations with respect to time specification: on one reading, John's arrival occurred at 2:00 yesterday, and on the other reading, it occurred before 2:00 yesterday. The same observation applies to (8b). In (8c), the time adverb *by now* presupposes two distinct times: a certain time simultaneous with the speech time and the time of John's drinking before that time. Since the nonfinite perfect does not contain the A-component, it follows that the R-component of the perfect contains two distinct times. In the perfect sentences in (9), either the event time of *have* or the event time of the past participle is specified by a time adverbial: for example, in (9a) the adverb *yesterday* modifies the event time of the past participle, while in (9d) the adverb *this day week* tends to modify the event time of *have*. This fact motivates us to conclude that the perfect tense, which itself is composed only of the R-component, consists of two situations and accordingly two event times, i.e. the event time associated with *have*, and the event time associated with the past participle.

#### 4.1.2. Entailment of the State

The dual structure of the perfect tense is also justified by the fact that the present perfect tense indicates a state holding at the speech time (i.e. a time of orientation). Observe the following:

- (10) a. Yoko has gone to Singapore. (She is not at Narita Airport now.)  
b. Someone has broken her doll. (The doll is now broken.)

(Leech (1987:39))

- c. You've woken him up now. (He's awake.) (Fenn (1987:100))

- (11) a. Yoko has seen *The Godfather* many times. (She knows much about

the movie now.)

- b. Sakyō Komatsu has written a lot of impressive science fiction. (He is now one of the most famous novelists in Japan.)
  - c. I have visited Italy before. (I like Italy very much now.)
- (12)
- a. I have known Mana since 1991. (I know her now.)
  - b. I have lived in Ibaraki since 1987. (I live in Ibaraki now.)
  - c. She has been sick for two weeks now. (She is sick now.)

In each example, the parenthesized sentence represents the state holding at the speech time (S). The present perfects in (10) are interpreted as cases of the resultative perfect, the present perfects in (11) are interpreted as cases of the experiential perfect, and the present perfects in (12) are interpreted as cases of the continuative perfect.

I regard both the state associated with the resultative perfect and that associated with the experiential perfect as subsumed under the label *resultant state* because the states in parentheses in (10) and (11) are brought about or induced, whether directly or indirectly, by the preceding situation associated with the past participle complement (cf. also section 3.2.2). But the type of the resultant state indicated by the resultative perfect is different from that of the resultant state indicated by the experiential perfect in the following manner. In the former case, the resultant state stems directly from the occurrence of the situation associated with the past participle and thus cannot be canceled: thus in (10a), the resultant state in the parentheses cannot be canceled. In the latter case, by contrast, the resultant state stems indirectly from the occurrence of the situation associated with the past participle, and thus can be canceled: in (11a), for example, the resultant state in the parentheses is one of the possible resultant states and thus another possible resultant state can be substituted for the one in the parentheses; hence, the resultant state in (11a) can be canceled. For convenience's sake, I refer to the former type of state as the state of direct result, or the direct resultant state, and the latter type as the state of indirect result, or the

indirect resultant state. In this connection, Depraetere (1998) observes that there are two types of resultant propositions: one is entailed in a given perfect sentence and thus cannot be canceled, while the other is conversationally implied in a given perfect sentence and thus can be canceled. They correspond to the present thesis' notions of direct and indirect resultant states, respectively.

Let us illustrate the point. For example, in (10a), the resultant state of Yoko's not being at the place where the speaker utters the sentence (i.e. Narita Airport) cannot be canceled. In (11a), by contrast, although the state of Yoko's having already seen the story of the movie at the time of utterance cannot be canceled, another conversationally-implied resultant state, say, the mental state of Yoko's loving the movie very much can be substituted for the indirect (or conversationally-implied) resultant state represented in the parentheses; i.e., the indirect resultant state of Yoko's knowing much about *The Godfather* at the speech time can be canceled. This is demonstrated by the following sentences:

- (13) a. \* Yoko has gone to Singapore, but she is now at Narita Airport.  
b. Yoko has seen *The Godfather* many times, but she does not like the movie because it is so violent.

The point is that although there is a difference between the two types of resultant states, the present perfect tense must entail a resultant state holding at the speech time, irrespective of whether it is a direct result or an indirect result.

This point is much more clarified when present perfect sentences are compared with sentences in the simple past tense. Consider (14) and (15):

- (14) a. ?? I have opened the door, but it is not open.  
(slightly adapted from Depraetere (1998:604))  
b. I opened the door (a few minutes ago), but it is not open now.  
(15) a. ? I have read that novel, but I remember nothing about it.

- b. I read the novel, but I remember nothing about it.

(Brinton (1988:11))

The resultative perfect version (14a) is odd because the meaning of the first conjunct is contradictory to that of the second conjunct:<sup>6</sup> since the first conjunct entails the present state of the door's being open, adding the second conjunct to the first conjunct leads to contradiction. The experiential perfect version (15a) is odd for the following reason: while the first conjunct entails an indirect resultant state (e.g. the state of the speaker's knowing at least a little about the novel), the second conjunct denies the link between the event of the speaker's reading a certain book and the present state brought about by the use of the present perfect. On the other hand, the past tense versions (14b) and (15b) are perfectly grammatical because the past tense does not necessarily entail a resultant state holding at the speech time (see the temporal schema of the simple past in section 3.1.2).

Before concluding this subsection, let us confirm that the situation associated with perfect *have* is stative. Observe the following:

- (16) I found him to  $\left\{ \begin{array}{l} \text{a. learn the answer} \\ \text{b. *know the answer} \\ \text{c. *have slept} \end{array} \right\}.$

(Ross (1969:81))

- (17) He seems to  $\left\{ \begin{array}{l} \text{a. *learn the answer} \\ \text{b. know the answer} \\ \text{c. have slept} \end{array} \right\}.$

(Ross (1969:81))

It is clear from the paradigms in (16) and (17) that perfect *have* is a stative predicate. This is further verified by the following paradigm:

- (18) a. I saw her to be friends with everyone.  
b. I see them to have arrived.

c. \*I saw her to make friends with everyone.

(Kashino (1989:9))

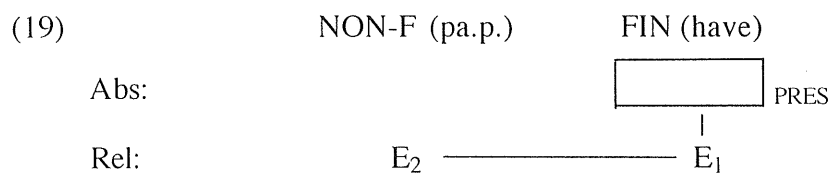
It is said that this construction requires that the predicate in the infinitive position be stative. The above observations thus show that in the case of the present perfect tense, the predicate *have* is associated with a state holding at the speech time.

In this section, I have justified the view that the perfect tense represents a proposition consisting of two (sub-)situations, i.e. a state holding at a time of orientation (in the case of the present perfect tense, the time of orientation is the speech time) and its corresponding preceding situation (in the case of the continuative perfect, the situation reaches the time of orientation; see section 4.3 below). Our next task, then, is to clarify how factors such as time adverbials, characteristics of referents in both object and subject position, and contexts interact with the basic temporal schema of the present perfect to develop into the temporal schemata of particular uses of the present perfect tense at the tense-interpretation level.

## 4.2. From Original Schematic Semantic Value to Pragmatic Categories

### 4.2.1. How to Interpret Present Perfect Form as Expressing Present Perfect Tense

First of all, we have to consider how a given present perfect form is interpreted as representing the present perfect tense. Let us present the temporal schema of the present perfect form (i.e. a temporal template) at the tense-structure level.



All this temporal schema shows is that the perfect auxiliary *have* accompanied by the present tense morpheme which represents the present time-sphere combines with the past participle complement to form the whole situation represented by the present perfect form.



At the first stage of the tense-interpretation level, a specific context or syntactic environment induces us to identify the position of the base time ( $E_1$ ) of the present perfect form: (i) it may be simultaneous with the speech time (S), (ii) it may be simultaneous with a time of orientation in the future, or (iii) it may not be related to any specific time of orientation. It is in the case of (i) that a given present perfect form is interpreted as representing the present perfect tense (I will restrict myself to this case from the next section on).

Case (ii) is exemplified by the following sentences:

(20) a. John will leave after Harry has arrived. (Hornstein (1990:100))

b. I hope that John will go away after he has got his way.

(Declerck (1997:101))

c. Bill will leave when John has already arrived. (Declerck (1997:111))

d. That will be the time when they have finally cut the knot.

(Declerck (1997:241))

(21) a. I have gone to the library. (Abe (1994:38))

b. Next morning there was a note from Mopsa on the hall table. *I have gone to lunch with Constance Feuton*, it read.

(quoted from Kato (1993:29))

The present perfect forms in the temporal clauses of (20) all represent the future perfect tense in the sense that their base time is viewed as simultaneous with a time of orientation in the future, but not with the speech time. The present perfect forms in (21) are what is called perfects of "notes" because they are used to represent someone's notes. The base time of this type of perfect is seen as simultaneous with the time when a person to whom the writer addresses a note reads the note; and it usually comes in the future with respect to the time of the writer's leaving the note. Thus, this type of perfect is also regarded as expressing a kind of future perfect tense.

Case (iii) is exemplified in (22):

- (22) a. Two and two have always been four. (Declerck (1991b:352))  
b. A problem of this kind has been solved as soon as the necessary parameters have been found.

In these perfect sentences, the base time  $E_1$  is not anchored to any specific time of orientation. This type of perfect is generally referred to as the perfect of generic use.

Since the future perfect tense (e.g. (20) and (21)) and the generic perfect tense (e.g. (22)), though they are both represented by the present perfect form, are not relevant to the main topic of this chapter, I will confine myself to the present perfect tense represented by the present perfect form from now on. Henceforth, I will use the term *present perfect* in the sense of 'the present perfect tense represented by the present perfect form'.

At this first stage of the tense-interpretation level, i.e. the beginning of the process reaching a particular interpretation (or use) of a given present perfect sentence, the temporal (semantic) value of the present perfect merely represents anteriority to the base time simultaneous with the speech time. That the present perfect has only one meaning has already been justified by the proform test and gapping in section 4.0. After this stage, the original meaning of the present perfect is further specified to express a certain use (or interpretation) under the influence of factors other than the original temporal value. This point will be discussed in the following subsection.

#### 4.2.2. Pragmatic Categories

In this subsection, we will discuss this point: which use a given present perfect sentence is construed as expressing is finally determined by the context; and factors such as time adverbials and verbal aspects can be guideposts, but not determinants, as to the classification of uses of the present perfect.

Let us first consider (23):

(23) Mana has played the *koto*.

This sentence as it stands is vague (at the first stage of the tense-interpretation level). Given appropriate contexts, the sentence can be interpreted at least in three ways. This is clarified by adding temporal adverbials to the sentence, as shown in (24):

- (24) a. Mana has played the *koto* before/many times.  
b. Mana has just played the *koto*.  
c. Mana has played the *koto* since 1983/for the past ten years.

It is generally said that sentences (24a-c) express an experiential, a resultative (or a "hot-news"), and a continuative perfect, respectively. Time adverbials can clarify the pragmatic status of a given present perfect sentence.

However, it is not always the case that a certain type of time adverbials induces a certain use of the present perfect. Observe (25):

- (25) a. Sam has been in Boston since Tuesday. (Mittwoch (1988:207))  
b. Well, Jack Nobert has taught at MIT for ten years, he has done some research in Alaska for a year, ... (Inoue (1979:566))  
c. Mana has played the *koto* hundreds of times this week. (She is ready for the concert tomorrow.)

Adding a *since* phrase or a *for* phrase to a present perfect sentence normally induces a continuative reading of the present perfect. But the present perfects in (20a, b) can represent experiential uses in certain contexts. Moreover, although the addition of adverbs of frequency to a perfect sentence usually motivates us to view the perfect sentence in question as expressing an experiential use, the present perfect in (25c) can be understood to express a resultative perfect: the parenthesized sentence represents a possible resultant state of the present perfect sentence. (It might appear that use of the adverbs *just* and *before* with the present perfect exclusively brings about a resultative and

an experiential reading, respectively. This point will be discussed in detail in section 4.3.2.5.)

Let us next show that verbal aspects are not determinants in classifying instances of the present perfect into a certain type of use, either. Consider the following sentences:

- (26) a. I have lived in Ibaraki.  
b. I have lived in Ibaraki for 11 years.
- (27) a. I have persuaded him.  
b. I have persuaded him once already, but he may have lost heart and need another talking to. (McCoard (1978:145))

The sentences in (26) and those in (27) contain state verbs and accomplishment verbs in Vendler's (1967) sense, respectively. Although the perfect sentence tends to be interpreted as expressing an experiential use in (26a), it tends to be construed as representing a continuative use in (26b). Moreover, it should be noted that without time adverbials, the present perfect in (26a) alone can be interpreted as expressing either an experiential or a continuative use; and the adding of a *for*-phrase does not always lead us to a continuative use of a given present perfect sentence, as we have already seen. In (27a), the present perfect is normally viewed as expressing a resultative perfect, but embedded in a context like (27b), it is seen exclusively as expressing an experiential perfect. These observations suggest that verbal aspects may induce the unmarked reading of a given perfect sentence, but cannot determine which use the perfect in question is finally interpreted as expressing.

The above observations lead us to the conclusion that it is the context that finally determines which use a given present perfect is viewed as representing. This implies that uses or functions of the present perfect constitute "pragmatic categories" (see Fenn (1987)). The question, then, arises as to how and why we can derive a certain use (i.e. pragmatic category or interpretation) from a given present perfect sentence in a certain

context. Clarifying this mechanism is our next task.

### 4.3. Two Types of Cognitive Criteria

This section gives a convincing answer to the question raised in the last section: how and why does a certain use stem from the core meaning (represented by the basic temporal schema) of the present perfect tense in a certain context? To this end, I will present two cognitive criteria which are operative at the tense-interpretation level when we classify the present perfect into pragmatic categories or uses on the basis of the information conveyed by the context. One of the criteria is used to distinguish perfects with the feature PERFECTIVE (P-perfects) from perfects with the feature CONTINUOUS (C-perfects). The other criterion is used to distinguish perfects with the feature SPECIFIC (S-perfects) from perfects with the feature GENERAL (G-perfects). Each criterion consists of a scale with two definite ends, but is not a strictly binary system. That is, a scale has two categories which reflect two features (e.g. the features PERFECTIVE and CONTINUOUS), but the distinction between the two categories is fuzzy.

#### 4.3.1. The Perfective-Continuous Criterion

The criterion which distinguishes P-perfects from C-perfects is called the P (erfective)-C(ontinuous) criterion. This criterion, based crucially on the basic semantic structure of the present perfect, consists of (at least) two pairs of concepts: the pair of separation vs. merger and that of conclusive vs. non-conclusive.

##### 4.3.1.1. Separation vs. Merger

The first pair of concepts to be examined is the pair of separation vs. merger, which stems necessarily from the dual structure of the perfect tense. For ease of reference, I

present a simple version of the basic temporal schema of the present perfect below.<sup>7</sup>

$$(28) \quad E_2 \text{ ————— } E_1, S$$

Recall that the temporal structure of the present perfect is as follows:  $E_2$ , which is the event time represented by the past participle complement, is prior to  $E_1$ , which is the event time represented by the perfect auxiliary *have*, and  $E_1$  is interpreted as simultaneous with, or more precisely, restricted to the same time length as, the speech time ( $S$ ) as the relevant time of orientation. This means that the temporal structure at issue does not say anything about the future (relative to  $E_1$ ). Thus, there are logically only two temporal relations between  $E_1$  and  $E_2$ : (i)  $E_2$  comes wholly before  $E_1$ , and (ii)  $E_2$  starts in the past and reaches  $E_1$ . The pair of concepts which distinguishes relation (i) from relation (ii) is shown as follows:

$$(29) \quad \text{Separation vs. Merger}$$

If the speaker has the concept of separation in mind, he or she chooses relation (i); and if the speaker has the concept of merger in mind, he or she chooses relation (ii). Hereafter, the former is called the relation of separation and the latter the relation of merger. For convenience' sake, I refer to this pair of concepts as the first condition of the P(ffective)-C(ontinuous) criterion.

Both relations are schematically represented as follows:

$$(30) \quad \begin{array}{l} \text{a. } \boxed{E_2} \text{ ————— } \boxed{E_1}, S \\ \text{b. } \boxed{E_2 \text{ ————— } E_1}, S \end{array}$$

The schema in (30a) represents the relation of separation and the schema in (30b) the relation of merger. In the case of the relation of separation, the event time of the situation associated with perfect *have* (i.e.  $E_1$ ) represents the relevant time length (i.e. the time length restricted to the same length as  $S$ ) of a resultant state which happens as a result of the occurrence of the situation described by the past participle complement (or the PAP-

situation); and the relevant time length of the PAP-situation is  $E_2$ .<sup>8</sup> Note, in passing, that as we have seen, resultant states are divided into the two sub-types: the state of direct result and that of indirect result. (This matter will be dealt with in detail in section 4.5.1.) In the case of the relation of merger, the event time of the situation associated with perfect *have* (i.e.  $E_1$ ) represents the relevant time length of a state holding at the speech time.<sup>9</sup> It should be kept in mind that here I use the term state, but not the term resultant state, because in the case of the relation of merger, what kind of state at S a given perfect sentence contains depends on the aspect of the PAP-situation (see the next subsection).

To illustrate these points, let us consider the following sentences:

- (31) a. Mana has already finished the work.  
b. I have known Mana since 1991.

Sentence (31a) is an example of the relation of separation.  $E_2$ , the event time of the PAP-situation (i.e. the situation of Mana's finishing the work), comes wholly before  $E_1$ . The situation associated with perfect *have* is construed as expressing a resultant state (e.g. the state of her being free now), and  $E_1$  is the event time of the resultant state. It should be stressed that the resultant state itself may start long before the speech time, but  $E_1$  is the relevant time length of that resultant state restricted to the same time length as the speech time. It is in this sense that we speak of the relation of separation.

On the other hand, sentence (31b) is an example of the relation of merger.  $E_2$ , the event time of the PAP-situation (i.e. the situation of the speaker's knowing Mana), reaches  $E_1$ , the event time associated with perfect *have* sharing the same time length as the speech time (S). Since the situation associated with perfect *have* is stative, it is interpreted as expressing one facet of the stative situation of the speaker's knowing Mana which holds at the speech time. Whether or not  $E_2$  is interpreted as continuing beyond S is irrelevant to the semantic structure of the present perfect tense.

#### 4.3.1.2. Conclusive vs. Non-conclusive

The second pair of concepts concerns the aspect of the PAP-situation: the pair consists of the concepts of conclusive and non-conclusive.

(32) Conclusive vs. Non-conclusive

Henceforth, I refer to this pair of concepts as the second condition of the P-C criterion. It should be noted here that the PAP-situation is composed not only of the past participle but also of elements such as referents in subject and object position and, if any, time adverbials.

Both of the concepts of conclusive and non-conclusive are exemplified in (33a, b), respectively.

- (33) a. Yoko has gone to Singapore.  
b. Mana has played the *koto*. (=23)

In (33a), the PAP-situation, i.e. the situation of Yoko's going to Singapore, is conclusive because it has the inherent end-point. In (33b), by contrast, the PAP-situation, i.e. the situation of Mana's playing the *koto*, does not necessarily include its inherent end-point, thus being viewed as non-conclusive.

Note that whether a given PAP-situation is conclusive or non-conclusive is a matter of grade. Consider (34):

- (34) a. Mana has already played the *koto*.  
b. Mana has played the *koto* hundreds of times.

The PAP-situation in (34a) is more conclusive than that in (33b) because of the lexical property of *already* expressing conclusiveness (cf. Michaelis (1992, 1996)). On the other hand, the unbounded nature of the adverb *hundreds of times* makes the PAP-situation in (34b) less conclusive than that in (33b). From these observations, it follows that the second condition of the P-C criterion is gradable: the degree of the conclusiveness of the PAP-situation is subject to the properties of elements constituting the PAP-situation.



#### 4.3.1.3. The Perfective-Continuous Scale

This subsection will show that the P-C criterion constitutes a scale with two ends, expressing the category of P(erfective)-perfects and the category of C(ontinuous)-perfects with the fuzzy area in-between. To this end, let us consider the status of the first and second conditions of the P-C criterion in detail.

First, I claim that the first condition of the P-C criterion, i.e. the pair of the concepts of separation and merger, serves as a necessary condition to distinguish P-perfects from C-perfects. This is because in the case of P-perfects,  $E_2$  is necessarily separated from (and thus comes wholly before)  $E_1$ , while in the case of C-perfects,  $E_2$  is necessarily merged with (and thus reaches)  $E_1$ .

Secondly, I argue that the second condition of the P-C criterion, i.e. the pair of the concepts of conclusive and non-conclusive, functions as a typicality condition which determines the typicality of members of each category (i.e. P-perfects or C-perfects). This is because, as we will see soon, perfects with the PAP-situation conclusive are not necessarily P-perfects and perfects with the PAP-situation non-conclusive are not necessarily C-perfects. With perfects characterized by the concept of separation, i.e. P-perfects, the more conclusive the PAP-situation of a P-perfect is, the more typical the P-perfect is considered to be; the more non-conclusive the PAP-situation of a P-perfect is, the less typical the P-perfect is considered to be. With perfects characterized by the concept of merger, i.e. C-perfects, on the other hand, the more conclusive the PAP-situation of a C-perfect is, the less typical the C-perfect is considered to be; the more non-conclusive the PAP-situation of a C-perfect is, the more typical the C-perfect is considered to be.

Since the P-C criterion is the combination of the first and second conditions, it forms a scale, which I refer to as the P(erfective)-C(ontinuous) scale. The scale is



PAP-situation under discussion has the high degree of non-conclusiveness. From this, we can conclude that the perfect in (36b) is classified as a typical C-perfect.

I now turn to a consideration of peripheral P- and C-perfects. Let us first observe examples of peripheral P-perfects.

- (37) a. Sam has been in Boston since 7:00. (the experiential reading intended)  
b. She has telephoned me many times for the last two weeks.

In both (37a) and (37b),  $E_2$  is interpreted as separated from  $E_1$ , so the perfects in (37) are classified as P-perfects. In both cases, both the aspect of the past participle complement (e.g. *been in Boston* in (37a)) and the properties of the adverb (e.g. *since 7:00* in (37a)) indicate that the PAP-situation is non-conclusive, or more precisely, highly non-conclusive. The same observation applies to (37b).

Let us now consider examples of peripheral C-perfects.

- (38) a. A week has elapsed since the preceding scene. (Fenn (1987:74))  
b. A month has gone by since then. (Fenn (1987:74))

Both the perfects in (38a) and (38b) are interpreted in such a way that  $E_2$  is merged with  $E_1$ , so they are classified as C-perfects. What about the PAP-situation? In (38a), for example, the verb *elapse* is telic and thus the PAP-situation is viewed as conclusive, including its inherent end-point. This suggests that the present perfect in question has a characteristic of conclusiveness, and, thus, it is situated around the central part of the P-C scale.<sup>10</sup> It should be noted that with this kind of perfect, the state holding at the speech time is viewed as a resultant state because of the conclusive aspect of the PAP-situation. The same applies to (38b).

#### 4.3.2. The Specific-General Criterion

A second criterion, which is to distinguish S(pecific)-perfects from G(eneral)-perfects, is named the S(pecific)-G(eneral) criterion. This criterion is not restricted to the

present perfect; rather, it is also applicable to other tenses such as the present and the past tenses (cf. section 3.1). In the case of the present perfect, the relevant situation to which this criterion is applicable is the PAP-situation, i.e. the situation described by the past participle complement, but not the resultant state described by perfect *have*. Notice here that a given situation is referred to as a specific situation when the speaker knows which point or period on the time line the situation at issue is related to;<sup>11</sup> on the other hand, a given situation is referred to as a general situation when the situation at issue is conceptualized as a "state of knowledge" or as a set of (sub-)situations, and usually the speaker does not know exactly when the situation obtained (I will return to this soon). It should be noticed that the criterion also consists of (at least) two pairs of concepts: the pair of close-up reference vs. bird's-eye view reference and the pair of recency vs. remoteness.

#### 4.3.2.1. The Specific-General Distinction

First of all, let us confirm that the English present perfect can receive either a specific or a general interpretation. Observe (39):

- (39) a. I have just been to the post office.  
b. Mana has visited Canada before, but I forgot/have forgotten when.

The present perfect in (39a) is construed as representing a specific perfect because it is easy to suppose that in this context the speaker clearly knows which point or period on the time line the PAP-situation (i.e. the situation of his or her being in the post office) is related to. In (39b), by contrast, as is clear from the content of the second conjunct, the time position to which the PAP-situation (i.e. the situation of Mana's visiting Canada) of the first conjunct is anchored is not recognizable to the speaker. To put it another way, the speaker does not care when the PAP-situation occurred, but rather conceptualizes it as part of his or her knowledge about the past. Thus, the present perfect expresses a general

perfect.

That the S-G distinction is not an ad hoc distinction applicable only to the present perfect is demonstrated by the fact that English other tenses also make this distinction. Look at the following present-tense sentences:

- (40) a. Napier passes the ball to Attwater, who heads it straight into the goal!  
(Leech (1987:6))
- b. She walks to work. (Leech (1987:9))

Sentence (40a) is uttered in sports commentaries. The simple present tense predicates *passes* and *heads* express the ongoing events directly connected to a certain time on the time line (i.e. now). I claim that this is because the feature SPECIFIC is reflected in these present tenses. Sentence (40b), on the other hand, does not describe an ongoing situation directly related to a certain time on the time line; rather, it expresses a generalized state of knowledge about the present that the speaker has in mind, i.e. the state of, say, a certain girl's going to the office on foot regularly. I claim that this is because the feature GENERAL manifests itself in the present tense sentence in (40b).

Let us next consider cases of the past tense.

- (41) a. We visited Selfridges last week. (Leech (1987:13))
- b. In those days I enjoyed a game of tennis. (Leech (1987:13))

Sentence (41a) describes a specific situation because of the definite nature of the adverb *last week*. Here, I conform to the general view that a situation is definite when both the speaker and the addressee know the time position of that situation. The definite adverb *last week* makes the situation at issue definite and thus the situation is specific. Sentence (41b) is interpreted in the same way as sentence (40b) with respect to the specific-general distinction: sentence (41b) describes a past habit of the speaker, i.e. a generalized state of knowledge about the past that the speaker has in mind, though it is not necessarily seen as holding at the speech time; so it receives a general interpretation.

These observations indicate that the S-G criterion is not an ad hoc criterion applicable only to the present perfect; rather, it is also applicable to other tenses. Before going further, I will clarify what the concept of general situations used in this chapter exactly means in order to avoid confusion. I take the view that the concept opposite to the concept of specific situations is the concept *non-specific situations*; and the latter consists mainly of the concepts of general and generic situations.

A generic situation is defined as one which is completely irrelevant to the time line, so it is omnitemporal (e.g. *Whales are mammals*).<sup>12</sup> In this chapter, I ignore the concept of generic situations because the present perfect tense, by nature, is incompatible with the concept of generic situations. This is because the base time of the present perfect tense, i.e. the event time of *have*, receives the temporal focus whereby the (resultant) state holding at the speech time is made specific and accordingly the whole situation represented by the present perfect tense is interpreted as, more or less, related to the time line. (It should be noted that the (non-)specificity of the PAP-situation is irrelevant here.)

A general situation, on the other hand, is defined as a situation which is conceptualized as a state of knowledge consisting of a set of situations which is, more or less, related to the time line. Habitual situations (e.g. *Hideto composes popular songs in his spare time*) and iterative situations (e.g. *I read Flowers for Algernon five times*) are included in this type of situation. It should be stressed again that a general situation is construed as related to the time line in some way, i.e. to a certain time-span on the time line. In the case of the present perfect, a general PAP-situation describes the speaker's state of knowledge about the past which is conceptualized as holding at the speech time.

Having clarified what general situations mean, we can now go further. I will carry on the discussion on the basis of the S(pecific)-G(eneral) distinction.

#### 4.3.2.2. Evidence

This subsection provides supporting evidence for our claim that the S-G distinction is operative in classifying the present perfect into pragmatic categories or uses.

The first evidence is the compatibility of the present perfect with certain negatives. Consider (42):

- (42) a. I have not seen him this month.  
b. \*I have never seen him this month.

(*Progressive*, 2nd ed., p.1213)

The lexical property of the adverb *this month* adds specificity to the present perfect; thus, such a perfect is classified as an S-perfect. On the other hand, the negative *never* in the sense of 'at not time' presupposes a generalized state of knowledge about the past (cf. COBUILD, 2nd ed., p.1109); i.e., a present perfect sentence with *never* requires that the PAP-situation be regarded as a generalized state of knowledge about the past. A semantic clash, then, arises between the specificity conveyed by *this month* and the generality conveyed by *never*. Hence sentence (42b) is ungrammatical.

Let us turn to (42a). The negative *not* is neutral as to the S-G distinction. In other words, it can occur with both expressions with specificity and those with generality. Thus, the negative *not* can go with the S-perfect in (42a).

This line of explanation in terms of our compositional tense theory is verified by the following sentence:

- (43) I have never seen him.

As we have seen, the original temporal value of the present perfect per se includes neither specificity nor generality. Thus, the present perfect in (43), to which no expressions with specificity are added after the S-G distinction works, can occur with the negative *never*, i.e. an expression conveying generality.

Another piece of evidence for the claim that the S-G distinction works in classifying the present perfect into pragmatic categories concerns the compatibility of the present

perfect with adverbials of definite time position, i.e. DTP adverbials. It is well known that the present perfect does not go with DTP adverbials such as *at five o'clock*. However, if such an adverbial specifies a sub-situation of the PAP-situation, it can occur with the present perfect.

- (44) a. \* She has telephoned me at ten o'clock.  
b. She has telephoned me at ten o'clock three times.

The difference in acceptability in (44) shows that the present perfect cannot go with DTP adverbials only in the case of specific reference to a past situation, whereas it can go with DTP adverbials in the case of the description of a generalized state of knowledge about the past (for the reason why present perfect sentences like (44a) are unacceptable, see chapter 6). Sentence (44b) does not refer to a specific event of the girl's telephoning the speaker; rather, it describes a generalized state of knowledge about the past, i.e. a set of the same type of events which happened in the past. This implies that the S-G distinction is relevant to the classification of the present perfect.

#### 4.3.2.3. Close-up Reference vs. Bird's-eye View Reference

Having seen that the classification of the present perfect reflects the S-G distinction, I will now turn to a close examination of the two pairs of concepts constituting the S(pecific)-G(eneral) criterion suggested at the beginning of section 4.3.2.

The first pair is the pair of the concepts of *close-up reference* and *bird's-eye view reference*.<sup>13</sup> In the case of close-up reference, the speaker refers to the PAP-situation as if his or her viewpoint zoomed in on that situation. In the case of bird's-eye view reference, by contrast, the speaker refers to the PAP-situation as if his or her viewpoint zoomed out; i.e., the speaker regards the PAP-situation as constituting part of a gestalt.

- (45) Close-up Reference vs. Bird's-eye View Reference

Henceforth, I refer to this pair of concepts as the first condition of the S-G criterion.



Note that in the case of the present perfect, the viewpoint of the speaker is fixed on the speech time because the relevant time of orientation is the speech time. For the sake of simplicity, I will restrict myself to examples of P(erfective)-perfects for the time being.

Let us observe the following pair of sentences:

- (46) a. I have seen him this morning.  
b. Tom has climbed Mt. Tsukuba many times.

In (46a), the speaker makes use of close-up reference to express the PAP-situation. In this case, because of the use of the definite time adverb *this morning*, the speaker is considered to have in mind the specific time position of the situation of his or her seeing a certain man (e.g. Tom), and, accordingly, he or she can access the situation easily. We may possibly suppose that the speaker tends to view the situation easy to access as psychologically close to the speaker's viewpoint, which is fixed on the speech time. It is plausible to claim that saying that one takes something as psychologically close to him or her amounts to saying that his or her viewpoint zooms in on that thing. Thus, we can claim that the present perfect in (46a) can be seen as reflecting the concept of close-up reference.

Sentence (46b), on the other hand, means that there were many tokens of the situation of Tom's climbing Mt. Tsukuba. Therefore, they all constitute a gestalt representing the scene of climbing the mountain in the past, expressing a generalized state of knowledge about the past. It must be noted here that the adverbial of frequency *many times* helps us to view the sentence as reflecting the concept of bird's-eye view reference because adverbials of frequency can be said to reflect the concept of bird's-eye view reference in the sense that we refer to the situation modified by such adverbials as a non-separable set of the same type of (sub-)situations. Thus, the present perfect in (46b) can be viewed as reflecting the concept of bird's-eye view reference.<sup>14</sup>

#### 4.3.2.4. Recency vs. Remoteness

Let us now turn to the second pair of concepts: *recency vs. remoteness*. This pair of concepts determines whether the PAP-situation or the beginning of the PAP-situation is physically close to or remote from the speech time.

##### (47) Recency vs. Remoteness

I refer to this pair of concepts as the second condition of the S-G criterion. As with the second condition of the P(erfective)-C(ontinuous) criterion, this condition is also gradable.

Consider the following examples:

(48) a. I have just been to the post office. (=39a)

b. I have climbed Mt. Tsukuba once before. That was a long time ago.

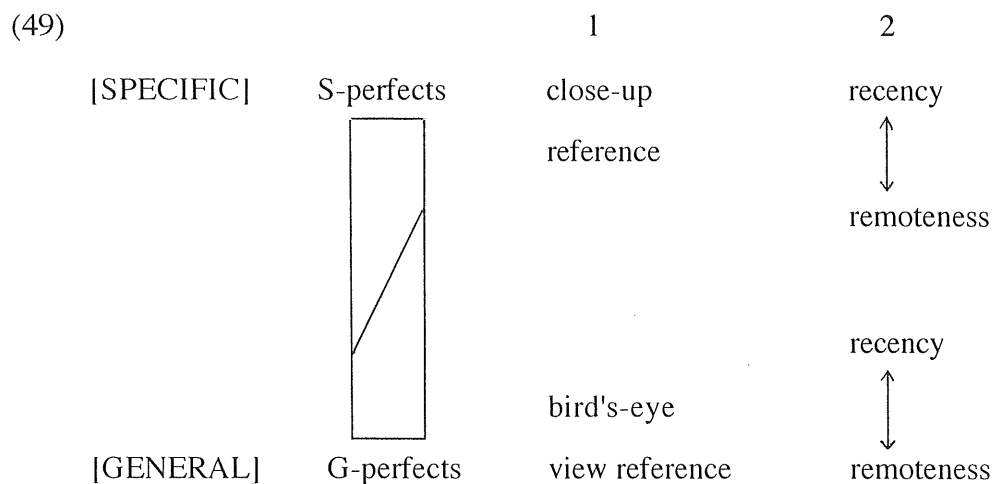
These present perfect sentences are examples of P-perfects. In (48a), because of the lexical property of *just* the sentence takes on recency.<sup>15</sup> In (48b), by contrast, the second sentence explicitly shows that the PAP-situation of the first sentence, i.e. the present perfect sentence, happened at some past time remote from the speech time.

#### 4.3.2.5. The Specific-General Scale

The discussion thus far has clarified the following points. First, the first condition of the S-G criterion, i.e. the pair of the concepts of close-up reference and bird's-eye view reference, is a necessary condition to distinguish S-perfects from G-perfects. That is to say, with S-perfects, the speaker necessarily makes close-up reference to the PAP-situation; with G-perfects, the speaker necessarily has a bird's-eye view of the PAP-situation. Secondly, the second condition of the S-G criterion, i.e. the pair of the concepts of recency and remoteness, is a typicality condition which is used to determine the typicality of S-perfects or G-perfects. In the case of P(erfective)-perfects with the concept of close-up reference, the closer to the speech time the PAP-situation of a P-

perfect is situated, the more typical the P-perfect is; and the farther from the speech time the PAP-situation of a P-perfect is situated, the less typical the P-perfect is. In the case of P-perfects with the concept of bird's-eye view reference, the farther from the speech time the PAP-situation of a P-perfect is situated, the more typical the P-perfect is; and the closer to the speech time the PAP-situation of a P-perfect is situated, the less typical the P-perfect is. As a result, we can say that the S-G criterion is a scale which goes from the end of the specificity area to the end of the generality area. Henceforth, I refer to this scale as the S(pecific)-G(eneral) scale.

The S-G scale is schematically represented as follows:



Perfects which are situated at or near either end of the S-G scale are classified as typical perfects, i.e. typical S-perfects or typical G-perfects, and perfects which are situated around the center of the S-G scale (marked with a slash) are classified as peripheral perfects, i.e. peripheral S-perfects or peripheral G-perfects. The closer to the center of the scale an S-perfect is located, the lower the degree of its specificity becomes and the higher the degree of its generality becomes; on the other hand, the closer to the center of the scale a G-perfect is located, the lower the degree of its generality becomes and the higher the degree of its specificity becomes. In other words, peripheral perfects on the S-G scale have both characteristics of S-perfects and those of G-perfects.

Consider, for example, (50), which are examples of typical S-perfects:

- (50) a. I have seen him this morning. (=46a)  
b. I have just been to the post office. (=39a)

As we have already seen, in (50a), because of the presence of *this morning*, the time position of the PAP-situation is interpreted both as close to the speech time and as expressing the situation in which the speaker makes a close-up reference to the event of his or her seeing a certain person (e.g. Tom). Thus, the present perfect in (50a) is considered to be a typical S-perfect. In (50b), the lexical property of *just* explicitly shows that the present perfect at issue is a typical S-perfect because *just* expresses both temporal closeness and emphasis: the latter suggests that the speaker zooms in on a situation modified by *just*

Let us turn to examples of typical G-perfects:

- (51) a. I have visited Italy several times, but the last time was a long time ago.  
b. Shakespeare has written impressive dramas. (Lakoff, R. (1970:844))

In (51a) the PAP-situation of the present perfect sentence is located in a time-span remote from the speech time, which is explicitly represented by the second conjunct; and the situation involved is interpreted as a non-separable set of the same type of situation, i.e. the situation of the speaker's visiting Italy, because of the presence of the adverbial of frequency *several times*. Therefore, the present perfect at issue is a typical G-perfect. A similar observation applies to (51b). We can view the PAP-situation as having occurred a long time ago by having recourse to encyclopedic knowledge; and we can view the PAP-situation as constituting part of a gestalt representing the scene of Shakespeare's writing dramas on account of the property of the bare NP *impressive dramas*. Thus, the present perfect in (51b) is seen as a typical G-perfect.

Let us now move to cases of peripheral perfects. First, observe the following peripheral S-perfect sentence:

(52) We've found him considerate, Mave, in the past.

(quoted from Fenn (1987:86))

Fenn (1987:86) observes that the adverbial *in the past* does specify a certain period of time during which the characters referred to by *we* and *him* have been in contact with each other, but not the whole of their lives; that is, by using the adverbial, the speaker restricts the PAP-situation obtaining in the past to a certain period of time, stressing the time-span in this discourse context. Within our framework, it can be explained in the following manner. The speaker uses the concept of close-up reference to describe the PAP-situation because he or she zooms in on the time-span under consideration. Thus, the present perfect at issue is a kind of S-perfect. On the other hand, the adverbial *in the past* implies that the period of time specifying the PAP-situation (i.e.  $E_2$ ) is far from the speech time. (Of course, this is a matter of degree.) In this sense, the perfect in (52) has both a characteristic of S-perfects and one of G-perfects. Since the concept of close-up reference is an element of the necessary condition of the S-G criterion, the perfect under discussion is classified as a peripheral S-perfect.

Secondly, let us consider some peripheral G-perfects:

(53) a. I've mended it three times today. (Palmer (1988:48))

b. Mana has played the *koto* hundreds of times this month.

In (53a), for instance, the adverb of frequency *three times* suggests that the speaker makes a set reference, and thus a bird's-eye view reference, to the PAP-situation, i.e. the situation of mending something. By contrast, the existence of the adverb *today* is considered to be the reflection of the concept of recency. Thus, the present perfect at issue is interpreted as a peripheral G-perfect. The same kind of explanation can be extended to (53b).<sup>16</sup>

The above observations have revealed that typical P-perfects can be divided further into two sub-types by means of the S-G criterion: P-perfects with the feature SPECIFIC,

and P-perfects with the feature GENERAL. For convenience' sake, I refer to the former as the *completive* perfect and the latter as the *experiential* perfect.<sup>17</sup> From this moment on, I will use the terms completive and experiential in my sense.

Before concluding this section, let us consider the relations between the adverbs *just* and *before*, on one hand, and the completive and experiential perfects, on the other, since I mentioned it in section 4.2.2. The point here is to show that the use of such adverbs as *just* and *before* is the reflection of the combination of certain concepts which we have thus far observed.

Let us start with the case of the adverb *just*. It is safe to say that the lexical property of *just* can give rise to both temporal closeness (or recency) and emphasis; thus, we can say from the point of view of our analysis that a present perfect sentence accompanied by *just* is interpreted as representing the concepts of recency and close-up reference. This is why a present perfect sentence with *just* is viewed as expressing a (typical) completive perfect.

Let us now turn to the case of the adverb *before*. This adverb means 'earlier than a certain time'. Using the adverb *before* presupposes that when the speaker refers to a past situation, he or she has in mind a whole period of time earlier than the speech time. This strongly implies that use of *before* is closely related to the concept of bird's-eye view reference, though it does not necessarily convey the concept of remoteness (see also note 15). Moreover, the meaning of *before* says that a present perfect sentence with *before* represents its PAP-situation as wholly prior to the speech time. Therefore, present perfect sentences with *before* are classified as experiential perfects.

#### 4.3.3. The S(pecific)-G(eneral) Criterion and the C(ontinuous)-Perfect

This section demonstrates that the S-G criterion is also applicable to the classification of C(ontinuous)-perfects into two more categories. Note, however, that in

this case the second condition of the S-G criterion determines whether the beginning of the PAP-situation is close to or far from the speech time, since in the case of C-perfects,  $E_2$  (i.e. the event time of the PAP-situation) by definition reaches  $E_1$  (i.e. the event time of perfect *have*), which is simultaneous with the speech time. As for the first condition of the S-G criterion, i.e. the pair of the concepts of close-up reference and bird's-eye view reference, there is no restriction for it to work here. Henceforth, I refer to C-perfects with the feature SPECIFIC (or the concept of close-up reference) as the *continuative* perfect and C-perfects with the feature GENERAL (or the concept of bird's-eye view reference) as the *habitual* perfect; and from now on I will use the terms continuative and habitual in my sense.

#### 4.3.3.1. Continuative and Habitual Perfects

First of all, let us observe the sentences in (54), which exemplify the continuative perfect.<sup>18</sup>

- (54) a. John has lived in Ibaraki since 1996.  
 b. I've worn glasses since my childhood.  
(Thomson and Martinet (1986:168))  
 c. That house has been empty for ages. (Quirk et al. (1985:192))

In (54a), the PAP-situation, i.e. the situation of John's living in Ibaraki, continues up to the speech time. Moreover, the PAP-situation is seen as a single uninterrupted situation. Recall that the temporal schema of the perfect tense requires that the temporal focus (TF) be fixed on  $E_1$  (see section 3.2.2); in the case of C-perfects, since  $E_1$  is merged with  $E_2$  (cf. the schema in (30b)), it can be said that the TF is also fixed on part of  $E_2$  which shares the same time as  $E_1$ . This indicates that the PAP-situation indirectly receives a kind of focus, i.e. the temporal focus, whereby the speaker zooms in on the situation; thus, the speaker is considered to make a close-up reference to the PAP-situation. Hence,

the present perfect in (54a) is viewed as expressing a C-perfect with the feature SPECIFIC, i.e. a continuative use.

I now turn to the habitual perfect. Observe the following sentences:

- (55) a. Mr. Phillips has sung in this choir for fifty years. (Leech (1987:39))  
b. I've always walked to work. (Leech (1987:39))  
c. Mana has played the *koto* every day for the last two months.

In (55a), the PAP-situation consisting of a set of the same situation of Mr. Phillips's singing in the choir continues up to the speech time. Thus, the present perfect at issue is a C-perfect. In this case, however, the situation of singing is not necessarily ongoing at the speech time. Furthermore, since a habit is a set of events which happen regularly, it can be said that in a habitual reading the speaker has the notion of set reference in mind. As we have already mentioned, set reference is a case of bird's-eye view reference, so we can claim that the present perfect in question is regarded as a C-perfect with the feature GENERAL, i.e. a habitual perfect.<sup>19</sup> 20

#### 4.3.3.2. Evidence

This subsection adduces two linguistic phenomena as evidence for our claim that the S-G criterion is also used to divide C-perfects into the two subcategories: the continuative and the habitual perfect.

A first piece of evidence is the fact that as with the experiential perfect which is accompanied by the concept of bird's-eye view reference, the habitual perfect is also compatible with DTP adverbials. Consider the following paradigms:

- (56) a. Mary has always/usually left the office at 5:00. (Sawada (1992:15))  
b. Mary has left the office at 5:00 before/once. (Sawada (1992:16))  
(57) a. She has telephoned me at ten o'clock for the last two years.  
b. She has telephoned me at ten o'clock three times.



In both (56) and (57), the (a)-sentences are viewed as expressing the habitual perfect and the (b)-sentences as expressing the experiential perfect. As we have seen, the operation of the concept bird's-eye view reference is requisite for the G-perfect interpretation. As is clear from the above paradigms, as with the experiential perfect the habitual perfect cooccurs with DTP adverbials such as *at 5:00* and *at ten o'clock*. From this fact, we can infer that both the habitual and the experiential perfect are subsumed under the same concept, i.e. bird's-eye view reference. Thus, the S-G criterion is relevant to the classification of C-perfects into more pragmatic categories or uses.

Still another piece of evidence is related to the choice of prepositions when a given perfect sentence is a negative one. It is widely accepted that a negative sentence in the present perfect represents the PAP-situation as a stative situation continuing up to the speech time without interruption (see, for example, Herweg (1991:973)), as shown in (58):

- (58) a. I haven't seen him {in/for} years.  
b. Nature has not changed once {in/\*for} thousands of years.

(GENIUS 2nd ed., p.707)

According to GENIUS, in (58a) the *in*-version of the present perfect sentence implies that the situation of the speaker's seeing someone never happened in a certain period of time including the speech time, while the *for*-version indicates that the situation of the speaker's not seeing someone has been holding throughout that period of time. This statement is supported by the grammaticality difference between the *in*-version and the *for*-version in (58b): the former is acceptable while the latter is not acceptable when it cooccurs with the adverb of frequency (i.e. *once*).

Within our framework, this fact is explained as follows. The adverb of frequency reflects the concept of bird's-eye view reference. On the other hand, the *for*-version states that a certain negative situation, a kind of stative situation, continues up to the

speech time; thus, the *for*-version describes the PAP-situation accompanied by the concept of close-up reference, which is brought about by the interaction between the position of the temporal focus and the fact that  $E_2$  reaches  $E_1$ . Thus, a semantic clash arises. Hence, the cooccurrence of the preposition *for* with adverbials of frequency results in ungrammaticality.

#### 4.3.3.3. Peripheral Cases

In this subsection, we will see how our analysis explains peripheral perfects. Having already considered peripheral perfects which are situated between typical completive and continuative perfects (e.g. (37) and (38)) and peripheral perfects which are situated between typical completive and experiential perfects (e.g. (52) and (53)), I will concentrate on peripheral perfects which come between typical experiential and habitual perfects, on one hand, and peripheral perfects which come between typical continuative and habitual perfects, on the other.

Let us first look at examples of peripheral perfects situated between typical experiential and habitual perfects.

- (59) a. I've learnt a good deal these last 8 years. (Fenn (1987:93))  
b. Mana has played the *koto* hundreds of times this year. She is now ready for the new-year concert tomorrow.

Sentence (59a) is an example of the peripheral habitual perfect with an experiential characteristic and sentence (59b) one of the peripheral experiential perfect with a habitual characteristic. What is described by (59a) is this: the implication that the speaker knows much about something now occurs as a result of the repetition of the situation of the speaker's learning it; and the PAP-situation associated with  $E_2$  is conclusive because of the property of the verb phrase *learnt a good deal*. On the other hand, on account of the existence of the adverb *these last 8 years*,  $E_2$ , i.e. the event time of the PAP-situation

which consists of a set of the same events, is usually interpreted as reaching  $E_1$  (i.e.  $E_2$  is viewed as merging with  $E_1$ ), which in turn is simultaneous with the speech time. Since it can be considered that the concept of bird's-eye view reference is operative in the speaker's mind, the present perfect in (59a) is a peripheral habitual perfect with an experiential characteristic.

Let us move to sentence (59b). In (59b), the event time of the PAP-situation of the first sentence, i.e.  $E_2$ , is separated from  $E_1$ , which is in turn simultaneous with the speech time (S), because the second sentence suggests that Mana's practicing the *koto* for the new-year concert is over at S and will not continue any more. This means that the concept of separation is in operation with the first sentence of (59b). Moreover, the adverb of frequency, i.e. *hundreds of times*, is the reflection of the concept of bird's-eye view reference. Thus, the present perfect in (59b) is a member of the experiential perfect. However, the unbounded nature of the adverb *hundreds of times*, together with the verbal aspect of *play the koto*, sort of adds continuousness to the perfect sentence at issue. Therefore, the present perfect in (59b) is seen as a peripheral experiential perfect with a habitual characteristic.

I now turn to a consideration of peripheral perfects which are situated between typical continuative and habitual perfects. Let us start by examining peripheral members of the continuative perfect with a habitual characteristic. Compare the following sentences:

- (60) a. That house has been empty for ages. (=54c)  
b. I have known Mana since 1991. (=36b)

As we have seen in section 4.3.3.1 (e.g. (54a)), the present perfect in (60b) is identified as a typical continuative perfect. In the case of the present perfect in (60a), the PAP-situation, which is a single and uninterrupted situation, continues up to the state associated with perfect *have* on which the temporal focus is fixed; thus, the concept of

close-up reference is chosen, and, accordingly, the perfect at issue is viewed as a continuative perfect. However, the beginning of the PAP-situation in (60a) is farther from the speech time than that of the PAP-situation in (60b). That is, in the former case the time period where the PAP-situation obtains is longer. Here, the second condition of the S-G criterion, i.e. the concepts of recency and remoteness, is operative, and the concept of remoteness applies to (60a). It is plausible to say that we tend to take a situation holding in a long period of time as a universal or invariable state, but not as a temporarily continuing state. From this point of view, the PAP-situation in (60a) is thus more universal than that in (60b), and is devoid of temporariness. From the above observation, the present perfect in (60a) is seen as a peripheral member of the continuative perfect with a habitual characteristic.

How about peripheral habitual perfects with some characteristic of continuative perfects, then? Take a look at (61):

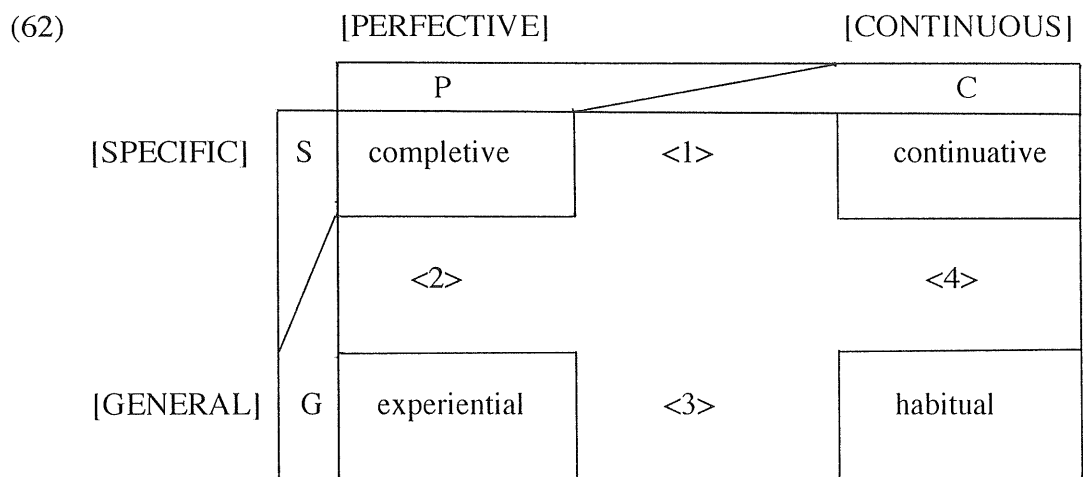
- (61) a. Mana became a professional *koto* player last month. She has played the *koto* at several halls since then. She will continue to play the *koto* in others.
- b. The province has suffered from disastrous floods throughout its history. (Quirk et al. (1985: 192))

In both (61a) and (61b), the PAP-situation consists of a repetition of (sub)situations of the same kind; as has already been shown, this implies that the speaker chooses the concept of bird's-eye view reference. Furthermore, from the context,  $E_2$ , associated with the PAP-situation, is interpreted as being merged with  $E_1$ , thus reaching the speech time. Therefore, both of the present perfects in question are habitual perfects. However, they behave differently from each other with respect to the second condition of the S-G criterion: in (61b), the beginning of the PAP-situation is remote from the speech time while in (61a), the beginning of the PAP-situation is closer to the speech time than the

one in (61b). From a cognitive point of view, it is plausible to say that we tend to have more difficulty in viewing as a habitual situation a repetition of situations of the same kind whose starting point is very close to the time of orientation (in this case, the speech time). Thus, the habitual perfect in (61a) is viewed as conveying more characteristics of the continuative perfect than that in (61b).

#### 4.4. The Relation between Four Prototypical Categories and Peripheral Areas

This section summarizes the discussion thus far. Combining the P-C criterion with the S-G criterion yields the four prototypical categories of the present perfect and the four fuzzy areas which peripheral perfects belong to. This is diagrammatically represented in (62):



P, C, S, and G in (62) represent the features of PERFECTIVE, CONTINUOUS, SPECIFIC, and GENERAL, respectively.

The four prototypical categories are: the completive perfect (which has both of the features of PERFECTIVE and SPECIFIC), the experiential perfect (which has both of the features of PERFECTIVE and GENERAL), the continuative perfect (which has both of the features of CONTINUOUS and SPECIFIC), and the habitual perfect (which has both

of the features of CONTINUOUS and GENERAL). Their representative example sentences are repeated below.

- (63) a. I have seen him this morning. (=46a) (Completive)
- b. I have visited Italy several times, but the last time was a long time ago.  
          (=51a) (Experiential)
- c. John has lived in Ibaraki since 1996. (=54a) (Continuative)
- d. Mr. Phillips has sung in this choir for fifty years. (=55a) (Habitual)

Let us now turn to the case of peripheral perfects. The middle parts of the P-C and the S-G criterion as scales provide fuzzy areas to which peripheral perfects belong. Peripheral perfects which have both some characteristic(s) of the completive perfect and some characteristic(s) of the continuative perfect are located in area <1>; they are exemplified in (64) below. Peripheral perfects which have both some characteristic(s) of the completive perfect and some characteristic(s) of the experiential perfect are located in area <2>; they are exemplified in (65) below. Peripheral perfects which have some characteristic(s) of the experiential perfect and some characteristic(s) of the habitual perfect are classified into area <3>; they are exemplified in (66) below. And peripheral perfects which have some characteristic(s) of the continuative perfect and some characteristic(s) of the habitual perfect are classified into area <4>; they are exemplified in (67) below.

- (64) a. Sam has been in Boston since 7:00. (=37a)
- b. A week has elapsed since the preceding scene. (=38a)
- (65) a. We've found him considerate, Mave, in the past. (=52)
- b. I've caught flu three times since last month.
- (66) a. Mana has played the *koto* hundreds of times this year. (=59b)
- b. I've learnt a good deal these last 8 years. (=59a)
- (67) a. That house has been empty for ages. (=60a)

- b. Mana became a professional *koto* player last month. She has played the *koto* at several halls since then. She will continue to play the *koto* in others. (=61a))

The perfect in (64a) is a peripheral completive perfect with continuative overtones while the perfect in (64b) is a peripheral continuative perfect with completive overtones. The perfect in (65a) is a peripheral completive perfect with experiential overtones while the perfect in (65b) is a peripheral experiential perfect with completive overtones. The perfect in (66a) is a peripheral experiential perfect with habitual overtones while the perfect in (66b) is a peripheral habitual perfect with experiential overtones. The perfect in (67a) is a peripheral continuative perfect with habitual overtones while the perfect in (67b) is a peripheral habitual perfect with continuative overtones.

Thus far, we have considered the nature of the mechanism of classifying the present perfect into pragmatic categories or uses. We have shown that at (the stage(s) following the first stage of) the tense-interpretation level, both the P(erfective)-C(ontinuous) criterion and the S(pecific)-G(eneral) criterion are operative with respect to the (pragmatic) interpretation of a given perfect sentence, based on the basic temporal schema of the present perfect with contextual information. From this point of view, we can say that the English present perfect has the four prototypical categories and the four fuzzy areas in which peripheral uses are located. These are answers to the questions (4a) and (4b) raised in section 4.0. Still remaining issues are to answer the following questions. What kind of status do the so-called resultative perfect and the "hot-news" perfect have? How are these two types of perfects analyzed? In what follows, I will deal with these two matters.

#### **4.5. Remaining Issues**

##### 4.5.1. Resultative Perfect

This section is concerned with the resultative perfect. I will show how the resultative perfect is dealt with in our analysis and claim that it is a special subtype of the P(erfective)-perfect, or, more precisely, perfects with more or less PERFECTIVE characteristics.

#### 4.5.1.1. The Status of Resultative Perfect

Let us begin by considering the status of the resultative perfect. It is often said that telic verbs, when appearing in the perfect form, bring about resultative connotations,<sup>21</sup> as in (68):

- (68) a. Dodos have already died out. (They do not exist on the earth now.)  
b. I have lost my favorite pen. (I do not have it now.)

The past participles in (68) are telic verbs, thus triggering the results in the parentheses. What the results seem to mean here is the direct resultant state in my terms, i.e. the result stemming directly from the occurrence of the PAP-situation.

However, telicity of verbs does not necessarily bring about direct resultant states; with such elements as social factors and contexts, they can yield the indirect resultant state in my terms or conversational implicatures in general terms (see section 4.1.2). These are exemplified in (69):

- (69) a. I've changed my mind about that favour you wanted me to do  
(consequence: and I am now ready to do it).  
b. I have now given up (consequence: so don't expect any further action  
on my part).

(Fenn (1987:112))

In these cases, the resultant states are not those stemming directly from the occurrence of the PAP-situations alone, but rather those inferred from the interaction between the PAP-situations and social factors or contexts (cf. Depraetere (1998)). In (69b), for instance,



the direct result of the PAP-situation (i.e. the situation of the speaker's giving up) is the "after-state" of the speaker's giving up; but a resultant state which we tend to regard as unmarked as a result of the utterance of (69b) may be, say, the mental state of the speaker's not wanting to do anything about the problem in his or her mind, which is indicated by the proposition in the parentheses. The point here is that the telicity of the verb involved (i.e. *give up*) does not necessarily lead to the occurrence of the direct result. The same observation applies to (69a). From this, it follows that present perfect sentences with telic verbs can represent either direct or indirect resultant states.

Moreover, it is possible that atelic verbs in the present perfect can also bear resultative overtones.

(70) a. I've warned you from my own experience (consequence: so I hope you will take head and conduct yourself in future accordingly).

(Fenn (1987:113))

b. I've said we'll ring her (consequence: so we must bear this in mind and find an opportunity to do so). (Fenn (1987:112))

These perfect sentences imply what Fenn calls abstract resultatives, which hold at the speech time and provide a basis for probable future actions shown in the parentheses. These resultant states have the same kind of status as the indirect resultant states shown in (69). Thus, if the present perfect with the latter type of resultant state is viewed as a resultative perfect, then the present perfect with the former type is viewed as a resultative perfect, too.

The discussion thus far leads to the claim that present perfect sentences with either of the two types of resultant states can express resultative perfects, irrespective of the telicity of the verb involved. If so, then it is the case that some experiential perfects, which are often said to represent conversational implicatures (or indirect resultant states in my terms), can show strong resultativeness.<sup>22</sup>

- (71) a. Mana has played the *koto* hundreds of times this month. (=53b)  
b. I have danced with Canon Banks twice and I feel sick.

(requoted from Fenn (1987:122))

Consider (71a), for example. The present perfect in (71a) is classified as a kind of experiential perfect. When it is inserted into the following dialogue, the perfect sentence can be viewed as expressing resultative connotations strongly.

- (72) a. Mother: Mana is going to play the *koto* at the concert tomorrow.  
Father: How is she?  
Mother: Very good! She has played the *koto* hundreds of times this month. Don't mind!

In this context, the present perfect involved is interpreted as exclusively representing the resultant state of Mana's being ready for the concert tomorrow. Since we have seen that present perfect sentences accompanying indirect resultant states can be regarded as representing resultative perfects, we can say that some experiential perfects can also be viewed as resultative perfects, as shown in (71). (In the following subsection, we will see that such present perfects as those in (71) are classified as peripheral experiential perfects with completive connotations.)

To recapitulate, which type of present perfect is identified as a resultative perfect depends on how we define resultative perfects. In the next subsection, I will discuss how I deal with the resultative perfect in my analysis.

#### 4.5.1.2. Analysis

This subsection analyzes the resultative perfect in terms of the analysis proposed in this chapter. It will be shown that the resultative perfect does not have the same status as the other four prototypical perfects (i.e. the completive perfect, the experiential perfect, the continuative perfect, and the habitual perfect); that is, the resultative perfect is not

classified on the same grounds as the other four perfects, but rather it is classified as a special case of P(effective)-perfects, i.e. perfects with the concept separation of the first condition of the P-C criterion. (Strictly speaking, we should refer to the perfect at issue as perfects with PERFECTIVE connotations because perfects like those in (74) below, which can be viewed as resultative perfects, are not P-perfects. But for convenience' sake, I call the perfect at issue P-perfects for the time being.) That is, the range where members of the resultative perfect can share extends not only over the areas of the prototypical completive and experiential perfects, but also over the areas <1>, <2>, and <3>, in the diagram in (62).

Consider the following sentences:

- (73) a. Someone has just broken her doll. (cf. Leech (1987:39))  
b. I have seen him this morning. (=46a))  
c. The abbey has fallen into ruin. It started a long time ago.  
d. Dodos have already died out. (=68a))  
e. Mana has played the *koto* hundreds of times this week. (=25c))  
f. Shakespeare has written impressive dramas. (=51b))

The present perfects in (73) are all P-perfects, having to do with the concept separation of the first condition of the P-C criterion. However, they behave differently with respect to the S-G criterion. Both (73a) and (73b) contain the typical completive perfect because they can be viewed as accompanied by the concepts close-up reference and recency. The present perfects in (73c, d) are viewed as peripheral completive perfects in certain contexts in that they can be connected with the concepts close-up reference and remoteness: in (73d), for example, a zoologist may make a close-up reference to the PAP-situation in the context where he or she thinks it a pity that we cannot study the ecology of dodos now. (As for (73d), we may say that instead of the concept close-up reference, the concept bird's-eye view reference is operative in the case of what I call the

divided reading, i.e. the case of referring to each death of the dodos.) The perfect in (73e) is related to the concepts bird's-eye view reference and recency, and, thus, it is seen as a peripheral experiential perfect. The perfect in (72f) is viewed as a prototypical experiential perfect because it can be regarded as conveying the concepts of bird's-eye view reference and remoteness. From these observations, it can be said that all the present perfects in (73) contain resultativeness, though it may vary in degree.

An important consequence which comes from our analysis is that instead of the two criteria which distinguish among the four pragmatic categories, we could use the distinction between direct and indirect resultant states as a criterion to distinguish prototypical resultative perfects from peripheral resultative perfects. With this criterion, the resultative perfect with a direct resultant state is classified as a prototypical resultative (e.g. the perfects in (73a, c, d)),<sup>23</sup> but prototypical members of the resultative perfect do not correspond exactly to any of the four prototypical categories mentioned in (62). For example, the present perfect in (73d), which can be seen as a prototypical resultative perfect, is identified as a peripheral completive perfect with experiential overtones; and the present perfect in (73b), which can be regarded as a prototypical completive perfect, is not viewed as a prototypical resultative perfect because it conveys an indirect resultant state.

This leads us to the conclusion that the criterion which distinguishes prototypical from peripheral resultative perfects, on one hand, and the criterion which distinguishes resultative from non-resultative perfects, on the other, are different from the two criteria which distinguish the four pragmatic categories mentioned in (62) from one another. That is, the former criteria are relevant to how we treat the resultant state associated with perfect *have* (or  $E_1$ ) with the help of contexts; and this is not directly relevant to the criteria for distinctions among the four prototypical categories in (62). With the criteria in question, P-perfects with direct resultant states (e.g. the perfects in (73a, c, d)) are

classified as prototypical resultative perfects, and P-perfects with indirect resultant states (e.g. the perfects in (73b, e, f)) as peripheral resultative perfects, while non P-perfects are classified as non-resultative perfects.

Before concluding this section, let us see that the above conclusion is further supported by the following data:

- (74) a. A week has elapsed since the preceding scene. (=38a))  
b. A month has gone by since then. (=38b))

As we have seen, these present perfects are peripheral continuative perfects with completive connotations. In these cases, the PAP-situation associated with  $E_2$  is conclusive, and a direct resultant state stemming exclusively from the occurrence of the PAP-situation holds at the speech time: in both cases, the direct resultant state is the after-state of the situation of time's going by. Thus, these perfects are, by definition, viewed as highly prototypical resultative perfects. I note in passing that since these perfects belong to the area <1> in (62), where the feature PERFECTIVE is still operative, the conclusion above is not contradictory to our claim that resultative perfects are classified as a special type of P-perfects, or more precisely, perfects accompanying any nuance of perfectivity, as I have suggested at the beginning of this subsection; on the contrary, the conclusion supports our analysis.

To sum up, we have seen that telicity of verbs associated with the past participle complement is not directly relevant to the criterion for the distinction between resultative and non-resultative perfects; instead, whether or not a given perfect sentence conveys a resultant state (i.e. P-perfects or non P-perfects) is the criterion. Moreover, the type of resultant state (i.e. direct vs. indirect resultant states) is a key factor for the distinction between prototypical from peripheral resultative perfects. As a result, we have shown that the category of resultative perfects is not equal to any of the four prototypical categories in (62) and is viewed as a special case of the P-perfect.

#### 4.5.2. "Hot-News" Perfect

This section considers how the "hot-news" perfect is analyzed in our theory. We will claim that as Schwenter (1994) points out, the "hot-news" perfect is an intermediate between the present perfect and the simple past with the perfective aspect and explain the phenomenon in terms of the temporal schemata of the present perfect tense and the simple past tense.

##### 4.5.2.1. What Is the "Hot-News" Perfect?

Let us first outline briefly what the "hot-news" perfect is. To my knowledge, this use of the present perfect is first mentioned by McCawley (1971). This kind of perfect can be viewed as having the following three conditions, at least:

- (75) A given present perfect is viewed as the "hot-news" perfect
- a. in the case where it refers to a past situation which is, subjectively or objectively, close to the speech time (S), and the situation is viewed as significant at S.
  - b. in the case where the speaker thinks that the addressee has not known the situation yet.
  - c. in the case where the speaker judges that the situation deserves news (and thus it is usually accompanied by the surprise value). (Cf. Schwenter (1994:997).)

To illustrate these points, let us consider some examples of the "hot-news" perfect.<sup>24</sup>

- (76) a. Malcolm X has just been assassinated. (McCawley (1971:104))  
b. The train station has burned to the ground!  
c. Tuition has just gone up again!

(b-c; Schwenter (1994:997))

Evidently, these present perfect sentences can all be interpreted as satisfying the three conditions in (75).

The "hot-news" use of the present perfect has not been discussed in detail, and has been treated as a special use of the resultative perfect or the perfect of "recent past" because it has been considered that its news value stems pragmatically from the situation where it is used (see Comrie (1985), Elsness (1997), and Fenn (1987)). However, Schwenter (1994) points out that the "hot-news" perfect has different discourse functions from other uses of the present perfect. More specifically, he observes that other uses of the present perfect focus more or less on the situation holding at the speech time (i.e. the situation described by perfect *have* in my terms), whereas the "hot-news" perfect focuses on the past situation itself (i.e. the PAP-situation in my terms) and thus it has a perfective-like characteristic as the simple past does.

As evidence that the "hot-news" perfect focuses on the PAP-situation, Schwenter cites the following excerpt:

(77) L.A. deputies have caught looters today in the firestorm area.... Deputy R.K. said the first looter was caught while the fire still raged around him.

(quoted from Schwenter (1994:1001))

Schwenter notes that the speaker focuses his attention on the PAP-situation of the present perfect sentence, and this is suggested by the use of the simple past sentence after the present perfect sentence at issue.<sup>25</sup> He continues to say that since the focus is fixed on the past situation (i.e. the PAP-situation in my terms) in the case of the "hot-news" perfect, a "hot-news" perfect sentence can easily be followed by a simple past sentence because in both cases the focus is put on a situation in the past area.

Here, I present further evidence, in terms of our analysis, that the four prototypical present perfects shown in (62), but not the "hot-news" perfect, require that the (resultant) state holding at the speech time be focused on. In the case of the continuative and the

habitual perfect, it can be said that the temporal focus is fixed on the event time ( $E_1$ ) associated with the state holding at the speech time for the following reason: since both the continuative and the habitual perfect express the situation where the PAP-situation which starts in the past continues up to the speech time, it is nonsense if we dare focus on some past section of the merged situation while talking about the present state of the merged situation. As for the completive and the experiential perfect (and the resultative perfect), the fact that they can be specified by the time adverb *now* supports the claim that these perfects require the temporal focus to be fixed on the event time ( $E_1$ ) associated with the resultant state holding at the speech time.

- (78) a. Now Yoko has gone to Singapore.  
b. Now Mana has joined the *koto* contest thirteen times.

In these sentences, the adverb *now* modifies the event time of the resultant state, and, thus, it highlights the resultant state at issue.

As evidence for his claim that unlike other uses of the present perfect, the "hot-news" perfect has a perfective-like characteristic, Schwenter observes that in discourse, other uses of the present perfect serve to represent their situations as backgrounds with respect to other situations associated with other tenses such as the simple past; while the "hot-news" perfect can appear in discourse without other tenses like the simple past, and, moreover, it can happen successively, pushing forward the time of the story line. All of them are characteristics of the simple past tense (or the perfective tense). Consider the following dialogue:

- (79) J: Does anyone know if Clinton's here yet?  
B: Yes, they've just pulled up out front; they've brought him up to the plaza;  
now I think they've put him up on stage.

(Schwenter (1994:1005))

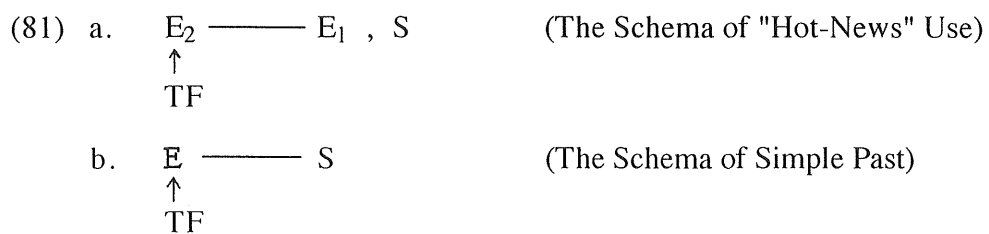
It is well known that in discourse, the past tense in the perfective form, i.e. the simple





interpretation level, so the "hot-news" perfect can still be an interpretive variant of the present perfect, and its temporal schema (80b) can be viewed as derived from the basic temporal schema (80a) at (the stage(s) following the first stage of) the tense-interpretation level. Hence the results of the ambiguity tests shown in section 4.0: the present perfect itself has only one temporal meaning (i.e. basic semantic structure).

Let us now turn to the second point: the temporal schema can account for why in discourse, the "hot-news" perfect has a perfective-like function. The following are the temporal schemata of the "hot-news" perfect and the simple past in the perfective form:



As is clear from (81), in both schemata the temporal focus (TF) is fixed on the event time in the past area. In this respect, the "hot-news" perfect is similar to the simple past tense.

This characteristic of the "hot-news" perfect explains the following two points: (i) it is often the case that discourse starts with a present perfect sentence of the "hot-news" use and it is followed by simple past sentences (e.g. (77)), and (ii) "hot-news" perfects can appear successively and push forward the time of the story line (e.g. (79)). The first point is explained in the following manner. The temporal schema of the "hot-news" perfect, like those of other normal uses, includes a resultant state holding at the speech time (S). It is thus natural for us to start a discourse with a tense form relevant to the speech time, i.e. the absolutely-existing time point for any temporal relations which the speaker and the addressee(s) can share. With that tense form, i.e. the present perfect, the addressee can identify the starting point of the discourse definitely. Once a past situation is introduced into the discourse, the addressee can easily follow the story line; thus, the simple past tense, which is not directly relevant to the speech time, can be used



$E_1$ . Recall that the resultative perfect is a special case of the P(erfective)-perfect in our system. Thus, the reason why the TF is fixed on  $E_1$  in the schema of the present perfect of normal uses is verified from a diachronic point of view.

The question, then, arises as to why the TF-shift occurs with the present perfect. This seems to have much to do with the type of the resultant state associated with  $E_1$ . Recall that we have distinguished direct from indirect resultant states. In the case of perfect sentences with indirect resultant states, we can think of many possible resultant states or conversational implicatures because they do not stem directly from the occurrence of their corresponding preceding situations, i.e. the situations described by the past participle complements (the PAP-situations). Observe the following sentences:

(83) Susan has slept with Ian. (Depraetere (1998:601))

(84) a. Susan has betrayed her husband.

b. Ian does not really love his wife.

c. Susan knows what the rooms in the Savoy Hotel are like.

(Depraetere (1998:601))

The present perfect in (83) is one with an indirect resultant state, and the sentences in (84) represent possible indirect resultant states or conversational implicatures stemming from the utterance of (83). What is important here is that with this type of perfect sentence, the context determines which indirect resultant state the speaker intends to communicate to the addressee(s); i.e., there is no absolute one-to-one link between the PAP-situation and its corresponding (indirect) resultant state. The situation may be possible where an indirect resultant state is not so salient in the speaker's mind; i.e., the speaker does not highlight the indirect resultant state so much. It is thus plausible to assume that this difference between the characteristics of direct and indirect resultant states motivates the speaker to shift the TF from  $E_1$  (associated with the resultant state) to  $E_2$  (associated with the PAP-situation). This inference is diachronically verified. Schwenter (1994) notes that the

"hot-news" perfect has emerged after other prototypical uses have all emerged (cf. also Carey (1995, 1996)); i.e., the present perfect in (83), widely known as an experiential perfect, has emerged before the "hot-news" perfect. If his observation is correct, then our explanation for the TF-shift in the case of the present perfect is verified, or at least motivated.

#### 4.6. Summary

This chapter has been devoted to demonstrating that the compositional tense theory proposed in chapters 1 to 3 is useful to provide a systematic explanation for a variety of phenomena concerning the present perfect. At the tense-structure level, the perfect auxiliary *have* is already combined with a past participle complement to form a temporal template, i.e. the perfect form; if perfect *have* is accompanied by the present tense morpheme, the result is that the template is seen as the present perfect form (see the schema in (19)).

It is the first stage of the tense-interpretation level that given an appropriate context, a given present perfect form is interpreted as expressing a present perfect tense. At this stage, the original temporal value of the perfect tense is preserved because only the operation of fixing the position of the base time of the perfect tense is carried out here; thus, the present perfect has only the meaning of 'anteriority to the base time simultaneous with the speech time', which is justified by the proform *do so* and the gapping tests.

We have seen that after this stage of the tense-interpretation level, we can get various pragmatic categories, or uses, of the present perfect tense. In particular, I have argued that the two criteria, i.e. the P(erfective)-C(ontinuous) criterion and the S(pecific)-G(eneral) criterion, are operative based on the basic temporal schema of the present perfect when we interpret a given present perfect sentence; and we have reached the

conclusion that there are four prototypical uses of the present perfect (see (62)). The upshot is that not only can our analysis give a systematic explanation of the mechanism of interpreting the present perfect tense, but also it can provide an explanation, from a unified point of view, for why some present perfects are interpreted ambivalently.

Finally, we have dealt with the resultative and the "hot-news" perfect and shown that they should be analyzed based on the criteria different from the ones for the distinction between the above-mentioned four prototypical uses. More specifically, the resultative perfect has been analyzed in terms of the notions of direct resultant states, indirect resultant states and non-resultant states; on the other hand, the "hot-news" perfect has been analyzed as an intermediate between the present perfect of normal uses and the simple past tense (or the perfective tense) because of the TF-shift in the temporal schemata of the three types of tenses mentioned above.

## NOTES TO CHAPTER 4

\* This chapter is a largely revised and developed version of Wada (1994).

<sup>1</sup> In this chapter, the term *sense* is used as a neutral term to cover both meanings, which are equivalent to basic semantic structures, and uses, which are intended to refer to pragmatic variants derived from one basic semantic structure.

<sup>2</sup> Unlike Bolinger (1977), McCawley (1971) claims that the results of the proform *do so* test shows that the present perfect is ambiguous, insisting that the present perfect has four meanings, i.e. the universal (i.e. continuative) perfect, the existential (i.e. experiential) perfect, the stative (i.e. resultative) perfect, and the "hot-news" perfect.

However, as Inoue (1979:565) points out, using the proform *do so* in order to judge whether a given present perfect sentence is ambiguous or vague with respect to its meaning is not appropriate because in that case the major constituent of the present perfect, i.e. perfect *have*, still remains in the second conjunct in which the proform *do so* is substituted for the past participle complement, as shown in (i), and, thus, the test does not illustrate an identity deletion applied to the present perfect tense.

(i) Max has been fired, and so has Fred. (=1)

She notes that gapping is a legitimate test for an identity deletion as to the present perfect tense because it involves a deletion of the entire present perfect form. This means that even if McCawley's observation is correct, the result remains preserved that the English present perfect tense has only one meaning.

<sup>3</sup> This position is also taken by the following linguists: Comrie (1976:119), Frawley (1992), Nakau (1994:Ch.19), Schwenter (1994), among others.

<sup>4</sup> For convenience' sake, I use the term *future perfect tense* for the tense whose temporal value is represented by the form of *will* + perfect tense referring to future time. Needless to say, this does not mean that I admit the future tense as an absolute tense in English.

5 It is well known that in the case of the perfect tense, the preposed time adverbial tends to modify the reference time while the postposed time adverbial tends to modify the event time. In my theory, the preposed time adverbial tends to specify  $E_1$ , which is associated with a syntactically higher predicate, i.e. *have*, while the postposed time adverbial tends to specify  $E_2$ , which is associated with a syntactically lower predicate, i.e. the past participle. But such a tendency is not crucial for the discussion here. What is important is that a DTP adverbial can specify either  $E_1$  or  $E_2$ .

6 The fact that sentence (14a) is not viewed as perfectly ungrammatical may be attributed to the fact that in an appropriate context, the present perfect can possibly be interpreted as expressing an experiential sense; for on an experiential reading, it is possible to assume the context where the speaker once opened the door repeatedly, but it is not used now.

7 In this chapter, the simple version of the temporal schema is basically used except for the case where the distinction between the A- and the R-component is directly relevant to the discussion.

8 Recall that in our compositional tense theory, the event time is not the time of the full situation, but rather the time of a relevant part of the situation talked of (see section 1.4).

9 In our compositional tense theory, the temporal schema in (28) is the basic temporal schema of the present perfect tense, and the temporal schema of the so-called continuative perfect in (30b) is seen as deriving from the basic one in (28) in the process of calculation. This is compatible both with Bauer's (1970) claim that the continuative perfect is a derived use of the present perfect, and with Reichenbach's (1947) treating the continuative perfect as a second use of the present perfect. Moreover, the position at issue is supported by Carey's (1994, 1995, 1996) observation that the continuative perfect diachronically emerged after the resultative and experiential perfect (see also



section 4.5.2).

<sup>10</sup> Few previous studies have shown how to analyze this type of peripheral perfect, let alone a systematic explanation for it.

<sup>11</sup> Readers should distinguish specific situations from definite situations. In this thesis, a specific situation refers to a situation recognizable or identifiable to the speaker, whereas a definite situation is one recognizable or identifiable to both the speaker and the addressee. Thus, just because the present perfect cannot go with DTP adverbials does not mean that the PAP-situation of the present perfect is not specific, though it may possibly mean that the PAP-situation of the present perfect is not definite.

- (i) a. \* I have played tennis yesterday.
- b. \* Mana has arrived at Tokyo National University of Fine Arts and Music at seven.

The reason why the present perfect tense cannot go with DTP adverbials is explained in chapter 6.

<sup>12</sup> As we have already seen, the present perfect form can be interpreted as expressing generic senses, as in (22) in the text. But in our tense theory, this type of perfect is not regarded as a present perfect, but as a generic perfect. As we have mentioned, this chapter does not deal with the generic type of perfect sentence.

<sup>13</sup> This distinction between the concept close-up reference and the concept bird's-eye view reference does not correspond to the distinction between the concept semelfactive and the concept iterative. A given perfect sentence accompanied by the concept of bird's-eye view reference can represent one occurrence of an event, as shown in (i):

- (i) I have visited Italy once.

<sup>14</sup> Sentences like the following can be viewed as conveying the concept of bird's-eye view reference:

- (i) a. At different times (since 1980) John has wanted to be a doctor, a postman and an astronaut.
- b. At different times (since 1980) John has owned a house, a caravan and a windmill.

(Mittwoch (1988:210))

For example, sentence (ia) represents the situations of wanting to be a doctor, wanting to be a postman, and wanting to be an astronaut as constituting a gestalt, but does not refer to the situations involved separately. The same applies to (ib). Thus, the sentences in (i) are, by definition, considered to be sentences with the concept of bird's-eye view reference.

<sup>15</sup> It can be said that *just* represents recency because of its lexical property; on the other hand, *before* does not necessarily represent remoteness by itself, but rather expresses relative anteriority, i.e. 'time area anterior to a certain time point'.

<sup>16</sup> Note that sentence (53a) represents a situation in the past (i.e. the PAP-situation) which happens temporally closer to the speech time than the PAP-situation of the present perfect sentence in (53b). Thus, sentence (53a) is a more peripheral (i.e. less typical) G-perfect than sentence (53b).

<sup>17</sup> Sentences with inanimate subjects can be classified as experiential perfect sentences. Observe the following:

- (i) a. Fossils of this prehistoric fish have been found all over the world.

(Declerck (1991a:100))

- b. A lot of plays have been written by Shakespeare. (Palmer (1988:50))

Generally speaking, it may be hard to say that inanimate subjects experience something, so it may be better for us to call this type of perfect the *existential* perfect. But this is only a matter of terminology, so I will keep using the term experiential to refer to perfect sentences with the features PERFECTIVE and GENERAL.

<sup>18</sup> Generally speaking, present perfect sentences in the progressive form tend to represent the C-perfect, especially the continuative perfect. However, such perfect sentences have more complicated temporal structures than present perfect sentences in the non-progressive form. To clarify the point, it is necessary to try to make the discussion as simple as possible. Thus, we do not consider present perfect sentences in the progressive form in this chapter.

<sup>19</sup> As with the experiential perfect, the habitual perfect can take inanimate subjects, as in (i):

- (i) Throughout the centuries, English has taken many suffixes from French and Latin. (English and Many Cultures, p.30)

<sup>20</sup> As is stated in Fenn (1987:89), a decisive factor which determines whether  $E_2$  reaches  $E_1$  or not is the notion of *regular iteration vs. non-regular iteration*. In the case of regular iteration, it is usually inferred that the PAP-situation associated with  $E_2$  will continue to happen up to the speech time (and beyond), and, thus,  $E_2$  is seen as reaching  $E_1$ .

<sup>21</sup> Although Declerck (1991b) claims that the resultant state which the present perfect represents is merely conversational implicatures, some present perfect sentences must entail the resultant state, as the sentences in (68) show. (Cf. also Depraetere (1998:603; fn. 9).)

<sup>22</sup> Fenn (1987:122) claims that some continuative perfect sentences can represent resultativeness. Consider the following example:

- (i) I mean I've been out there for ages. I'm soaking ....

Within our framework, the PAP-situation (i.e. the situation of the speaker's being out there for ages) is interpreted as separate from the situation described by perfect *have* holding at the speech time, because it is clear because of the use of *there* that the speaker has come back from the place at issue now. On the other hand, the PAP-situation is

viewed as non-conclusive because of the stative nature of the nonfinite predicate *been out*. Thus, in our analysis the present perfect sentence in (i) is classified as expressing a peripheral completive perfect with continuative overtones. From this, it follows that our claim still remains preserved that the resultative perfect is a special case of the P (effective)-perfect.

23 Possibly we can regard only this type of perfect as the resultative perfect, though we do not take that position.

24 For convenience' sake, we regard the passive form *be* + past participle as a whole as representing a single PAP-situation.

25 It is well known that discourse often starts with a present perfect sentence and changes into simple past sentences, as shown in (i):

(i) Joan has received a proposal of marriage; it took us completely by surprise.

To the best of my knowledge, however, it is Schwenter (1994) who first mentioned that the present perfect at issue is the "hot-news" perfect.

26 I note in passing that the existence of perfects like the "hot-news" perfect which is an intermediate between the other present perfects and the simple past enables us to claim that the pluperfect represents only one temporal structure, i.e. the perfect tense in the past time-sphere (which is proposed in chapter 3), and, thus, the pluperfect has the temporal structure parallel to that of the present perfect form, which means that the pluperfect does not represent the past-in-the-past tense (see chapter 5 for further discussion). This is because since perfects like the "hot-news" perfect has some characteristics of the simple past tense, we can infer by analogy that the same observation applies to the past perfect tense; if so, unlike Caenepeel (1995), we do not necessarily consider that the pluperfect in narrative discourse sometimes represents the past-in-the-past tense, but rather we can claim that the pluperfect in narrative discourse can be interpreted as expressing a pragmatic use similar in function to the "hot-news" perfect

which has some characteristics of the simple past tense (see also note 27). See Caenepeel (1995) for further discussion on this topic.

<sup>27</sup> In chapter 5, the temporal focus (TF) is fixed on  $E_1$  in the temporal schema of the present perfect tense because only P(erfective)-perfects are under consideration there.

(i) I have seen him already---he came to borrow a hammer.

(Leech (1987:40-41))

The point here is that as with the "hot-news" perfect, P-perfect sentences necessarily contain the resultant state holding at the speech time, i.e. the situation associated with  $E_1$ , so the explanation in the text is applicable to the situation where a discourse starts with the P-perfect and next switches the tense from the present perfect to the simple past. The only difference between the cases of P-perfects and the "hot-news" perfect is that in the former, the TF-shift from  $E_1$  to  $E_2$  is tacitly carried out after the introduction of the present perfect sentence and before the shift of the tense form from the present perfect to the simple past, while in the latter, the TF-shift is already carried out before the introduction of the present perfect sentence.

## CHAPTER 5

### ON THE PLUPERFECT:

#### DOES IT REPRESENT THE PRE-PRETERITE TENSE?\*

##### 5.0. Introduction

It has been a prevailing view (e.g. McCawley (1971), Palmer (1988), Quirk et al. (1985), Salkie (1989)) that the English pluperfect can be interpreted as expressing the past of a simple past (henceforth the pre-preterite tense) as well as the past of a present perfect (henceforth the pre-perfect tense). The latter is regarded as having the temporal structure in which the perfect is embedded in the past area and the former as having the temporal structure in which the preterite is embedded in the past area.<sup>1</sup> They are exemplified in (1) and (2):

- (1) When I arrived at the airport, Yoko had gone to Singapore.
- (2) I arrived at the hall at five; Mana had played the *koto* at four.

It is generally said that the pluperfect in (1) has the backshifted temporal structure of the present perfect in (3), whereas the pluperfect in (2) has that of the simple past in (4):

- (3) a. Yoko has gone to Singapore now.
- b. \*Yoko went to Singapore now.
- (4) a. Mana played the *koto* at four.
- b. \*Mana has played the *koto* at four.

As is well known, the finite present perfect in English cannot cooccur with adverbials of definite time position (DTP adverbials) such as *at four* and *when I arrived at the airport*,<sup>2</sup> whereas the simple past can. This fact might lead us to the claim that since the event time (E) of the pluperfect in (2), which precedes the reference time (the time of orientation (O) in our terminology) in the past, is specified by the DTP adverbial *at four*, this pluperfect is construed as expressing the pre-preterite tense, i.e. the past of a simple

past tense.

Notice here that this line of reasoning is tacitly based on the assumption that the finite present perfect represents the intrinsic meaning of the perfect tense and the perfect tense is the so-called indefinite past tense, i.e. a past tense whose time position or interval is not identifiable to the hearer. On this assumption, it might be said that the perfect tense cannot cooccur with a DTP adverbial because such an adverbial is considered to be compatible only with a definite tense like the simple past.

However, this argument is not well-founded. For one thing, the incompatibility of the finite present perfect with a DTP adverbial does not necessarily prove the indefiniteness of the perfect tense per se. The definiteness or indefiniteness of a time adverbial is one thing and the definiteness or indefiniteness of a tense is another. For another thing, the possibility is left that the finite present perfect in English is an exception with respect to cooccurrence with DTP adverbials; in fact, English perfect tenses other than the finite present perfect can cooccur with DTP adverbials. Observe the examples in (5):

- (5) a. Chris claims to have been in Pontefract last year. (Klein (1992:530))
- b. Having had a violent row with him on Sunday, John has decided not to see him again for a week. (Fenn (1987:230))
- c. He may have played yesterday. (Quirk et al. (1985:552))

The nonfinite perfects in (5) can all be regarded as "present perfects" on the grounds that the reference time (i.e. the time of orientation in our terminology) of the nonfinite perfect is simultaneous with the main-clause time, which is, in turn, simultaneous with the speech time (S). They all cooccur with DTP adverbials, as the pluperfect in (2) does.<sup>3</sup>

Taking the above matters into consideration, we can get the following generalization as to the English perfect tense on the basis of the compositional tense theory, where the finite perfect can be decomposed into the A(bsolute tense)-component expressing the

present or past time-sphere and the R(elative tense)-component expressing the perfect tense (see section 3.2.2 for details):

- (6) The perfect tense can cooccur with DTP adverbials unless some other factor impedes such cooccurrence.

On the basis of this generalization, which presupposes a compositional account of the English perfect tense, I claim that the cooccurrence of the pluperfect with DTP adverbials does not provide an argument for allowing the pluperfect to express the pre-preterite structure, for the perfect tense per se can go with DTP adverbials; and I argue that a nonfinite perfect represents the intrinsic meaning of the perfect tense, from which both a tense-like function and an aspect-like function are derived (see chapter 4, especially section 4.5.2, for details). In order to verify this position, however, the question has to be solved as to what kind of factor prevents the English finite present perfect from cooccurring with DTP adverbials. I will postpone the details of this matter until the next chapter and merely mention here that the factor involved is connected with a peculiarity of the English present tense.

While the fact that the pluperfect is compatible, but the finite present perfect form is incompatible, with DTP adverbials seems the only decisive argument for the claim that the pluperfect can represent not only the pre-perfect tense but also the pre-preterite tense, we have several pieces of evidence for the claim that the English pluperfect has only one temporal structure(or basic temporal structure), i.e. the temporal structure of the pre-perfect tense, which is to be shown in this chapter. However, we can justify our claim that the English pluperfect represents only the pre-perfect tense only after we have proven that the incompatibility of the finite present perfect with DTP adverbials is not due to the nature of the perfect tense, but to the factor suggested in the generalization in (6). Thus, the result of this chapter, together with the explanation for the incompatibility of the present perfect form with DTP adverbials in the next chapter, proves that the pluperfect is



parallel in temporal structure to the present perfect form, and, thus, verifies our compositional account of English perfect tenses.

Some linguists (e.g. Ando (1983) and Huddleston (1984)) suggest that if perfect *have* does not carry the present tense inflection, we have a neutralization of the function of the perfect tense (or aspect) and that of the past tense. However, this claim is different from our claim that the English pluperfect represents only the pre-perfect tense, since they also assume that the finite present perfect expresses the nature of the perfect tense. To my knowledge, it is only Fenn (1987) that has suggested that the English pluperfect represents only the pre-perfect tense. However, he also presupposes that the finite present perfect represents the intrinsic semantic value of the perfect tense, claiming that a nonfinite perfect can function as a proform of the simple past tense. Declerck (1991b) also states that the pluperfect always expresses one temporal meaning, i.e. anteriority in the past, rejecting the view that the pluperfect is ambiguous. However, it seems that the temporal structure of the pluperfect that he has in mind does not correspond to that of the pre-perfect tense established within our framework. This seems to be due to the fact that his analysis is different from ours mainly in two respects: first, he does not admit the dual structure of the perfect tense; second, he does not adopt a compositional semantic account of a finite perfect.

In this chapter, I will show that at the tense-interpretation level, the temporal schema of the pluperfect provides an explanatory basis for a demonstration of the parallelism between the pluperfect and the present perfect sentences. It should be noticed that for the sake of simplicity, I restrict myself to dealing with the (plu)perfect with the feature PERFECTIVE, i.e. the perfect in which the event time of the past participle complement lies entirely before the time of orientation.

This chapter is organized as follows. Section 5.1 offers two phenomena that can be viewed not only as arguments against the claim that the English pluperfect can represent

the pre-preterite tense, but also as arguments for the claim that the English pluperfect represents only the pre-perfect tense. In section 5.2, on the basis of our compositional tense theory, I formulate the temporal schemata of the pre-perfect and the pre-preterite tenses, explicating the two phenomena concerning the pluperfect observed in section 5.1. Section 5.3 demonstrates that our analysis can deal with some further empirical facts that show the parallelism between the temporal structure of the pluperfect and that of the present perfect. Section 5.4 makes concluding remarks.

## **5.1. Arguments against the Claim that the Pluperfect Can Represent the Pre-preterite Tense**

### **5.1.1. Two Phenomena**

In this section, I offer two phenomena that count as arguments against the claim that the English pluperfect can represent the pre-preterite tense.

The first argument concerns the entailment of a resultant state at the time of orientation (O) in the past. Let us begin by observing a well-known paradigm as to the difference between the present perfect and the simple past, given in (7):

- (7) a. \*I have lost my watch, but I have it with me now.<sup>4</sup>  
b. I lost my watch, but I have it with me now.

(7a) is unacceptable because the meaning of the second sentence is contradictory to the meaning conveyed by the first sentence. As we have verified in section 4.1, the present perfect in (7a) entails not only the situation of the speaker's losing his watch, but also the resultant state of that situation which obtains at the speech time (S), i.e. the state of the speaker's not having the watch at S.<sup>5</sup> So we cannot say without contradiction that at S the speaker has the watch that he has lost. Hence the unacceptability of (7a). In (7b), on the other hand, the sentence in the preterite does not necessarily entail such a resultant state. It entails only the event of losing a watch. It is therefore possible that by S the

speaker has found the watch that he had lost. Hence the noncontradiction of (7b).

Keeping in mind this contrast between the present perfect and the simple past, consider the following:

(8) \*When I arrived home, I had lost my watch. But I had it with me then.<sup>6</sup>

The adverbial *when I arrived home* specifies the time of orientation in the past (or Past 1) and the adverbial *then* refers to the same time.

The unacceptability of (8) suggests that the pluperfect cannot represent the pre-preterite tense. This is explained in the following manner. Given the fact that the simple past does not necessarily entail a resultant state at S, the pre-preterite tense, by definition, does not necessarily entail a resultant state at the time of orientation in the past. On the pre-preterite interpretation, it should be possible to say that by the time he arrived home, the speaker had found the watch that he had lost before. But the real truth is that such an interpretation is impossible with respect to (8). We can infer that this is because the pluperfect entails a resultant state at the time of orientation in the past: the pluperfect in (8) entails the state of the speaker's not having the watch, which is contradictory to the situation described by the second sentence. Hence, we can present the unacceptability of (8) as an argument against the claim that the pluperfect can represent the pre-preterite tense.

The second argument is based on the fact that we cannot always use the pluperfect when referring to situations in the past time relative to the time of orientation in the past (henceforth the past-in-the-past or Past 2). Compare (9a) with (9b):

- (9) a. ?Max poured a cup of coffee. He had entered the room.  
b. Max entered the room. He poured a cup of coffee.

(Lascarides and Asher (1993:470))

In both (9a) and (9b), the event of Max's entering the room temporally precedes the event of his pouring a cup of coffee. Despite the equal temporal relation between them, (9a) is

odd. If the pluperfect were the pre-preterite tense, which is used to refer simply to a situation in Past 2, (9a) would be perfectly acceptable. We can thus predict that the pluperfect means more than that it simply refers to a situation in Past 2.

This is supported by Lascarides and Asher's (1993:470-471) statement that (9a) is improved when accompanied by a further clause that "explains" the preceding sentence:

(10) Max poured himself a cup of coffee. He had entered the room feeling depressed, but now felt much better. (Lascarides and Asher (1993:471))

It is natural for us to have coffee so as to refresh ourselves when we feel depressed. In this sense, the sentence in the pluperfect explains why the event of the preceding sentence happens. Hence, (10) is perfectly acceptable. On the other hand, (9a) is odd because we can hardly think of the event of entering a room as a reason to drink coffee. This suggests that the function of "explaining" something can be crucially related to the semantic structure of the past perfect tense represented by the pluperfect (see the next subsection).

From these observations, we can say that this phenomenon is an argument against the existence of the pre-preterite structure of the pluperfect.

### 5.1.2. Current Relevance

The above observations suggest that the pluperfect requires some special environment where it occurs, namely, that an environment where the pluperfect occurs is highly restricted. Why is it so? A possible answer to the question is that the pluperfect expresses a close link between a situation in Past 2 and a situation in Past 1 because of its semantic structure, especially the existence of the resultant state it entails. Under this view, in the first sentence of (8), the resultant state, which emerges as a result of the occurrence of the preceding situation in Past 2 (i.e. the event of the speaker's losing his watch), obtains at the time of orientation in Past 1, so there exists a link of relevance

between the situation in Past 2 and the situation in Past 1. In (10), we can consider that what the pluperfect describes is that there is a link of relevance between the event of Max's entering the room feeling depressed (in Past 2) and the event of his pouring coffee (in Past 1) because the resultant state of the former situation (e.g. the state of Max's being in the room feeling depressed) is easily regarded as inducing the latter situation.

This kind of close relationship is regarded as the property of *current relevance*, which is said to be characteristic of the present perfect. Then, what is the definition of current relevance? Inoue (1979) regards current relevance as "a condition of 'repeatability' on the situation described in the topic proposition" (p.574) at the speech time. This condition must be satisfied when we use the present perfect. She further argues that "the relationship between the proposition in the present perfect and the one in the topic of discourse is that of entailment in a broad sense, supplemented by the so-called pragmatic presuppositions, i.e. the speaker's assumptions in uttering a sentence." (p.577) However, because she considers that the present perfect does not necessarily entail the (resultant) state holding at the speech time, we have to redefine the notion of current relevance in terms of the dual structure of the perfect tense, which has already been verified in section 4.1. Specifically, extending Inoue's original definition of it on the basis of the dual structure of the perfect tense, I define current relevance as follows: Current relevance is a condition where the resultant state of the perfect tense, direct or indirect, constitutes part of the situation described in the topic proposition in a broad sense. This definition of current relevance also verifies Inoue's statement that the relationship between the proposition described in the present perfect and that described in the discourse topic is that of entailment, because the PAP-situation, i.e. the situation described by the past participle complement, is closely related to, and, thus indirectly constitutes part of, the discourse topic via the resultant state.

To illustrate this point, let us first observe the following examples of the

experiential perfect:

- (11) a. Einstein has visited Princeton. (Chomsky (1971:212))  
b. Shakespeare has written *The Tragedy of King Lear*.  
(Inoue (1979:582))  
c. Daniel Jones has done linguistic work in colonial India.  
(Inoue (1979:577))

These sentences are usually regarded as unacceptable because the referent of the subject is already dead. But they can be appropriate in certain special discourse topics. Take (11c) as a sample case. Since Daniel Jones is dead now, (11c) is unacceptable in a discourse topic like that of Daniel Jones' engaging in various activities: such a discourse topic is not repeatable at S. Inoue notes that a possible discourse topic for (11c) would be one about linguistic working in colonial territories: since colonial territories exist now, such a discourse topic is repeatable at S; and the situation of his doing linguistic work there can be entailed by such a discourse topic at S. In my view, this entailment is possible because the indirect resultant state, i.e. the (abstract) state affected in some way by Daniel's doing linguistic work in colonial India (e.g. the state of his having left a great achievement), holds true at S, constituting part of the discourse topic 'linguistics working in colonial territories'. The resultant state functions as a connector which joins the two situations at different times together. Thus, the present perfect can express current relevance, i.e. a link of relevance between the situation in Past 1 (e.g. the situation of Daniel's doing linguistic work in colonial India) and the situation in the present (e.g. the situation of linguistic work in colonial territories still existing). A similar analysis applies to both (11a) and (11b).

I now turn to the completive and resultative perfects, exemplified in (12):

- (12) a. Yoko has gone to Singapore now. (=3a)  
b. Now I have eaten three of the mushrooms. (Dinsmore (1981:475))

c. The train has just arrived.

Consider (12a) as an example. A discourse topic appropriate for (12a) is one about Yoko's recent activities (in this case we assume that Yoko is alive). We can regard the proposition described by the present perfect (i.e. Yoko's going to Singapore) as being entailed in a broad sense by the proposition in that discourse topic because the direct resultant state, i.e. the state of Yoko's not being in the place where the speaker is, holds at S, and, thus, the situation in the past is connected with the situation in the present.

Let us now go back to the pluperfect. We will first look at (8), which is repeated below.

(8) \*When I arrived home, I had lost my watch. But I had it with me then.

If we remove the second sentence from (8), then the sentence in the pluperfect will be acceptable in a discourse topic like that of the speaker's hard luck at a certain time (i.e. a time of orientation) in the past;<sup>7</sup> the proposition described by the past participle of the pluperfect (i.e. the speaker's losing his watch) is entailed by that discourse topic because the resultant state associated with *had* holds at that time of orientation, constituting part of the discourse topic at issue, and, thus, is regarded as explaining why the speaker is in a bad mood. The resultant state serves as a connector which joins the situation described by the past participle and the situation in the discourse topic in question. Thus, the pluperfect in (8) represents current relevance.

Let us next observe (10) again.

(10) Max poured himself a cup of coffee. He had entered the room feeling depressed, but now felt much better. (Lascarides and Asher (1993:471))

A possible discourse topic is the following: Max's activities for refreshment at a certain time (i.e. a time of orientation) in the past, which is brought about by the preceding simple-past sentence. The proposition described by the past participle of the pluperfect (i.e. Max's entering a room feeling depressed) is entailed by that discourse topic because

its resultant state (e.g. Max's being in a room feeling depressed) holds at that time of orientation and, thus, can be regarded as a connector which joins the situation described by the past participle to that discourse topic, explaining why Max poured himself a cup of coffee. Thus, we can say that the pluperfect in (10) also expresses current relevance. The conclusion here explains why (9a) is odd. In this case, the resultant state of the PAP-situation, i.e. the situation of Max's being in the room, is hard to regard as constituting part of the discourse topic at issue, i.e. Max's activities for refreshment.

From what we have seen, we can claim that the pluperfect is parallel to the present perfect with respect to current relevance. This kind of parallel can be regarded as an argument for our suggestion that the pluperfect should represent only the pre-perfect tense, i.e. the tense whose basic semantic structure includes both the event time of the past-participle situation and the event time of its resultant state holding at a time of orientation in the past. Since the pre-perfect and the pre-preterite tenses are defined as the backshifted versions of the present perfect and the simple past respectively, it is the case the pre-perfect tense also implies current relevance (in this case the continuing relevance to the time of orientation in the past), while the pre-preterite tense does not. If the pluperfect were regarded as representing the pre-preterite tense, i.e. the tense whose basic semantic structure simply requires the event time of the past-participle situation to come before a time of orientation in the past, it would not require a special environment like (10); it would freely appear in such an environment as (9a) or (8). We can therefore claim that the pluperfect represents the temporal structure of the pre-perfect tense, not that of the pre-preterite tense.

In this section, we have observed two phenomena that can be regarded as arguments against the claim that the pluperfect can represent the pre-preterite tense; and they can be explained in terms of current relevance. In order to demonstrate that the phenomena at issue stem necessarily from the temporal structure of the pre-perfect tense

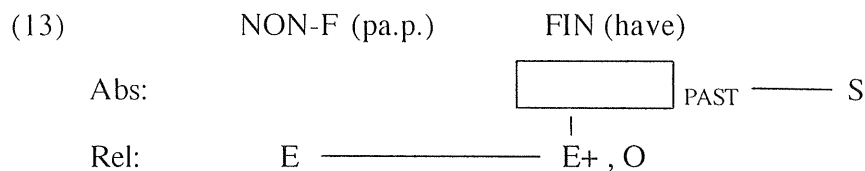


(represented by the pluperfect), I will explicitly formulate the temporal schemata of the pre-perfect and the pre-preterite tenses in the next section.

## 5.2. Explanation Based on Temporal Schemata of Pre-perfect and Pre-preterite Tenses

In what follows, I will show that the temporal schema-based analysis in terms of our compositional tense theory is useful for a unified explanation for the two phenomena in the previous section and further related phenomena shown with respect to the pluperfect which will be discussed in section 5.3.

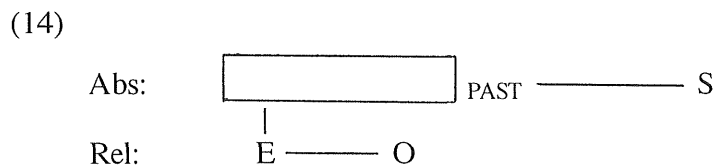
First of all, let us formulate the temporal schemata of the pre-perfect and the pre-preterite tenses. As we have seen in chapters 3 and 4, within our compositional tense theory the pre-perfect tense is composed of the past time-sphere (associated with the A-component) and the perfect tense (associated with the R-component). The past time-sphere is established in our mind by the past-tense morpheme. The perfect tense consists of two event times: one is related to a situation described by the past participle and the other to its corresponding resultant state described by *have*. The two event times have been labeled  $E_2$ , which is for the event time of the past participle, and  $E_1$ , which is for the event time of *have*, in chapters 2 and 3. In this chapter, I will substitute  $E_+$  for  $E_1$  and  $E$  for  $E_2$  because the two situations of the perfect tense are closely related to each other, making up a whole situation. The pre-perfect tense requires  $E_+$  to hold at a time of orientation (O) in the past time-sphere. Thus, the temporal schema of the pre-perfect tense, which is operative at the tense-interpretation level, is represented as follows:



For the sake of discussion, I omit temporal focus from the temporal schemata in (13) and

(14). The point to be noted here is that our compositional tense theory predicts that the pluperfect represents only the pre-perfect tense; the form *have* + the past participle complement morpheme *-en* constitutes a temporal template for the perfect tense at the tense-structure level and it cannot be a proform of the simple past tense (which consists only of a single situation).

Let us now turn to the temporal schema of the pre-preterite tense. By definition, it represents the temporal structure of a tense expressing further anteriority to the simple past tense, namely, that the event time of the simple past tense comes before the time of orientation in the past which is established contextually or by another event time. The temporal schema of the pre-preterite tense is thus represented in (14):

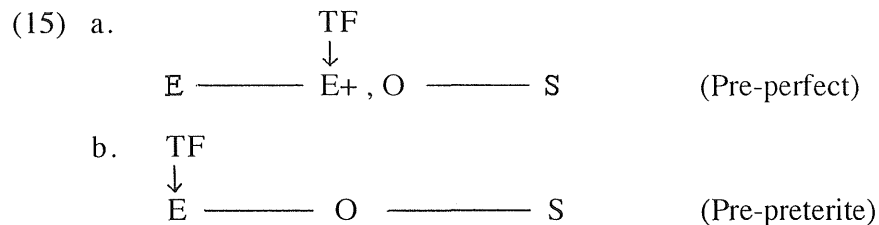


Notice that although the time of orientation itself is not directly related to the past time-sphere established by the past-tense morpheme, it is located in the past area because, for example, the event time described by another predicate in the past tense may serve as the relevant time of orientation here.

I will next be concerned with temporal focus (TF). In the previous chapters, it has been assumed that in the case of the present perfect (excluding the "hot-news" use), TF is fixed on E+, i.e. the event time of the resultant state holding at S, while in the case of the simple past, TF is fixed on E, i.e. the event time coming entirely before S. Given this, by definition, the pre-perfect tense requires that TF be fixed on E+, which holds true at a certain time of orientation in the past area, whereas the pre-preterite tense requires that TF be fixed on E, which is temporally precedes a relevant time of orientation in the past area. (Further justification of the difference of the position of the TF between the pre-perfect and the pre-preterite tenses will be done by explaining, on the basis of the temporal

schemata of both tenses, the two phenomena shown in section 5.1 and some other related phenomena shown later in section 5.3.)

I can now present the temporal schemata of both tenses with temporal focus as below:



The event time referred to by an arrow is the target event time on which TF is fixed. Note here that here, I will use the simplified schemata which do not distinguish the A-component from the R-component, because the relevant information here is the relation between event times and times of orientation (including the speech time).

The schema in (15a) reflects the fact that the pluperfect expresses a link of relevance between the situation described by the past participle and a discourse topic holding at the time of orientation in the past; more specifically, E+, which is associated with the resultant state brought about by the occurrence of its corresponding preceding situation described by the past participle, connects the preceding situation with a discourse topic holding at the time of orientation.

I am now in a position to demonstrate that our temporal schema of the pre-perfect tense illustrates the two phenomena with respect to the pluperfect shown in section 5.1. First of all, the unacceptability of (8) is predictable from the temporal structure of the pre-perfect tense. Let us consider (8) again, repeated here as (16):

(16) \*When I arrived home, I had lost my watch. But I had it with me then.

The unacceptability of (16) is ascribed to the contradiction between the first and second sentence. The temporal structures of both sentences in (16) are schematized in (17). For convenience' sake, we omit the representation of TF in (17) and (20):





described by the past participle is relevant to the discourse topic holding at the time of orientation.<sup>8</sup>

In this section, I have first formulated the temporal schemata of the pre-perfect and the pre-preterite tenses. On the basis of the temporal schemata, I have next shown that the pluperfect represents only the pre-perfect tense, explaining why the environments are restricted where the pluperfect can be used.

### **5.3. Further Related Phenomena**

In this section, I will observe some empirical facts that are predicted and explained as consequences of the analysis proposed in this chapter.

#### 5.3.1. Indirect Speech

The temporal schemata of the pre-perfect and the pre-preterite tenses can adequately explain the difference between the pluperfect and the simple past sentences in indirect speech:

- (22) a. One day, Naomi said to Oscar that she had seen him the day before.  
b. One day, Naomi said to Oscar that she saw him the day before.

(Comrie (1986:273))

- (23) a. John said that he had left early.  
b. John said that he left early.

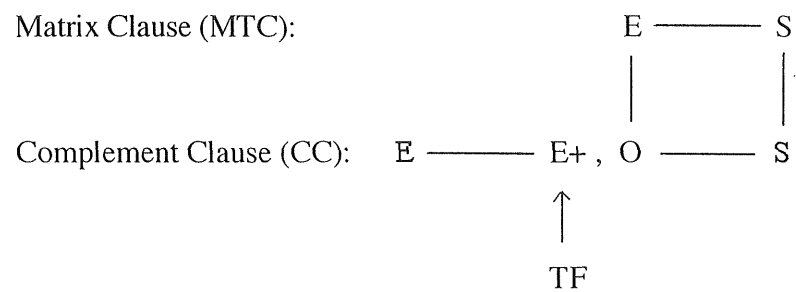
(Harder (1996:441))

Consider (22), for instance. The Reichenbachian tense system, which is prevalent, cannot explain the difference at issue. Comrie (1986) notes that "the pluperfect will only be appropriate in cases where a reference point [our time of orientation] in the past can be contextually established." (p.291) In both (22a) and (22b), however, the reference time, or the time of orientation, in the past is contextually established by the time when Naomi

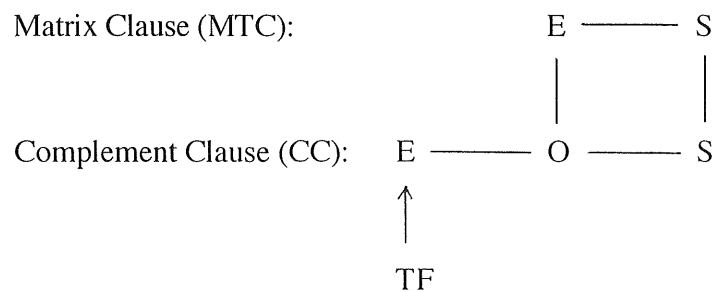
talked to Oscar, more specifically, by the adverbial *one day*. Given this, it follows that the temporal structure of the complement clause (CC) of (22a) is identical with that of the CC of (22b); for in both cases, the event time is anterior to the reference time, which is, in turn, anterior to the speech time. Thus, within the Reichenbachian system, the CC in (22a) should have the same temporal structure as that in (22b).

By contrast, our temporal system can explain the difference between (22a) and (22b). Within our system, the temporal structure of the pre-perfect tense is assigned to the CC of (22a) and that of the pre-preterite tense to the CC of (22b). The temporal schemata of (22a) and (22b) are shown in (24a) and (24b), respectively:

(24) a. Temporal Structure for (22a)



b. Temporal Structure for (22b)



In both (22a) and (22b), the event time (E) of the MTC (i.e. the time of Naomi's talking to Oscar) specifies the time of orientation (O) of the CC. In (22b), what the temporal structure of the CC represents is that the situation of Naomi's seeing Oscar precedes the time of orientation in the past and the TF is fixed on the event time itself. In (22a), on the other hand, the temporal structure of the CC entails not only the event time E, but also the

time of the resultant state E+, which obtains at the time of orientation in the past, and shows that the TF is fixed on the time of the resultant state E+; thus, there exists a link between the event time E of the CC and the event time E of the MTC by virtue of the presence of the time of the resultant state E+.

Our analysis can be further supported by the following two statements. First, Ouirk et al. (1985:1026-1027) state that "if the present deictic references in the direct speech became past deictic references in the indirect speech, there is a corresponding shift of verb forms into past, or if necessary into the past perfective." We can interpret this statement as follows: in the use of the indirect speech, we normally choose the preterite version; we choose the pluperfect version in cases where there is some information that the pre-preterite cannot convey, i.e. the cases where the TF is situated on the time of the resultant state E+, which holds at the time of orientation.

Secondly, it is generally said that the use of the simple past version implies that the speaker seems to measure the CC situation directly from the speech time (cf. Declerck (1991a, 1991b)). This is induced by the fact that the temporal focus is directed at the event time in Past 2 directly from the speaker's viewpoint, which is fixed at the speech time.

### 5.3.2. *After*-Clauses

As a second consequence of the analysis proposed in this study, the difference between the pluperfect and the preterite in *after*-clauses can be explained adequately.

- (25) a. After he had eaten his dinner, he smoked a cigar.  
b. After he ate his dinner, he smoked a cigar.

(Salkie (1989:2))

- (26) a. I ate my lunch after my wife had come back from town.  
b. I ate my lunch after my wife came back from town.

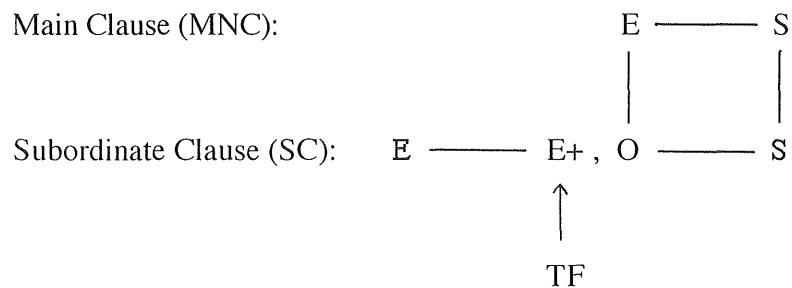


(Leech (1987:48))

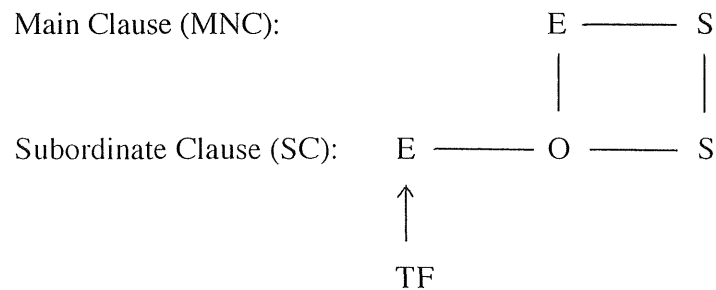
Let us consider (25), for example. Sentence (25a) is said to be synonymous with sentence (25b). It is certain that both (25a) and (25b) have the same temporal relation between the time of the situation of the main clause (MNC) and the time of the situation of the subordinate clause (SC). However, it is not guaranteed that (25a) has the same temporal structure as (25b).

Our system predicts and explains that they are different in the temporal structure of the SC, schematized as in (27), where the pluperfect represents the pre-perfect tense and the preterite the pre-preterite tense:

(27) a. Temporal Structure for (25a)



b. Temporal Structure for (25b)



As is self-evident from (27a), the pluperfect version shows that the event time E of the SC (i.e. the time of his eating dinner) is relevant to the event time E of the MNC (i.e. the time of his smoking) by virtue of the presence of the time of the resultant state E+ of the SC. As is clear from (27b), by contrast, the preterite version only shows that the event time E of the SC precedes the event time E of the MNC.

In this connection, Leech (1987:48) states that in the case of the pluperfect we measure the precedence of the situation of the SC from the time of the situation of the MNC; in the case of the preterite we measure the time of the situation of the SC directly from the speech time (S). In our system, this contrast is explained in terms of the difference of temporal structure. In (25a), the TF is fixed on the time of the resultant state E+ of the SC (e.g. the time of the resultant state of feeling a full stomach), which coincides with the event time E of the MNC; thus, it can be said that by using the pluperfect, the speaker can express a link between the event of the MNC and the event of the SC described by the past participle by virtue of the presence of the time of the resultant state E+ highlighted by the TF. In (25b), on the other hand, the TF is necessarily fixed on the event time E of the SC itself by virtue of the absence of the resultant state brought about by the occurrence of the event of his eating dinner; hence no link of relevance between the event of the SC and the event of the MNC.

This line of reasoning is supported by the fact that we can replace (28a) with (28b), but not with (28c), without changing the temporal interpretation:

- (28) a. John arrived after the bomb had exploded. (Declerck (1991b:108))
- b. John arrived when the bomb had exploded. (Declerck (1991b:109))
- c. John arrived when the bomb exploded.

Like (28a), (28b) is construed as follows: the MNC time (i.e. the time of John's arrival) functions as the time of orientation for the SC, which is simultaneous with the time of the resultant state E+ of the SC (i.e. the time of the resultant state of the place in question burned down), not with the event time E of the SC (i.e. the time of the instant of the explosion). In the case of (28c), however, the MNC time is connected with the event time E of the SC. If we draw on the position that *when* is supposed to express a relation of simultaneity (cf. Araki, Ono and Nakano (1977:122) and Ota (1963:113)), we can ascribe to the temporal structure of the pluperfect (i.e. the pre-perfect tense) the reason

why the MNC time is always related to the time of the resultant state E+ of the SC in a sentence like (28b). Since the pluperfect always requires that the TF be on the time of the resultant state, the speaker's attention is paid to the time of the resultant state E+; thus, the time of the MNC situation is always related to the time of the resultant state E+ of the SC via *when*. Taking into consideration the fact that both *after*-clauses and *when*-clauses are regarded as temporal clauses, we can say that the pluperfect in the former type of clause has the same structure as that in the latter type of clause. The reason why in *after*-clauses the preterite is considered to express the same temporal relation as the pluperfect is due to the lexical property of *after*. However, just because it is so does not mean that the pluperfect version has the same temporal structure as the preterite version.

### 5.3.3. Narrative Texts

Finally, the analysis proposed in this thesis can account for the inconsistent use of the pluperfect in narrative texts. As is well known, the pluperfect is not always used to refer to a situation in the-past-in-the past (Past 2) in a narrative. Consider the following excerpts:

(29) She *left* the bedroom to wash and dress in the bathroom down the hall. Michael, still naked, the morning sun refreshing his body, *lit* a cigarette and *relaxed* on the bed. This *was* the last morning they would spend in this house and the villa....

The night before, Don Tommasino *had sat* with Michael in the garden after Apollonia *had gone* to bed. The Don *had been worried* and *tired*, and *admitted* that he *was concerned* about Michael's safety. "Your marriage brought you into sight," he *told* Michael....

(M. Puzo, *The Godfather*, pp.350-351, italics mine)

(30) It *was* a pattern he *was* to see often, the Don helping those in

misfortune whose misfortune he had partly created....

Michael *had married* Kay up in New England, a quiet wedding, with only her family and a few of her friends present. Then they *had moved* into one of the houses on the mall in Long Beach. Michael *was surprised* at how Kay *got* along with his parents and the other people living on the mall....

(M. Puzo, *The Godfather*, p.392, italics mine)

- (31) In the case of Eve and Alexandra, Eve *had* no intention of serving her younger sister.

Eve *had hated* her sister for as long as she could remember. She *went* into a silent rage when someone *picked up* Alexandra, or *petted* her or *gave* her a present. Eve *felt* she *was being cheated*....

(S. Sheldon, *Master of the Game*, p.279, italics mine)

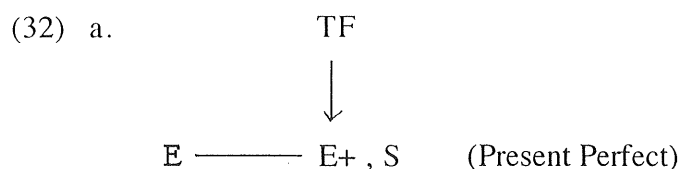
To illustrate the point, let us take (29) as a sample case and consider it in detail. The four italicized preterites in the first paragraph refer to the same time domain as the *narrative-now*, i.e. the present time in narrative texts. This time domain is labeled as Past 1. The first two italicized pluperfects in the second paragraph refer to Past 2. What is crucial is that the preterites (i.e. *admitted, was concerned, told*) in the second paragraph also refer to Past 2, not to Past 1. As Fenn (1987:220-221) points out, if the pluperfect were really regarded as expressing the pre-preterite tense, it would logically be used throughout references to situations in Past 2; but this is not always the case. Moreover, it should also be noted that the pluperfect cannot be used to refer to Past 1. Given these facts, we can assume that the distribution of the verb forms in (29) implies that the preterite can function as the pre-preterite tense, whereas the pluperfect functions as the pre-perfect tense.

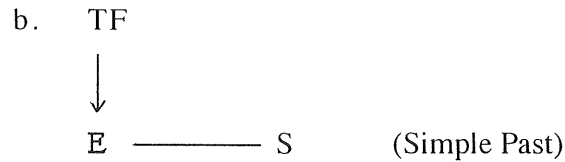
In order to verify this, let us begin with Inoue's (1979) statement that the present perfect conveys an explanatory sense. Inoue claims that a speaker chooses the present

perfect "when the information he is giving or requiring appropriately exemplifies or explains the topic of discourse." (p.585) The important point to note here is that the same discourse function applies to the pluperfect. Fenn (1987) states that "expository information in narrative texts is often conveyed in the past perfect" (p.220). In (29), for instance, the first two pluperfects *had sat* and *had gone* describe preceding experiences (in Past 2) which convey some pieces of information relevant to the main events in the narrative-now (i.e. Past 1): the experiences in Past 2 (e.g. Don Tommasino's sitting with Michael warning him of the danger of his life) explains why Michael and Apollonia are forced to leave the place where they have been. This kind of parallel between the present perfect and the pluperfect supports our claim that the temporal structure of the present perfect is parallel to that of the pluperfect.

Let us next turn to the question as to why and when the preterite, instead of the pluperfect, is used to refer to Past 2. The notion of temporal focus shifting (TFS) gives an answer to the question.<sup>9</sup> According to Declerck (1991b), the TFS occurs when "there is a shift in what the speaker is concerned with." (p.307) As Declerck mentions, it is generally admitted that in the use of the present perfect, a speaker focuses on the fact that a given situation in the past (associated with E) is relevant to the structure of the world (within which the resultant state associated with E+ is subsumed) at the speech time (S), whereas in the use of the simple past, a speaker focuses on a situation in the past (associated with E).<sup>10</sup>

For ease of reference, the simplified versions of the temporal schemata of the present perfect and the simple past tenses are represented as follows:





These temporal schemata can convincingly illustrate the distributional properties of the present perfect and the simple past in discourse. Observe:

(33) I have seen him already--he came to borrow a hammer.  
(Leech (1987:40-41))

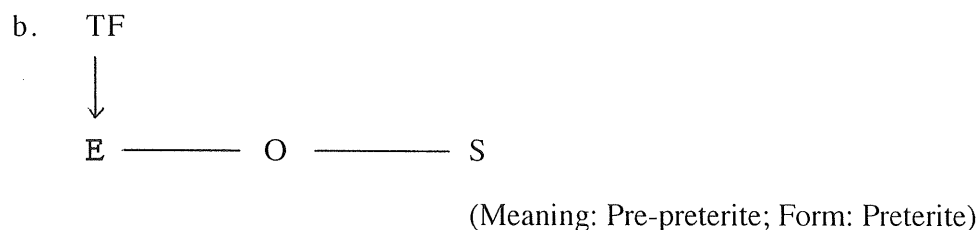
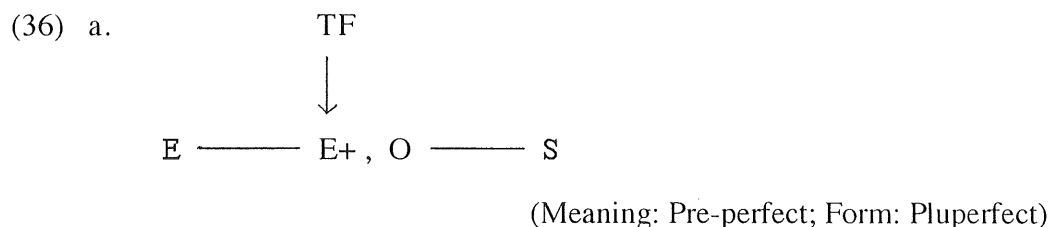
(34) Steel chief Ian MacGregor has turned down nominations for worker directors submitted by the ISTC, the main steel union. He said the two men--one an experienced manager--were unacceptable. (Fenn (1987:177))

(35) Enid: ...Where've I seen you before? Television. I can't remember what it was you were talking about. (=What you were talking about on the occasion on which I saw you.) (Fenn (1987:178))

It is often pointed out that the present perfect functions as the first reference to some situation in discourse and the simple past describes the subsequent situations. In our system, it can be predicted that this phenomenon results from the difference between the temporal structures of the present perfect and the simple past. In the case of the present perfect the TF is fixed on the time of the resultant state E+ which obtains at S. Since S is the only time that both a speaker and a hearer can always share without a special effort, discourse normally starts with the present perfect which requires that the TF be on the time of the resultant state that obtains at S.<sup>11</sup> Once both a speaker and a hearer share knowledge of the situation in question (i.e. the situation in the past), they can easily identify and thus focus on that situation. The TF, thus, shifts from the time of the resultant state E+ in the present time to the event time E in the past. As a consequence, we choose the simple past (cf. also section 4.5.2.2, especially note 27).

I am now in a position to consider the shift from the pluperfect to the preterite.

Before going further, it may be helpful to repeat the temporal schemata of the pre-perfect and the pre-preterite tenses, repeated here as (36):



Let us now look at the excerpt in (29) again. To see it clearly, I represent the temporal relation of verbs in (29) diagrammatically as follows:

(37)

Past 1 (Narrative-Now: The Morning)	left, lit, relaxed, was
Past 2 (The Night Before)	had sat, had gone, admitted, was concerned, told

In the first two pluperfects (i.e. *had sat* and *had gone*), the TF is situated on the time of the resultant state E+ obtaining at the narrative-now, i.e. Past 1. The reason why the second paragraph starts with the pluperfect, the form where the resultant state holds at the time of orientation in Past 1, is that in narrative texts the narrative-now is the time domain that the narrator and the reader(s) can always share without a special effort (see (36a)). The narrator shifts the TF from the time of the resultant state E+ in Past 1 to the event time E in Past 2 after his concern has switched to the event time E in Past 2. Thus, the preterites (i.e. *admitted*, *was concerned*, and *told*) are used which require that the TF be

on the event time E itself. This is similar to the pattern of the TFS from the present to Past I. We can therefore conclude that the TFS motivates the shift of verb forms from the pluperfect to the preterite.

#### **5.4. Conclusion**

This chapter has shown that the English pluperfect does not represent the pre-preterite tense, but rather represents only the pre-perfect tense; and, thus, the temporal structure of the pluperfect is parallel to that of the present perfect form.

We have pursued the following steps. First, I have offered the two phenomena that count as arguments against the pre-preterite interpretation of the pluperfect. Secondly, on the basis of the compositional tense theory proposed in this thesis, where a finite perfect is factored into the Absolute tense)-component (i.e. a time-sphere established by a tense morpheme) and the R(elative tense)-component (i.e. the perfect tense consisting of two event times), I have formulated the temporal schemata of the pre-perfect and the pre-preterite tenses and given an explanation for the above-mentioned two phenomena in terms of the temporal schemata. Finally, I have demonstrated that our temporal schema-based analysis accounts appropriately for the distributional differences between the pluperfect and the preterite in indirect speech clauses, *after*-clauses, and narrative texts.



## NOTES TO CHAPTER 5

\* Portions of this chapter are written based on Wada (1995b).

<sup>1</sup> In this chapter, I use the term *simple past* for referring to a past time relative to the speech time and the term *preterite* for referring to its syntactic form; and I use the term *pre-perfect tense* for referring to a perfect tense in the past area and the term *pluperfect* for referring to the syntactic form *had* + past participle.

<sup>2</sup> As we have seen in chapter 4, DTP adverbials can go with the present perfect with the feature GENERAL, as shown in:

(i) John HAS left the house at five o'clock. (Declerck (1991b:331))

As Declerck (1991b) also points out, *at five o'clock* in (i) is not a definite indication of time because "it is not interpreted in relation to any particular day referred to in the context." (p.331) Sentence (i) implies that the situation of John's leaving the house at five o'clock has held at least once within an unspecified period up to now. In this sense this type of time adverbial does not refer to a definite time position. For further discussion, see Declerck (1991b:331-334) and chapter 4.

<sup>3</sup> The future perfect is also compatible with DTP adverbials, as we have seen in section 4.1.1.

(i) John will have left the office at 3 p.m.

<sup>4</sup> Here and below an asterisk is also used to indicate that the example at issue is semantically anomalous.

<sup>5</sup> In this connection, Depraetere (1998:603-604) notes that some present perfect sentences entail the resultant state and thus it cannot be canceled. See also section 4.1.2 for discussion of similar kinds of paradigms.

<sup>6</sup> One might claim that the ungrammaticality of (8) should be ascribed to a semantic property of *when*; *when*, when cooccurring with the pluperfect, is sometimes regarded as specifying the event time. However, such an objection is not to the point.

Even if *when* is replaced by *by the time*, which is always interpreted as specifying the reference time, the grammaticality does not change. Consider the following:

- (i) \*By the time I arrived home/in Japan, I had lost my watch. But I had it with me then.

If the pluperfect were really seen as expressing the pre-preterite tense, it would be possible that the speaker once lost his watch and found it again before he reached home/Japan. Hence, we can provide (8) and (i) as evidence that the pluperfect cannot be regarded as representing the pre-preterite tense.

<sup>7</sup> The first sentence in (8) alone can of course be used in the case where the speaker is in a neutral mood, but not in a bad mood. The point here is that the pluperfect of resultative use at issue represents a certain kind of resultant state (i.e. the state of his not having the watch), which constitutes part of the situation described in the discourse topic: the speaker's situation at the time of orientation in the past. The same observation applies to (10). I note in passing that in narrative texts, it seems that the use of the pluperfect does not necessarily require a discourse topic in the sense used here, but it necessarily requires the time of the resultant state E+ (see section 5.3.3). The reason can be attributed to the nature of narrative texts (cf. Hopper (1979)), which I must investigate in my future research.

<sup>8</sup> This does not mean that the pre-preterite tense is not used at all in the case where a certain discourse topic holds at a time of orientation in the past.

<sup>9</sup> Fenn (1987:220-221) gives a similar explanation for the phenomenon at issue by using the term "time-focus shift."

<sup>10</sup> This statement is compatible with our definition of current relevance, shown in section 5.1.2.

<sup>11</sup> Discourse often starts with the simple past like the following:

- (i) A: Did you read the book?

B: Yes, it was interesting.

In this case speaker A and speaker B share the same knowledge about the topic. They both know what book is at issue. Therefore speaker A can begin with the preterite which requires that the TF be fixed on the event time E in the past.

## CHAPTER 6

### TENSE FORMS AND DTP ADVERBIALS\*

#### 6.0. Introduction

In the previous chapter, I have demonstrated that the English pluperfect represents only the pre-perfect tense, having the temporal structure parallel to that of the present perfect form, and that some tense phenomena concerning both forms are predictable from their temporal structures based on our compositional tense theory. As we have mentioned in the previous chapter, however, we have to explain why in English only the finite present perfect cannot go with DTP adverbials of past reference in order to completely verify the conclusion that we have reached. The task of this section, thus, is to investigate what kind of factor brings about the incompatibility of the present perfect and DTP adverbials of past reference. Specifically, after introducing Klein's (1992) P(osition)-Definiteness Constraint, which has been proposed to explain the phenomenon at issue, and pointing out some problem(s) with the constraint, I will present a revised version of the constraint within the framework of our compositional tense theory, and demonstrate that it can explain more data than Klein's original version.

This chapter is organized as follows. After outlining Klein's (1992) P-Definiteness Constraint and pointing out some problem(s) with it in section 6.1, as a first approximation, I will present a revised P-Definiteness Constraint for the perfect form on the basis of our compositional tense theory in section 6.2. In section 6.3, I will show that the proposed revised P-Definiteness Constraint can explain not only why the present perfect form cannot go with DTP adverbials while other perfect forms can, but also some data that Klein's original version as it stands cannot explain. In section 6.4, I will present a generalized version of the revised P-Definiteness Constraint, demonstrating that the problem of whether or not tense forms other than the present perfect form can occur with

DTP adverbials can be handled by the generalized version of the constraint. Section 6.5 makes concluding remarks.

## 6.1. Klein's (1992) P-Definiteness Constraint

### 6.1.1. What Is the P-Definiteness Constraint?

In order to solve what he calls the present perfect puzzle, i.e. the incompatibility of the present perfect and DTP adverbials of past reference, Klein introduces the P(osition)-Definiteness Constraint. Before entering into this constraint, we have to see some backgrounds necessary for the constraint.

Let us first look at the definition of the notion of *p-definiteness*. Klein notes that "an expression whose lexical content explicitly specifies the position of a time span in relation to TU [i.e. the speech time] is 'p-definite'" (p.544). Hence, an expression accompanied by a DTP adverbial is p-definite: for example, *She left Japan on March 29*.

Let us now turn to a consideration of the peculiarity of the English present tense. Klein considers that the present tense is inherently p-definite in that in its temporal structure, the reference time includes the speech time (S), which is a prerequisite to any temporal relation and is identifiable to both the speaker and the hearer at or during his or her utterance. The peculiarity at issue is the inherent p-definiteness of the English present tense.

I will now proceed to the P-Definiteness Constraint:

- (1) P-DEFINITENESS CONSTRAINT: In an utterance, the expression of TT and the expression of TSit cannot both be independently p-definite.<sup>1</sup>

(Klein (1992:546))

TT is short for the topic time and TSit for the time of the situation. They correspond to the reference time and the event time in the sense of Reichenbach (1947). What is important is that this constraint maximally allows only one p-definiteness expression in an

utterance. Therefore the present perfect cannot go with DTP adverbials without violating the constraint by virtue of the fact that the present perfect, a variant of the present tense, is inherently p-definite, as exemplified in (2):

- (2) a. \*Yoko has gone to Singapore on March 29.  
b. \*Mana has played the *koto* at four.

In Klein's view, each sentence has two p-definite expressions. In (2a), the topic time (i.e. the reference time) is already p-definite in that it includes S, on one hand, and the DTP adverbial *on March 29* makes the time of the situation (i.e. the event time) p-definite, on the other. The same observation applies to (2b). Thus, they violate the P-Definiteness Constraint, and, accordingly, they are seen as unacceptable.<sup>2</sup>

In contrast, the past tense is not inherently p-definite, since the topic time (i.e. the reference time) is not simultaneous with S. Thus, the preterite and the pluperfect, both of which are members of the past tense, can go with DTP adverbials.

- (3) a. Yoko went to Singapore on March 29.  
b. Mana had played the *koto* at four.

There is only one p-definite expression in each sentence: *on March 29* in (3a) and *at four* in (3b). Hence, they are both acceptable.

#### 6.1.2. Some Problem with Klein's P-Definiteness Constraint

In this subsection, I will show that Klein's P-Definiteness Constraint as it stands causes some problem. First, let us observe the following examples, which lower the value of Klein's P-Definiteness Constraint:<sup>3</sup>

- (4) a. At that time George had been to the dentist two hours earlier.  
(Nakau (1994:260))  
b. On April 1, Mana had graduated from the high school a week earlier/before.<sup>4</sup>

- c. Now we finally know that last night Mary had disappeared 3 months ago.<sup>5</sup> (Harder (1996:418))

In (4a), for example, *at that time* specifies the topic time, or the reference time, in the past and *two hours earlier* the time of the situation, or the event time. This means that there are two p-definite expressions in (4a). The same observation applies to (4b) and (4c). Thus, Klein's P-Definiteness Constraint cannot explain the acceptability of (4).

One might argue that in a strict sense time adverbials like *two hours earlier* and *five minutes ago* do not make the event time p-definite, since such a time adverbial specifies a time interval before a certain time point: in (4a), for example, the relevant time point is the one which *at that time* specifies. Under this view, it is certain that sentences like those in (4) are not counterexamples to the P-Definiteness Constraint.

If we proceed along these lines, however, we have to introduce one more constraint so as to explain why time adverbials like *five minutes ago* cannot go with the present perfect: since under the view in question such an adverbial is not p-definite, the unacceptability of a sentence like *Yoko has eaten breakfast five minutes ago* cannot be attributed to the violation of the P-Definiteness Constraint. One possible constraint might be the so-called scope-contradiction constraint: the present tense, which refers to the present time, is contradictory to the adverbial *five minutes ago*, which refers to the past time by virtue of the idiosyncratic property of *ago*, and thus the present perfect cannot go with an adverbial like *five minutes ago*. (Note, however, that this scope solution is rejected by Klein himself (see Klein (1992:529-530)).) However, adopting this account means that the unacceptability of a present perfect sentence like *Mana has played the koto at four* and that of a present perfect sentence like *Yoko has eaten breakfast five minutes ago* cannot be explained by a unified constraint.

To sum up, Klein's explanation for the DTP-adverbial cooccurrence facts, more or less, poses a problem which cannot be disregarded. An alternative explanation must be

searched for.

## 6.2. Revised P-Definiteness Constraint

In this section, I will revise Klein's P-Definiteness Constraint on the basis of our compositional tense theory in order to account, from a unified point of view, for both the grammaticality of sentences like those in (4) and the incompatibility of the present perfect with time adverbials like *yesterday* or *five minutes ago*.

As a first approximation, let us try to formulate the revised version of the P-Definiteness Constraint for the perfect tense alone. Within the framework of the compositional tense theory proposed in this study, a finite tense consists of the A(bsolute tense)-component expressing a time-sphere and the R(elative tense)-component expressing event times. Thus, a finite perfect is decomposed into the A-component related to a time-sphere (present or past) and the R-component related to the perfect tense consisting of two event times, i.e. E and E+, which are associated with the past participle complement and the perfect auxiliary *have*, respectively. Moreover, the compositional tense theory distinguishes the tense-structure level from the tense-interpretation level. Taking these observations into consideration, we can present the revised version of the P-Definiteness Constraint for the perfect tense as follows:

- (5) Revised P-DEFINITENESS CONSTRAINT (Perfect Form Version): In a clause in the perfect form, the A-component and the R-component cannot both be p-definite.

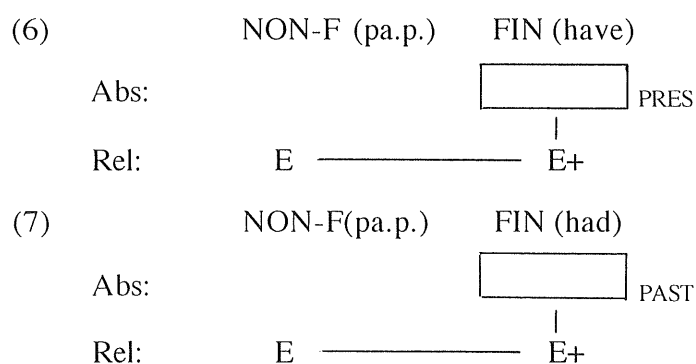
It should be noted here that this constraint is operative at the tense-interpretation level because determining whether an expression is p-definite or not finally depends on the presence or absence of DTP adverbials, and, in our theory determining the temporal value of a given tense form with the help of time adverbials is done at the tense-interpretation level. It should also be noted that in this constraint, a "clause" is assumed to be a

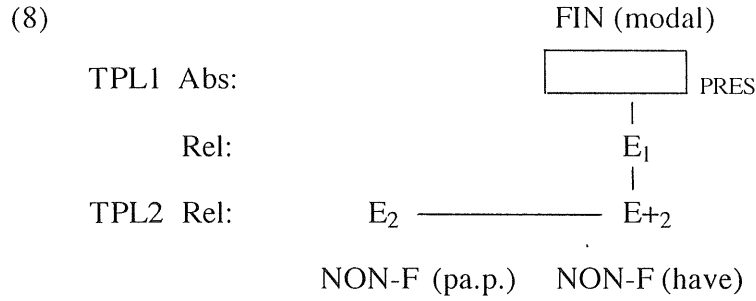


syntactic unit corresponding to a temporal template, which is defined as being established at the tense-structure level (see chapters 2 and 3):<sup>6</sup> since the perfect form *have* + the past participle morpheme *-en* constitutes a temporal template by itself, it is assumed to correspond to a single clause. This constraint provides a first approximation to a general constraint concerning the (in)compatibility of English tense forms and DTP adverbials. For convenience, however, for the time being I confine myself to considering the revised version of the P-Definiteness Constraint for the perfect tense, leaving open until section 6.4 the question of whether or not the constraint at issue can be extended to a more general constraint.

Within our framework, the A-component of the present perfect form (e.g. *Makiko has returned*) is interpreted as inherently p-definite because the present time-sphere represented by the present tense morpheme, by definition, includes the speaker's viewpoint, which adheres to the speech time (S); on the other hand, the A-component of the pluperfect (e.g. *Makiko had returned*) and the so-called modal perfect (e.g. *Makiko must have returned by now*) is not construed as inherently p-definite because in clauses that these perfect forms themselves constitute, they do not contain any present tense-morpheme expressing the present time-sphere.

The temporal schemata of the three perfect forms at the tense-structure level are represented as follows.





As for the schema of the present perfect form shown in (6), when E+ is interpreted as simultaneous with the speech time (S), the present perfect form represents a present perfect tense; when E+ is interpreted as simultaneous with a time of orientation in the future area, the present perfect form represents a future perfect tense (e.g. a present perfect form in temporal clauses such as *I will leave when Makiko has returned*). In the schema of the pluperfect in (7), E+ is interpreted as simultaneous with a time of orientation in the past area, and thus the pluperfect represents a past perfect tense (or a pre-perfect tense): in a sentence like *John had left when Mary arrived*, E+, which is associated with *had*, is interpreted as simultaneous with the time of orientation established by the event time of *arrived*. The schema of the modal perfect in (8) needs more remarks than those in (6) and (7). First, it should be noted that TPL is short for the term *template*. Second, event times which have the same subscript number constitute one temporal template which is to be projected into a clause: for example, in a sentence like *Makiko must have returned by now*, *must* is connected with E<sub>1</sub> and constitutes a clause which corresponds to TPL1, while *have* and *returned* are connected with E<sub>+2</sub> and E<sub>2</sub> respectively, constituting a single clause symbolized by TPL2.

From the above observations, we can say that the revised P-Definiteness Constraint predicts that any kinds of perfect tenses which are represented by the present perfect form cannot go with DTP adverbials without violating the constraint because their A-component is to be marked as p-definite at the first stage of the tense-interpretation level (this is represented by the schema in (6)) for the reason that we have seen, namely, that

the present time-sphere necessarily includes the speech time. The revised P-Definiteness Constraint also predicts that the pluperfect and the modal perfect can occur with DTP adverbials because the present tense morpheme, which is a cause of inherent p-definiteness, is not included in a clause corresponding to a temporal template represented by a perfect tense, i.e. the form *have* + past participle.

Having seen what are necessary for the following discussion, in the next section we will see how the revised P-Definiteness Constraint works at the tense-interpretation level and explains the (in)compatibility of the above-mentioned four types of perfect tenses (i.e. the present perfect tense represented by the present perfect form, the future perfect tense represented by the present perfect form, the past perfect tense (i.e. the pre-perfect tense) represented by the pluperfect, and the present perfect tense represented by the modal perfect form) with DTP adverbials.

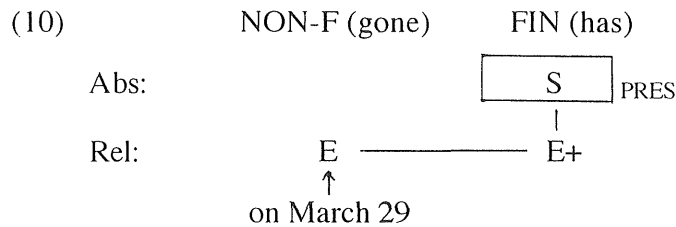
### **6.3. Explanation for the (In)Compatibility of Perfect Tenses with DTP Adverbials**

#### **6.3.1. Present Perfect Tense Represented by Present Perfect Form**

This subsection explains why the present perfect tense represented by a present perfect form is incompatible with DTP adverbials. First, consider the unacceptability of (2), which is repeated here as (9), in terms of the revised P-Definiteness Constraint.

- (9) a. \*Yoko has gone to Singapore on March 29.  
b. \*Mana has played the *koto* at four.

I will take (9a), for example and represent the temporal schema of (9a) working at the tense-interpretation level in (10) below (this is because as I have stated, the revised P-Definiteness Constraint is operative at the tense-interpretation level).



Since the time of the resultant state E+ is interpreted as simultaneous with S (because the perfect in question is in the assertive form and included in an independent clause), the perfect in question represents a present perfect tense. Hence the temporal schema in (10). In our tense theory, sentence (9a) is composed of one clause because the two verbs *has* and *gone* constitute a temporal template, i.e. a present perfect form, at the tense-structure level.

The revised P-Definiteness Constraint correctly predicts that the sentence at issue is unacceptable. Let us first look at the A-component. Since the present tense morpheme establishes the present time-sphere including S, the A-component of the present perfect tense is inherently p-definite; in other words, the A-component is already p-definite at the first stage of the tense-interpretation level, which comes before the stage where information from DTP adverbials is processed.

Let us turn to the R-component. Since the event time E of sentence (9a) is specified by the DTP adverbial *on March 29*, the R-component is interpreted as p-definite at the second or later stage of the tense-interpretation level. This means that both the A- and the R-component of sentence (9a) are p-definite and thus the sentence violates the revised P-Definiteness Constraint. This is why sentence (9a) is unacceptable.

Secondly, the revised P-Definiteness Constraint can account, from a unified point of view, for why the present perfect represented by a present perfect form cannot go with time adverbials like *five minutes ago*. In the case of the revised P-Definiteness Constraint, we need not, on an ad hoc basis, regard such an adverbial as an adverbial of time-interval specifying; rather, we can construe it as a DTP adverbial, and, accordingly,

regard it as being capable of making the R-component p-definite. In this view, a sentence like (11),

(11) \*Makiko has finished breakfast five minutes ago.

is ruled out in the same way that sentences like those in (9) are ruled out. The A-component of (11) is p-definite because the present time-sphere includes the speech time (S) and the R-component of (11) is construed as p-definite because the DTP adverbial *five minutes ago* specifies the event time E, i.e. a constituent of the R-component. This means that sentence (11) violates the revised P-Definiteness Constraint. Thus, we need not assume an extra constraint such as the scope-contradiction constraint.

### 6.3.2. Future Perfect Tense Represented by Present Perfect Form

Let us next consider the unacceptability of sentences in the future perfect tense represented by a present perfect form with DTP adverbials. Observe:<sup>7, 8</sup>

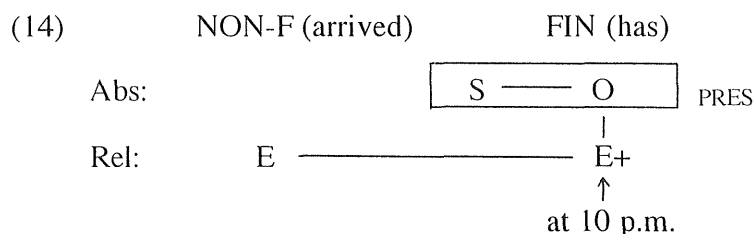
(12) a. \*John will leave when Mary has arrived at 10 p.m./tonight.

b. \*John will leave after Mary has arrived at 10 p.m./tonight.

(13) a. \*Tomorrow, Makiko will eat dinner with me when I have returned at 7 o'clock.

b. \*Tomorrow, Makiko will eat dinner with me after I have returned at 7 o'clock.

Consider (12a), for instance. The temporal schema of its temporal clause is represented as follows:



The perfect tense, composed of the event time of *arrived* and that of *has*, constitutes a

temporal template and accordingly a clause. The revised P-Definiteness Constraint explains why the sentence in question is unacceptable. Let us first consider the A-component. As with the present perfect tense represented by a present perfect form, since the present time-sphere includes S in itself, the A-component is inherently p-definite. As for the R-component, it is seen as p-definite at the tense-interpretation level because the DTP adverbial *at 10 p.m.* specifies the time of the resultant state E+, an element of the R-component.<sup>9</sup> Therefore, sentence (12a) comes to have two p-definite components, violating the revised P-Definiteness Constraint. The same explanation applies to (12b) and (13). Hence the unacceptability of the future perfect tense represented by the present perfect form with DTP adverbials.

### 6.3.3. Past Perfect Tense Represented by the Pluperfect

I now turn to a consideration of sentences in the past perfect tense (or the pre-perfect tense) represented by the pluperfect. First of all, observe the following:

- (15) a. Mana had played the *koto* at four. (=3b)  
       b. He had come back Tuesday. (Hamann (1989:42))
- (16) a. Tuesday, he had come back. (Hamann (1989:42))  
       b. At ten o'clock, John had already arrived. Then we all had a drink.

(Hamann (1989:40))

As is well known, temporal adverbials in the back position such as those in (15) tend to specify the event time in the Reichenbachian sense, while temporal adverbials in the front position such as those in (16) tend to specify the reference time in the Reichenbachian sense. In our terminology, the former tend to specify the event time E associated with the past participle, while the latter tend to specify the time of the resultant state E+ associated with perfect *have*.

With this in mind, let us proceed to the explanation for the acceptability of (15) and







The reason can be ascribed to the sentences' violation of the revised P-Definiteness Constraint.<sup>11</sup> The explanation goes as follows. First of all, it must be noted that the type of E-specifying DTP adverbials in (18) is crucially different from that in (20): in (18a), for example, the DTP adverbial of E-specifying, i.e. *two hours earlier*, is semantically dependent on the DTP adverbial of E+-specifying, i.e. *at that time*, because the former's reference to a certain time is based on the time position specified by the latter; in (20a), by contrast, the DTP adverbial of E-specifying, i.e. *at six*, refers to a certain time position independently of the DTP adverbial of E+-specifying, i.e. *at seven*, so there is no relationship of dependency between the two time adverbials. Secondly, we must recall that the English perfect tense has a dual structure: the situation described by the past participle (associated with E) and the resultant state described by perfect *have* (associated with E+) constitute the whole situation associated with the perfect tense and, thus, are closely related to each other. Thus, a semantic clash arises when the perfect tense cooccurs with two DTP adverbials which refer to two completely different time positions.

This leads to the conclusion that one of such DTP adverbials as those in (20), i.e. the DTP adverbial of E+-specifying, must specify a temporal element other than the two times of the perfect tense which occupy the R-component. Since in our tense theory, a given finite tense consists of the A- and the R-component, such a temporal element must be related with the A-component. If so, in (20a) *at seven* should be construed as specifying some time position in the past time-sphere and thus as changing the A-component into a p-definite component at the tense-interpretation level; and the R-component is also construed as p-definite because *at six* specifies the event time E of the perfect tense, an element of the R-component. I note in passing that assuming the reverse relation in specification between the two adverbials is impossible because the past participle *left*, which represents the event time E, does not contain the A-component. Therefore it should be the case that sentence (20a) has two p-definite components. This

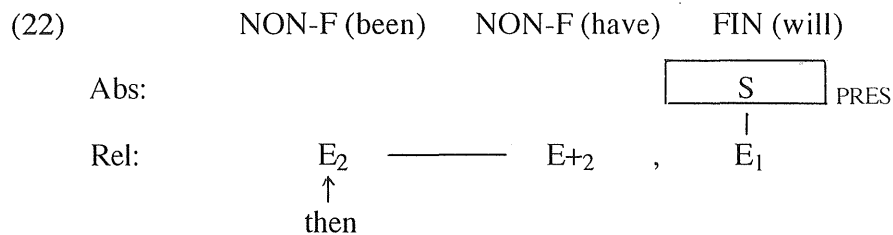
is how the unacceptability of (20a) is ascribed to a violation of the revised P-Definiteness Constraint.

#### 6.3.4. Modal Perfect Forms

This subsection considers, in terms of the revised P-Definiteness Constraint, why modal perfects can go with DTP adverbials. Modal perfects are exemplified in (21):

- (21) a. He will have been at home then. (Araki, Ono and Nakano (1977:368))  
 b. John should/ought to have visited Mary yesterday.  
 (Araki, Ono and Nakano (1977:346))  
 c. John may have finished it yesterday.  
 (Araki, Ono and Nakano (1977:370))  
 d. He must have come yesterday. (Araki, Ono and Nakano (1977:391))

Take (21a) as a sample case. The temporal schema which is available at the tense-interpretation level is represented in (22):



At the tense-interpretation level, the event time of *will*, i.e.  $E_1$ , is construed as simultaneous with the event time of *have*, i.e. the time of the resultant state  $E_{+2}$ . Thus, the perfect tense in (21a) refers to the same time range that the present perfect tense refers to. Nevertheless, unlike the present perfect tense, sentence (21a) can go with the DTP adverbial *then*. Why is this so?

The explanation runs as follows. It should first be noticed that (21a) contains two clauses: a clause associated with *will* and a clause associated with the perfect tense, i.e. *have been*. As is clear from (22), the perfect form in (21a) is a nonfinite form and thus

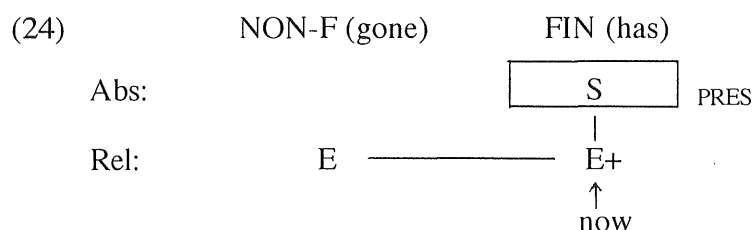
does not contain the A-component, but rather contains only the R-component. So, although the R-component is regarded as p-definite because the event time E is modified by the DTP adverbial *then*, sentence (21a) does not violate the revised P-Definiteness Constraint in that it is interpreted as having only one p-definite component, i.e. the R-component. The same applies to (21b-d). Thus, the revised P-Definiteness Constraint based on the proposed compositional tense theory can account for why modal perfects can occur with DTP adverbials.

### 6.3.5. Apparent Problems

In this subsection, I will deal with some phenomena that appear to be unable to be handled by the revised P-Definiteness Constraint. Let us first consider sentences such as those in (23):

- (23) a. Now Yoko has gone to Singapore.  
 b. Today, Chris has finished his work. (Klein (1992:550))

Consider (23a), for instance. Below is the temporal schema of (23a):



As we have seen, the A-component of (23a) is inherently p-definite. The point here is that the R-component might seem to be p-definite because the adverbial *now* specifies the time of the resultant state E+. Thus, sentence (23a) might appear to have two p-definite components, violating the revised P-Definiteness Constraint.

However, the line of reasoning mentioned above is based on a wrong observation about the status of the time adverbial *now*. As Klein (1992:549-550) points out, a time adverbial like *now* or *today* should be regarded not as a p-definite adverbial, but as a

"b(oundary)-definite" adverbial. The latter makes definite the boundary or interval of a given expression that it specifies. As for *now*, this claim is supported by Comrie's (1985:34) statement that the adverb *now*, together with the present perfect, is interpreted as 'up to now.' As to *today*, we can regard it as referring to a time interval in which the situation associated with the perfect tense holds, as with *this morning* or *this month* (see also Leech (1987:46)). If these statements are correct, sentence (23a) actually has only one p-definite component, i.e. the A-component, and thus it is acceptable because it observes the revised P-Definiteness Constraint.

Let us now move to an explanation of the difference in acceptability between the following two sentences, both of which contain the present perfect tense and the same time adverb *at present*:

- (25) a. At present/Now/So far/Up til [sic] now I have eaten three of the mushrooms. (Dinsmore (1981:475))
- b. \*At present, Chris has been in Pontefract. (Klein (1992:530))

How can we deal with this contrast? The conclusion is like this: in (25a) *at present* is viewed as expressing b-definiteness while in (25b) *at present* is seen as representing p-definiteness. How can we reach this conclusion? The line of reasoning will be shown step by step in the following manner.

I assume that the basic characteristic of the adverb *at present* is p-definite because of the lexical nature of the preposition *at* (cf. Wierzbicka (1993)): *at* basically represents the time position or point. On this assumption, sentence (25b) is unacceptable because it contains two p-definite components, i.e. the A-component, which is inherently p-definite, and the R-component, which is made p-definite by virtue of the DTP adverbial *at present*. The next task is, then, to explain why sentence (25a) is interpreted as acceptable. I claim that reinterpretation makes (25a) acceptable in the following way. First of all, notice that the present perfect tense in (25a) is seen as representing the experiential perfect in that the

object NP *three of the mushrooms* induces the time interval which starts in the past and continues up to the present (in this case, the perfect at issue cannot be viewed as expressing the habitual perfect). This fact may trigger the reinterpretation of the adverbial *at present* at the tense-interpretation level. That is, the adverbial is reinterpreted as an adverbial of expressing a time boundary, i.e. a b-definite adverbial.<sup>12</sup>

This kind of explanation is verified by the following contrast:

- (26) a. \*As of September 19, 1997, Jean Reno, a famous actor, has moved into the neighborhood.  
b. \*As of five o'clock, November 20, Mana, a famous *koto* player, has practiced the *koto*.
- (27) a. As of September 19, 1997, Jean Reno, a famous actor, has made 27 movies.  
b. As of five o'clock, November 20, Mana, a famous *koto* player, has practiced the *koto* fifty times.

Note that in both (26) and (27) the present time is September 19, 1997 in the (a)-sentences and five o'clock, November 20 in the (b)-sentences. The present perfects in (26) are interpreted as expressing the completive perfect, and thus adverbials such as *as of September 19, 1997* and *as of five o'clock, November 20* are not reinterpreted as b-definite adverbials, but remain p-definite adverbials. On the other hand, the present perfects in (27) are viewed as expressing the experiential perfect and thus the same adverbials are reinterpreted as b-definite adverbials in a similar way that *at present* in (25a) has been. Therefore, (26) violates, but (27) observes, the revised P-Definiteness Constraint. Hence the difference in acceptability between (26) and (27).

This subsection has dealt with the two apparent problems, i.e. the phenomena concerning the compatibility of the present perfect and certain types of time adverbials. The conclusion is that if a given adverbial is (re)interpreted as a b-definite time adverbial,

it can go with the present perfect without violating the revised P-Definiteness Constraint.

#### 6.3.6. Summary

In this section, I have demonstrated that the revised P-Definiteness Constraint based on our compositional tense theory can explain not only why only the present perfect form cannot go with, and other kinds of perfect forms can go with, DTP adverbials; but also why the pluperfect can go with two p-definite adverbials in some cases (see (18)), but not in others (see ((20)), which Klein's original version of the P-Definiteness Constraint cannot deal with straightforwardly. The incompatibility of the English present perfect with DTP adverbials such as *at four* and *two hours earlier/before* is attributed to the inherent p-definiteness of the present time-sphere established by the English present tense morpheme. This is the factor that impedes the cooccurrence of the present perfect with DTP adverbials, which has already been mentioned in chapter 5, and, thus, our claim that the perfect tense itself can cooccur with DTP adverbials is verified. This conclusion also strengthens and justifies our explanation for the parallelism in temporal structure between the present perfect tense and the past perfect tense in terms of the proposed compositional tense theory.

### **6.4. Generalized Version of Revised P-Definiteness Constraint and Other Tense Forms**

#### 6.4.1. Revised P-Definiteness Constraint as a More General Constraint

Having seen that the revised P-Definiteness Constraint is useful for the explanation for the incompatibility of the perfect forms with DTP adverbials, we can now move to a consideration of the question of whether or not the same constraint can be extended to the (in)compatibility of tense forms other than the perfect tense form with DTP adverbials. Let us refine the revised P-Definiteness Constraint in the following manners:

(28) Generalized Version of Revised P-Definiteness Constraint (GRPD Constraint): In a clause, the A(bsolute tense)-component and the R(elative tense)-component cannot both be p-definite.

The only difference between this constraint and constraint (5) is that in (28) the statement as to the perfect form is deleted. This means that the constraint in (28) is applicable to the cooccurrence of each tense form with DTP adverbials, but not restricted only to the cooccurrence of the perfect form with DTP adverbials. Thus for example, the GRPD Constraint can explain why a sentence in the simple past like *Yoko went to Singapore yesterday* is acceptable. Since the past tense morpheme establishes the past time-sphere, which does not include the speech time, the A-component, associated with the past time-sphere, is not inherently p-definite; by contrast, since the event time is specified by the DTP adverbial *yesterday*, the R-component, which is associated with the event time, is interpreted as p-definite. Since only the R-component is p-definite with a sentence in the simple past tense, such a sentence preserves the GRPD Constraint. Hence a simple past sentence can go with a DTP adverbial.

In order to further verify the validity of the GRPD Constraint, I will consider whether or not the GRPD Constraint gives a unified explanation for the cooccurrence of present tense forms other than the present perfect form (including future time expressions such as sentences with *will* or *be going to*, the present simple form and the present progressive form) with DTP adverbials in the following subsections.

#### 6.4.2. Future Time Expressions and GRPD Constraint

This subsection discusses whether or not the GRPD Constraint can be extended to future time expressions such as sentences with *will* (henceforth *will*-sentences) and sentences with *be going to* (henceforth *be going to*-sentences). I take them up because they are viewed as members of the present tense within our framework in that their finite

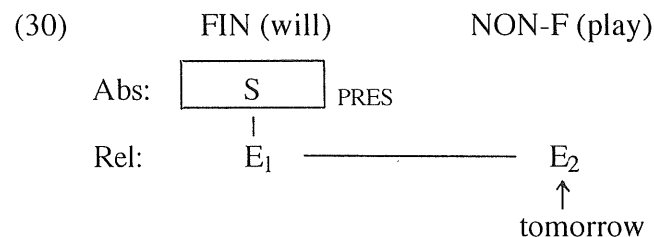
predicates contain the A-component associated with the present tense morpheme.

Let us first consider *will*-sentences:

- (29) a. Mana will play the *koto* for me tomorrow.  
 b. Next year we'll have a good harvest. (Leech (1987:58))  
 c. Tomorrow it will be rainy but warm. (Declerck (1991a:111))

As we have seen in section 3.2.1, future *will*-sentences have a dual structure where the situation associated with *will* (henceforth the W-situation) is located in the present area and the situation associated with the infinitive (henceforth the I(nfinitive)-situation) is located in the future area. Thus, in (29a) the W-situation is described by *will* and the I-situation by *play the koto*.

The temporal schema of (29a) is represented as follows:



Recall that in our compositional tense theory, the finite predicate *will* and the nonfinite predicate *play* constitute their own temporal templates at the tense-structure level and they are combined with each other to form the *will*-sentence in (29a) at the tense-interpretation level (cf. section 3.2.2). Thus, the *will*-sentence is interpreted as having two clauses (corresponding to two temporal templates) at the tense-interpretation level. (This means that if a *will*-sentence appears in a subordinate or an embedded clause, the total number of (sub-)clauses will be (at least) three, i.e. a main clause, a (sub-)clause associated with *will*, and a (sub-)clause associated with an infinitive of the subordinate clause.)

We are now in a position to explain, in terms of the GRPD Constraint, why the *will*-sentence in (29a), whose W-situation is located in the present area, can go with the



DTP adverbial *tomorrow*. The explanation is as follows. Let us begin with the finite predicate *will*. It constitutes a temporal template at the tense-structure level, and, accordingly, corresponds to a single clause at the tense-interpretation level. Although its A-component is inherently p-definite because of the present tense morpheme, its R-component is not p-definite. Therefore the GRPD Constraint remains preserved. Let us next consider the nonfinite predicate (i.e. *play*). The adverbial specifies  $E_2$ , i.e. the event time of the infinitive. The predicate in question constitutes a temporal template at the tense-structure level, which is to correspond to a single clause at the tense-interpretation level; and the nonfinite predicate has only the R-component. Thus, even if it is modified by a DTP adverbial such as *tomorrow*, the GRPD Constraint is not violated because only the R-component of the predicate *play* is p-definite. The same explanation can be extended to (29b, c).

Let us now turn to the cooccurrence of *be going to*-sentences with DTP adverbials, which are exemplified in (31):

- (31) a. Doc Brown is going to take us back to the future next Saturday night.  
 b. Next year we're going to employ more workers.

(Declerck (1991a:112))

- c. "It's all set up. I'm going to meet Barzini a week from now. To make a new peace now that the Don is dead." Michael laughed.

(M. Puzo, *The Godfather*, p.413)

Here, I assume, on the basis of the AUX-as-Main-Verb hypothesis, that *be going to*-sentences are also composed of two situations: one is the situation described by *be going to* (henceforth the BGT-situation) which is situated in the present area and the other is the situation described by the infinitive which is situated in the future area (I will return to this point in chapter 7). Thus in (31a), the BGT-situation is described by *be going to* and the I-situation by *take us back to the future*.



- (33) a. Now Hideto will go to the party (tonight).  
 b. Now Makiko is going to drive with me (tonight).

In both (33a) and (33b), the adverb *now* specifies the W-situation and the BGT-situation, which are both located in the present area. Since *will* and *is going to* are finite predicates, by definition, they contain both the A- and the R-components. As we have seen, the A-component of both sentences is p-definite because the present area described by the A-component includes the speech time (S). On the other hand, since *now* specifies the event time of *will* or *is going to*, i.e. a constituent of the R-component, the R-component of the *will*- and the *be going to*-sentences at first sight appears to be p-definite. If this were the case, it would be a violation of the GRPD Constraint, and the sentences in (33) would be unacceptable. However, as we have seen in the case of the perfect tense, we can assume that the adverb *now* here is interpreted as expressing b(oundary)-definiteness, i.e. expressing a definite time period which S is in the center of.<sup>13</sup> This is indirectly supported by the oddness of the following sentence:

- (34) ?At the (present) moment the work will be finished tomorrow.

(Huddleston (1969:789))

In (34), the adverb *at the present moment* tends to be interpreted as a DTP adverbial, but not as a time adverbial of boundary definite, because the lexical nature of the word *moment* in the adverbial makes the whole expression p-definite. If so, we can explain the oddness of (34) because the sentence is seen as having two p-definite components: the A-component is p-definite because of the nature of the present time-sphere and the R-component is considered to be p-definite because of the specification by the DTP adverbial *at the present moment*. On the other hand, since *now* does not lexically represent a moment, it can be interpreted as specifying a definite time period. This is why and how sentences like those in (33) are acceptable.

To recapitulate, it seems that the discussion thus far shows that the GRPD

Constraint works. Now that we have a more general constraint, i.e. the GRPD Constraint, we do not need the revised P-Definiteness Constraint in (5), which is only applicable to the perfect form. As we will see in the following subsection, however, a serious problem *prima facie* arises with the GRPD Constraint in explaining the cooccurrence of the present simple form with DTP adverbials: the GRPD Constraint alone cannot explain why present simple forms referring to the future can go with DTP adverbials referring to future time. From the next subsection on, I will restrict myself to this problem.

#### 6.4.3. Present Simple Forms and GRPD Constraint

In this subsection, I will show that the GRPD Constraint alone cannot explain why present simple forms referring to the future can occur with DTP adverbials. Let us first observe the following sentences:

- (35) a. After Yoko starts tomorrow, I will leave for my hometown.  
b. John will leave after Mary arrives at 10 p.m./tonight.  
c. John will leave when Mary arrives at 10 p.m./tonight.  
d. John said that he would leave when I arrive tomorrow.

The fact is that the present simple forms in the temporal clauses in (35) refer to the future and cooccur with DTP adverbials such as *tomorrow* and *at 10 p.m.*

To show that the GRPD Constraint as it stands cannot account for this fact, let us take (35b) as a sample case. The present simple form *arrives* in the *after*-clause is a finite predicate and thus has both the A- and the R-component. The A-component is associated with the present time-sphere established by the present tense morpheme, which is inherently p-definite, while the R-component is associated with the event time included in the future area, i.e. a sub-part of the present time-sphere, by virtue of the presence of the DTP adverbial referring to the future (i.e. *at 10 p.m.* or *tonight*). As we have seen in

section 3.1.1, the present simple form by itself constitutes a temporal template at the tense-structure level, so it constitutes a clause at the tense-interpretation level. Taking these matters into consideration, it follows that the cooccurrence of the finite predicate at issue i.e. *arrives*, and the DTP adverbial (i.e. *at 10 p.m.* or *tonight*), and such cooccurrence violates the GRPD Constraint; for the A-component is inherently p-definite and the R-component is interpreted as p-definite because of the specification by the DTP adverbial. The same observation applies to (35a, c, d).

#### 6.4.4. Two Solutions

In order to handle the problem raised in the previous subsection, we can present two types of solutions. One is to abandon the GRPD Constraint and return to the revised P-Definiteness Constraint in (5), which is applicable only to the perfect form. The other solution is to claim that some other factor makes possible the cooccurrence of present simple forms with DTP adverbials referring to the future, while the GRPD Constraint is in operation. In what follows, I will examine both possibilities and claim that the second solution is better than the first one.

Let us start by examining the first solution. Adopting this solution amounts to saying that the inherent p-definiteness of the present time-sphere is relevant only in the use of the perfect form. In this case, we have to not only abandon a unified explanation for the cooccurrence of both the perfect form and other forms such as simple past tense forms or future time expressions (e.g. sentences with *will* or *be going to*) with DTP adverbials, but also answer the question of why only in the case of the perfect form the inherent p-definiteness of the present time-sphere works. Thus, this is not a better solution.

Let us now turn to the second solution. In this case, we come to claim that the GRPD Constraint is valid and some factor other than the GRPD Constraint makes

possible the cooccurrence of present simple forms referring to future time with DTP adverbials. Consider the following contrast:

- (36) a. \* John will leave when Mary has arrived at 10 pm./tonight. (=12a))  
b. \* John will leave after Mary has arrived at 10 p.m./tonight. (=12b))
- (37) a. John will leave when Mary arrives at 10 p.m./tonight. (=35c))  
b. John will leave after Mary arrives at 10 p.m./tonight. (=35b))

As we have already seen, in the compositional tense theory the present perfect form has a dual structure consisting of two event times while the present simple form has a single structure consisting of only one event time. I would like to claim that a hint as to the explanation for the difference in acceptability in (36) and (37) lies in this crucial difference in temporal structure between the present perfect and present simple forms.

Let us assume that the reason why present simple forms can go with DTP adverbials referring to future time is ascribed to the existence of a hypothesis like the following:

- (38) In the case where an event time obtains in the future area, the inherent p-definiteness of the A-component can be nullified at the tense-interpretation level under the condition that the R-component is interpreted as more specific than the A-component with respect to p-definiteness.

This hypothesis implies that with respect to the present simple form referring to the future, since the future area itself does not contain the speech time, i.e. a cause of the inherent p-definiteness of present tense forms, the degree of the specificity as to the p-definiteness of the A-component is construed as not high and thus something more specific as to p-definiteness in the R-component can replace it. This hypothesis is motivated in that the hypothesis conforms to our general way of cognition: if both something more specific and something more general are available, we tend to choose the more specific option.<sup>14</sup> For example, unless you want to blur the exact time, you would

choose (39b) rather than (39a).

- (39) a. Makiko came to my office in the morning.  
b. Makiko came to my office at 11 a.m.

If the hypothesis in (38) is correct, we can explain the cooccurrence of present simple forms with DTP adverbials referring to future time, the GRPD Constraint remaining preserved. The explanation goes as follows. First, the finite predicate *arrives* in the temporal clauses of (37) constitutes a temporal template at the tense-structure level, which is projected into a single clause at the tense-interpretation level. Next, since the event time of *arrives* is interpreted as obtaining in the future area, hypothesis (38) is applicable: the inherent p-definiteness of the A-component of *arrives* is seen as being nullified because the R-component is more specific as to p-definiteness by virtue of the highly specific nature of the DTP adverbial (e.g. *at 10 p.m.* or *tonight*). As a result, only the R-component of *arrives*, associated with the event time specified by the DTP adverbial, is reinterpreted as p-definite at (the final stage of) the tense-interpretation level. Therefore the present simple forms in (37) preserve the GRPD Constraint. Hence the sentences in (37) are acceptable.

The question, then, arises as to why hypothesis (38) is not applicable to present perfect forms referring to the future. If it were so, the sentences in (36) would be acceptable. We can attribute the reason to the dual structure of the perfect form. The explanation is as follows. As has already been pointed out, the present perfect form consists of two event times, i.e. E+, associated with the perfect auxiliary *have*, and E, associated with the past participle complement. Thus, it is possible that a given DTP adverbial specifies either of them; in other words, unlike the case of the present simple form consisting of a single event time, in the case of the perfect form we cannot decide which event time a given DTP adverbial is related to without a specific context. This means that the cost of processing the information about the present perfect form referring

to future time is high in comparison with the present simple form referring to future time because there are two event times in the case of the perfect form; that is, in the case of the perfect form we have to do an extra job, i.e. deciding which event time, E or E+, a DTP adverbial specifies.<sup>15</sup> From this, we can assume that this extra processing cost prevents hypothesis (38) from working, or at least makes it difficult for hypothesis (38) to work, because the perfect form is a marked form with respect to temporal structure.<sup>16</sup> This reasoning turns out to be convincing if we take the nature of temporal clauses into account; since temporal clauses inherently function as specifying the time of main clauses, it is unlikely that the processing cost in temporal clauses is high. From this, we can say that hypothesis (38) is not allowed to work in this syntactic environment.

Hypothesis (38) is further justified by the fact that it can explain why the present progressive form referring to the future goes with DTP adverbials referring to the future. Consider (40):

- (40) a. We're visiting Aunt Rose tomorrow. (Leech (1987:33))  
 b. I'm taking Mary out for dinner this evening. (Leech (1987:63))

In (40a), for example, the finite predicate *are* contains both the A-component connected with the present time-sphere and the R-component connected with the orientational event time, i.e.  $E_{O_1}$ , while the nonfinite predicate *visiting* contains only the R-component connected with the (pure) event time, i.e.  $E_2$ . As we have mentioned in section 3.4, the progressive auxiliary *be* and the present participle complement combine into a temporal template, i.e. the progressive form, at the tense-structure level, and, accordingly, constitutes a single clause at the tense-interpretation level. Given this, it is expected from the GRPD Constraint that if the A-component of the progressive form is inherently p-definite,  $E_2$ , which is an element of the R-component, cannot be specified by a DTP adverbial. But the real truth is that the present progressive in (40a) goes with the DTP adverbial *tomorrow*.



The hypothesis in (38) can account for this apparent contradiction. In the case of the present progressive form referring to the future,  $E_1^0$ , i.e. the orientational event time associated with *be*, occupies the present area, whereas  $E_2$ , i.e. the (pure) event time associated with the present participle, occupies the future area (see section 3.4 for details). This situation satisfies the condition for hypothesis (38) to work. Note here that since there is only one event time in the future area in the case of the progressive form of future reference, we can exclusively decide which event time is at issue, i.e.  $E_2$ . We do not have to do an extra job as with the present perfect form, and, thus, the GRPD Constraint can work easily as with the present simple form. Therefore, the inherent p-definiteness of the A-component of the progressive form is nullified at the tense-interpretation level, and only the R-component of  $E_2$  is viewed as p-definite by virtue of the specification by the DTP adverbial (*tomorrow* or *this evening*); thus, the GRPD Constraint is preserved and the sentences in (40) are acceptable.

From what we have seen thus far, it has become clear that the second solution, namely, the explanation for the (non-)cooccurrence of present tense forms referring to future time with DTP adverbials by combining the GRPD Constraint and hypothesis (38), is a better solution than the first solution, namely, the explanation by claiming that the revised P-Definiteness Constraint cannot be reduced to a more general constraint. With the GRPD Constraint, we can explain the whole phenomenon concerning the cooccurrence of English tense forms with DTP adverbials from a unified point of view.

## 6.5. Concluding Remarks

In this chapter, I have first proposed the revised P-Definiteness Constraint for the perfect form, which is based on Klein's (1992) P-Definiteness Constraint, on the basis of the compositional tense theory proposed in chapters 1 to 3, and then extended it to a more general constraint, i.e. the GRPD Constraint. This chapter has been devoted to

demonstrating that the constraint, which is operative at the tense-interpretation level, is useful for the explanation for the (in)compatibility of perfect tenses with DTP adverbials, on one hand, and the compatibility of simple past tenses with DTP adverbials referring to past time and the compatibility of future time expressions (i.e. *will-* and *be going to-*sentences) with DTP adverbials referring to the future, on the other. The reason why only the present perfect form cannot occur with DTP adverbials is not ascribed to the nature of the perfect form per se, but to the peculiarity, i.e. the inherent p-definiteness, of the present time-sphere represented by the present tense morpheme. It has also been shown that the reason why the present simple and progressive forms can go with DTP adverbials of future time reference is due to hypothesis (38), which is based on our way of cognition.

## NOTES TO CHAPTER 6

\* A portion of this chapter appeared in Wada (1995b).

<sup>1</sup> Klein (1992) defines the topic time as follows: "The topic time is the time span to which the claim made on a given occasion is constrained." (p.535) The topic time is represented by the tense morpheme. As Klein (1992) himself suggests, we can regard the topic time as a kind of reference time.

<sup>2</sup> An anonymous *EL* reviewer has pointed out to me the problem of whether or not a sentence like *Now Yoko has gone to Singapore yesterday* is acceptable. This type of sentence is unacceptable in that it violates the P-Definiteness Constraint. See the explanation in the text for details.

<sup>3</sup> Michaelis (1994, 1998) rejects the P-Definiteness Constraint, arguing that a discourse like the following impeaches its validity:

(i) It was 1972. Harry had joined the navy in 1960. (Michaelis (1994:113))

She claims that although the reference time (i.e. Klein's topic time) is specified by *1972* and the event time by *in 1960*, the perfect sentence is not anomalous, and thus the constraint at issue is untenable. However, Michaelis seems to misunderstand Klein's P-Definiteness Constraint. In (i), *1972* specifies the reference time of the first sentence, but not the reference time of the second sentence (i.e. the perfect sentence). The second sentence is not *explicitly* specified by two p-definite adverbs. The p-definiteness of the reference time of the second sentence is only implied by the reference time of the first sentence. It seems that Klein (1992:526; 544) himself refers to this issue, considering that only the case where two (or more) DTP adverbials appear in one sentence does he take into account. Thus, discourse (i) seems not to be a counterargument to the P-Definiteness Constraint.

<sup>4</sup> Nina Padden (personal communication) judges this sentence as acceptable in a context like the following:

- (i) I telephoned Mana on April 1. On that day/At that time (I found) she had graduated from the high school a week earlier/before.

She comments that it is normal to delete the adverbial *on that day/at that time* from the second sentence in (i). But she continues to comment that sentence (4b) as it stands is much better than the sentences in (ii):

- (ii) a. \*Yesterday at six, Mana had played the *koto* at five.  
b. \*In September 1992, Rieko had moved to the new office in April 1992.

See section 6.3.3 for further discussion of this matter.

<sup>5</sup> In this case, *ago* is interpreted in the sense of 'before'. See Smith (1978; 1981b:219).

<sup>6</sup> Strictly speaking, we should speak of "sub-clause" instead of "clause" in order for us not to confuse the notion "clause" here with the notion "clause" of its standard use as used in *main clauses* or *subordinate clauses*. I use the term sub-clause only if misunderstanding could arise.

<sup>7</sup> Of the three informants whom I asked to judge (12) and (13), two of them judge them as unacceptable and the other one judges them as unacceptable in written language, but as acceptable in spoken language. This means that the acceptability judgment as to sentences like (12) and (13) is shaky. However, even the third informant mentions that (12) and (13) are a bit odd in comparison with their present simple form counterparts. See section 6.4.4 for further discussion.

<sup>8</sup> Even in independent clauses, the present perfect form cannot go with DTP adverbials, as shown in (i):

- (i) a. \* They have eaten all the cookies tomorrow. (Smith (1978:54))  
b. \* John has come home tomorrow. (Harder (1996:473))  
c. ??Tomorrow, John has climbed Mt. Olympus. (Hornstein (1990:85))

However, the unacceptability of (i) may be due to the discrepancy between adverbials of

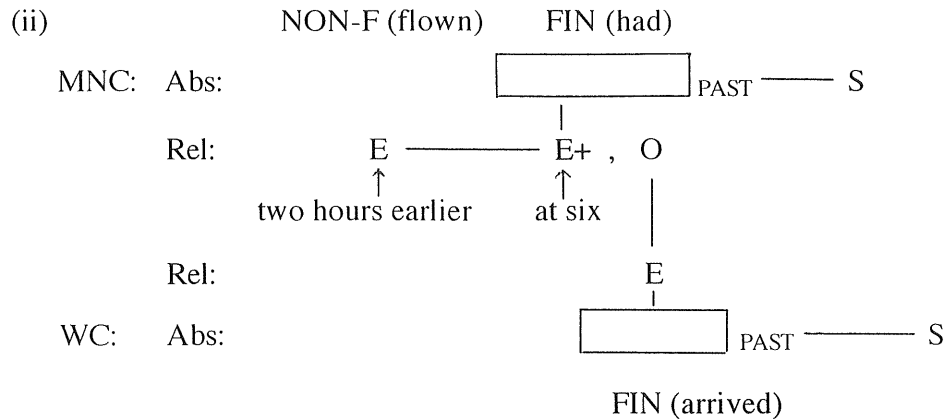
future time reference and present perfect forms whose base times are viewed as simultaneous with the speech time because the perfect forms at issue are in the assertive form. This is why we do not take sentences like those in (i) as samples of the future perfect tense represented by the present perfect form.

<sup>9</sup> One might say that the adverbial *at 10 p.m.* can specify the event time E of the perfect tense. Even in that case, the conclusion is the same, because the fact that the R-component is p-definite remains the same.

<sup>10</sup> I claim that DTP adverbials like *at four* or *yesterday* specify event times (including E+ and E<sup>0</sup>), but not times of orientation, for the following reasons. First, as we have seen in section 1.4, since a time of orientation is defined as a base time from which the speaker evaluates or calculates the event time(s), but not as a time established by time adverbs or by the context, by definition, the time of orientation cannot be specified by the DTP adverbials at issue in the compositional tense theory. Secondly, as we have also seen in section 1.4, since a time of orientation in a given clause can correspond to an event time in another clause, in a sentence like (i) the time of orientation must be interpreted as corresponding to the event time of the *when*-clause and the DTP adverbial *at six o'clock last Monday*, which provides a basis for the identification of the so-called relative DTP adverbial *two hours earlier/before*, must be interpreted as related to a constituent of the perfect tense, i.e. the time of the resultant state E+.

- (i) At six o'clock last Monday, when I arrived at the airport, Miyako had flown to  
Canada two hours earlier/before.

The temporal schema of (i) working at the tense-interpretation level is represented as in (ii):



Here, MNC and WC are short for the main clause and the *when*-clause, respectively. The vertical line linking the event time E of the WC to the time of orientation O of the MNC suggests that the event time of the WC functions as the time of orientation in the MNC (the position of the time of orientation in (ii) is different from that of the time of orientation in (14) and (17) only for the conventional reason). This is why in our theory DTP adverbials like *at four* or *two minutes ago* specify event times, but not times of orientation, as a rule.

<sup>11</sup> In this case, Klein's original version can also explain the phenomenon at issue.

<sup>12</sup> This explanation is supported by the acceptability judgment of (i) below.

(i) ? At present, John has hiked three times in the past. (Hornstein (1990:28))

The fact that the acceptability judgment of present perfect sentences with the adverb *at present* is shaky can be interpreted as suggesting that how to interpret *at present* depends on pragmatic factors, which are accessible after the second stage of the tense-interpretation level. In this case, the adverbial of frequency *three times* motivates us to view the perfect sentence as an experiential perfect; hence the reinterpretation of *at present*.

<sup>13</sup> There is a possibility that we can provide another kind of explanation for the phenomenon at issue. Nina Padden (personal communication) has pointed out to me that sentences like those in (33) are used in the case of the subject's changing his or her mind.

This means that the adverb *now* here is not a pure time adverbial; rather, it is used to "indicate something which contrasts with what you have just said before" (COBUILD 2nd ed., p.1129). In short, this type of *now* is interpreted in the sense of, say, 'however'. If this is the case, the adverb *now* in (33) does not make the R-component of the finite predicate (i.e. *will* or *is going to*) p-definite and thus (33) does not violate the GRPD Constraint.

<sup>14</sup> This way of cognition is closely related to Grice's (1975) maxims of conversation, especially to the maxim of Manner.

<sup>15</sup> In the case of the present perfect form referring to the future, although E can logically obtain in the present or the past area, we tend to consider that E obtains in the future area for pragmatic reasons (see Comrie (1981:26)).

<sup>16</sup> As has been stated in note 7, one informant's suggestion that sentences like those in (36) may be acceptable in spoken language may indirectly support our explanation. Recall that hypothesis (38) is closely related to our way of cognition and thus the decision on which component is more specific with respect to p-definiteness can differ from speaker to speaker. So, to the informant, in the course of processing the present perfect form referring to the future in temporal clauses, deciding which event time, E or E+, a DTP adverbial specifies does not count for much, and hypothesis (38) may work. Hence, sentences like those in (36) will be acceptable to such a speaker in spoken language.

## CHAPTER 7

### DOES DOC BROWN KNOW WHICH EXPRESSION TAKES US BACK TO THE FUTURE: *BE GOING TO* OR *WILL*?\*

#### 7.0. Introduction

A lot of attention has been paid to differences between sentences with *be going to* (*be going to*-sentences) and sentences with *will* (*will*-sentences) in the literature (Binnick (1971, 1972), Coates (1983), Declerck (1991a, 1991b), Haegeman (1989), Higuchi (1991), Leech (1987), Palmer (1979, 1988, 1990), Wekker (1976), etc.). The previous studies, however, have two drawbacks. First, they do not give a sufficient or systematic account of differences between *be going to*- and *will*-sentences from a general theory of tense. Second, some of them fail to explain the close relationship between future *will* and modal *will*, for they presuppose that English has the future tense, splitting *will* into a future tense marker and a modal auxiliary (we use the term *modal* in the sense of 'modal auxiliary' in this chapter).

This chapter shows that the compositional tense theory proposed in this study can give a unified and systematic explanation both for differences in meaning and cooccurrence restriction between *be going to*-sentences and *will*-sentences and for a diversity of uses (or senses) of *be going to*-sentences and *will*-sentences. We first propose the basic temporal schemata of *be going to*-sentences and *will*-sentences, both of which are operative at the tense-interpretation level: the *be going to*-sentence consists of an ongoing process at the speech time (S) and the infinitive's situation, while the *will*-sentence is composed of a mental state at S and the infinitive's situation; with *be going to*-sentences, the temporal focus (TF) is fixed on the ongoing process, whereas with *will*-sentences, the TF is fixed on the infinitive's situation. It will be shown that the temporal schemata of both sentences provide an explanatory basis for the phenomena concerning



*be going to* and *will*.

This chapter consists of eight sections. Section 7.1 presents a number of differences in meaning and cooccurrence restriction between *be going to*-sentences and *will*-sentences. Section 7.2 re-examines, in terms of two pairs of notions, i.e. reality vs. non-reality and the modality vs. the proposition domain, the temporal schemata of *will*- and *be going to*-sentences that we have already proposed, thus presenting their extended versions. In section 7.3, we formulate the internal temporal structures of *will*- and *be going to*-sentences. In section 7.4, temporal focus is added to the temporal schemata presented in section 7.2 to form the full-fledged versions of the temporal schemata of *be going to*- and *will*-sentences. Section 7.5 demonstrates that the temporal schemata of both sentences explicate the phenomena presented in section 7.1 in a unified and systematic way. It should be noted that in section 7.1 to section 7.5, we mainly deal with typical uses of *will* and *be going to* in the present tense, i.e. future *will* (which is opposed to other uses such as the volitional use and the (strong) epistemic use) and semi-modal *be going to* (which is opposed to the simple future and the predictive future use). In section 7.6, it is shown that at the tense-interpretation level, the temporal schemata of *be going to*- and *will*-sentences work with the notions of grammaticalization and subjectification in the sense of Traugott (1989) to explain why a diversity of senses or uses of *be going to* and *will* can have emerged. Section 7.7 shows that the proposed temporal schema-based analysis can be extended to account for why *be going to*-sentences in the past tense tend to contribute to unfulfillment of the infinitive part while *will*-sentences in the past tense do not. Section 7.8 makes concluding remarks.

## **7.1. Facts**

### 7.1.1. Differences in Meaning

We will first observe differences in meaning between *be going to*- and *will*-

sentences in terms of three different notions. The first to be observed is the notion of near vs. remote future. Consider the following contrast:

- (1) a. I hear you're going to make a speech tonight.  
b. ? I hear you will make a speech tonight.

(Declerck (1991a:115))

It is often said that *be going to* in the present tense represents near future in comparison with *will* in the present tense; thus, it might be said that the former cooccurs with a time adverbial of near future reference like *tonight*. On the other hand, *will* is said to represent more remote future than its *be going to* counterpart; thus, we might say that the cooccurrence of *will* with *tonight* is odd.

As the sentences in (2) and (3) show, however, it is not always the case that *be going to*-sentences represent near future and *will*-sentences remote future:

- (2) a. I'm going to be a policeman when I grow up.  
b. If Winterbottom's calculations are correct, this planet is going to burn itself out 200,000,000 years from now.

(Leech (1987:61))

- (3) a. She will be 32 next March.  
b. It will rain tomorrow.

Let us now compare *be going to*- and *will*-sentences in terms of another pair of notions, i.e. that of assured vs. contingent future. Observe (4), for example:

- (4) a. ... most Congressmen are dubious about what is going to happen to money in local hands.  
b. ... most Congressmen are dubious about what will happen to money in local hands.

(Binnick (1971:41))

Binnick (1971) notes that sentence (4a) is more appropriate than sentence (4b) after

passage of the revenue-sharing plan in question, whereas sentence (4b) is more appropriate than sentence (4a) before the plan in question is passed. From this observation, we may say that the *be going to* version (4a) describes the assured future event while the *will* version (4b) describes the contingent future event.

However, in main clauses or sentences, *be going to* in the past tense often implies non-fulfilment of the I(nfinitive's)-situation, which is exemplified in (5):

- (5) a. He was going to sue me, but I persuaded him it was pointless.  
(Leech (1987:62))
- b. You were going to give me your hairdresser's telephone number.  
(Declerck (1991a:121))

Finally, we can distinguish *be going to*-sentences from *will*-sentences by saying that the former represent the future performance of a present situation and the latter the prediction about a future situation, as in:

- (6) a. She's going to have twins.  
b. She will have twins.  
(Leech (1987:60))

Leech (1987:60) states that sentence (6a) is appropriate for the case where the woman at issue is already pregnant, while sentence (6b) is appropriate in the case of the pronouncement of, say, a prophet.

In section 7.5, I will show that the differences presented thus far all derive from the difference in temporal schema between *be going to*- and *will*-sentences.

### 7.1.2. Syntactic Environments

Let us now turn to five syntactic environments where *be going to* behaves differently from *will*. We begin with the cooccurrence of *be going to/will* with *if*-clauses. Consider (7):

- (7) a. If you accept that job, you'll never regret it.  
b. \*If you accept that job, you're never going to regret it.

(Leech (1987:61))

It is often said that the *be going to*-sentence is present-oriented, thus being contradictory to future reference of the *if*-clause situation, whereas the *will*-sentence is future-oriented, thus going with future actualization of the addressee's accepting a job, which is described by the *if*-clause (cf. Coates (1983:201)).

However, such a statement as it stands meets some difficulties in accounting for the grammaticality of the following pair of sentences:

- (8) a. Now we are going to have no money at the end of the month.

(Haegeman (1989:297))

- b. Now we will have no money at the end of the month.

(Huddleston (1969:789))

Sentences (8a) and (8b) both have two time adverbs, i.e. *now* and *at the end of the month*, so that they refer to both present and future time. It is thus difficult to distinguish the *be going to*-sentence from the *will*-sentence only in terms of present- vs. future-orientation.

A second phenomenon to be observed is the difference in grammaticality between *be going to* and *will* with respect to their cooccurrence with stative predicates: *will* goes with both stative and non-stative predicates, while *be going to* basically does not go with stative predicates.

- (9) a. \* I wonder if she's going to know you. (Leech (1987:59))

- b. \* We're going to see the finish soon. (Declerck (1991a:114))

Thirdly, *will* can occur with the perfect tense, but *be going to* basically cannot:

- (10) a. He will have received a letter from her before he writes to her.

(Declerck (1991a:139))

- b. ?\*He is going to have received a letter from her before he writes to her.

Fourthly, let us consider the cooccurrence of *be going to/will* with the imperative-plus-coordinating conjunction construction. As is clear from the following paradigm, *will* can go with both *and* and *or*; by contrast, the combination of *be going to* with *and* is odd.

- (11) a. Come closer and I'll give you five pounds. (Clark (1993:79))  
b. ? Come closer and I'm going to give you five pounds.
- (12) a. Be off or I'll push you downstairs. (Clark (1993:79))  
b. Be off or I'm going to push you downstairs.

Finally, Haegeman (1989:296) states that *be going to* goes with *already* without difficulty while *will* does not. Observe (13) for instance:

- (13) a. We are already going to have the kitchen redecorated, we cannot have the builders in too.  
b. ? We already will have the kitchen redecorated, we cannot have the builders in too.

(Haegeman (1989:296))

In this section, we have seen a number of differences between *be going to*- and *will*-sentences in semantic and syntactic terms. To explicate them from a unified point of view, we need to construct the detailed temporal schemata of *be going to*- and *will*-sentences. This is the task to be carried out in the following three sections.

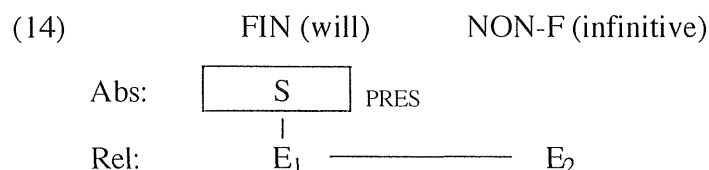
## 7.2. Temporal Schema

This section will develop the temporal schemata of *will*- and *be going to*-sentences on the basis of the tense theory that we have presented in chapters 1 to 3 in order to fully account for the data proposed in section 7.1. For the sake of simplicity, reference to the notion of temporal focus will be postponed until section 7.4.

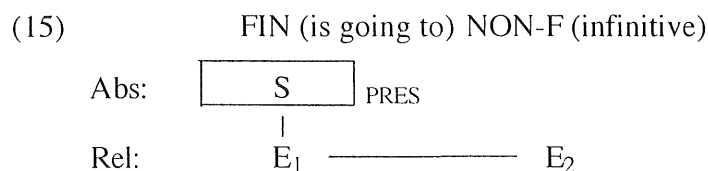
### 7.2.1. Dual Structure

This subsection reconfirms the dual structure of both *be going to*- and *will*-sentences.

Let us start with *will*-sentences. In section 3.2, we have seen that the *will*-sentence has a dual structure: it is composed of two situations and accordingly two event times, i.e. the event time associated with *will* ( $E_1$ ) and the event time associated with the infinitive ( $E_2$ ). Both *will* and the infinitive constitute their own temporal templates at the tense-structure level, and they combine into a *will*-sentence at the tense-interpretation level. It has also been shown that a given *will*-sentence is construed as a future *will*-sentence when  $E_2$  is viewed as posterior to  $E_1$  under the influence of factors such as the context, time adverbials of future reference and the predicate (or situation) type of the infinitive. The temporal schema of *will*-sentences in the present tense is repeated here as below:



Let us now turn to *be going to*-sentences. As we have seen in section 6.4.2, basically the *be going to*-sentence in the present tense has the same structure as the *will*-sentence counterpart:



It has been assumed that *be going to* constitutes a temporal template at the tense-structure level, and, accordingly, it represents one situation, i.e. the situation described by *be going to* (i.e. the BGT-situation); and the BGT-situation is combined with the I(nfinitive)-



throughout this chapter.

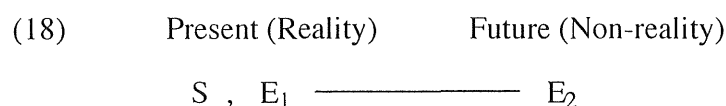
The schema in (16), which says that a *will-/be going to*-sentence consists of the present and the future parts, is verified by the following sentences which have two time adverbs:

- (17) a. Now we are going to have no money at the end of the month. (=8a)  
b. Now we will have no money at the end of the month. (=8b)

Since *now* is a present-time adverb, it is associated with a present situation; i.e., such a situation is the BGT-situation in (17a) and the situation described by *will* (i.e. the W-situation) in (17b). In both cases, *at the end of the month*, i.e. a future-time adverb, is associated with the future situation, i.e. the I-situation.

### 7.2.2. Reality and Non-reality

This subsection re-examines the temporal schema in (16) in terms of reality vs. non-reality. It is natural to say that present time is real, but future time is non-real, in the sense that we regard a situation which is going on or holding in the present as already actualized (wholly or partially), while we regard a situation which will come into existence in the future as not yet actualized. Thus, the schema in (16) can be extended as follows:



The above schema illustrates how an English sentence of future reference is recognized. The future, unlike the present and the past, is the time area which is non-real and thus uncertain, so we tend to evaluate a future situation from the time which is real and thus we are certain of. Such a point in time is usually present.<sup>2</sup>

For a better understanding of the schema in (18), let us consider the following:

- (19) a. Doc Brown is going to take us back to the future next Saturday.



- b. Mana will play the *koto* for me tomorrow.

In (19), both *be going to* and *will* are viewed as representing present situations while the infinitive is seen as describing a future situation. In (19a), for example, since the BGT-situation occupies the present area, i.e. a time area which is real and thus we are certain of, we can evaluate or compute the I-situation in the future (the situation of Doc Brown's taking us back to the future), i.e. a time area which is non-real and thus we are uncertain of, from the event time of the BGT-situation (i.e.  $E_1$ ) as the base time.

### 7.2.3. Modality and Proposition Domain

In this subsection, we will distinguish the temporal schema of the *will*-sentence from that of the *be going to*-sentence by introducing the theory of modality outlined in chapter 1. This theory interacts with the temporal schemata of *will*- and *be going to*-sentences to form extended versions of their temporal schemata at the tense-interpretation level, because the level at issue is an interface between information about tense structure and information about other factors.

As has widely been assumed, we have also assumed that a sentence is semantically composed of the subjective domain (i.e. the speaker's mental world), viz. the modality domain, and the objective domain, viz. the proposition domain. Recall that in our theory of modality, subjective epistemic modality (including subjective epistemic and deontic modals) is seen as belonging to the modality domain, whereas objective epistemic modality (including objective epistemic modals and some root modals such as dynamic modals) and semi-modals or semi-auxiliaries are regarded as propositional elements of a sentence as with main or full verbs.<sup>3, 4</sup> Thus the *will*-sentence differs from the *be going to*-sentence in that the W-situation belongs to the modality domain and the BGT-situation to the proposition domain (cf. Klinge (1993:346)).

The claim that the BGT-situation belongs to the proposition domain is also

empirically justified by Nicolle's (1998) observation that the notion of "prior intention" or "current activity leading to a future event," which is said to be expressed by the form *be going to*, cannot be canceled. An example of the former case and one of the latter case are exemplified in (20) and (21), respectively:

(20) A: Would somebody chair this afternoon's session, please?

B: ? I'm going to do it, although I wasn't intending to.

(21) ?She's going to have twins, but she isn't pregnant yet.

(Nicolle (1998:230))

Since it is the case that propositional elements, but not implicatures, cannot be canceled, we can claim that the BGT-situation belongs to the proposition domain.

The temporal schemata of the *will*- and the *be going to*-sentence are extended as follows:

- |      |                     |                     |               |
|------|---------------------|---------------------|---------------|
| (22) | Present             | Future              |               |
| a.   | S , $\boxed{E_1}_M$ | ———— E <sub>2</sub> | <will>        |
| b.   | S , E <sub>1</sub>  | ———— E <sub>2</sub> | <be going to> |

In (22a), E<sub>1</sub> (representing the event time of the W-situation), surrounded by the square with subscript M, means that the situation associated with the event time is modalized, namely, that it is interpreted as belonging to the modality domain; E<sub>2</sub> (representing the event time of the I-situation) denotes a situation which belongs to the proposition domain.

It is important to note here that the W-situation cannot spread on the time line which belongs to the proposition domain, while the BGT-situation can. Modality is a speaker's mental state and is, by definition, only accessible at the speech time, so it cannot spread on the time line which belongs to the proposition domain (time flow does not exist in the modality domain). Since the W-situation is identified as a modality, it has nothing to do with the question of whether or not it has an internal temporal structure on the time line.<sup>5</sup> On the other hand, a situation in the proposition domain can have an internal temporal

structure in that it is closely related to, and thus can spread on, the time line. It follows that since the BGT-situation is construed as a propositional element, it is located on the time line and thus can have an internal temporal structure spreading there.

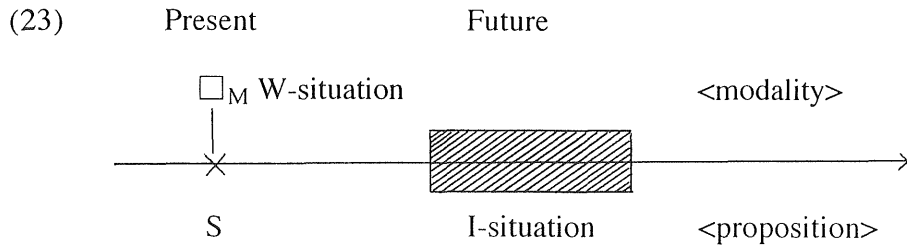
### 7.3. Internal Temporal Structure

In this section, we propose the internal temporal structures of *will*- and *be going to*-sentences on the basis of what we have seen thus far.

#### 7.3.1. *Will*-Sentences

We begin with the internal temporal structure of *will*-sentences. First of all, in our tense theory, it is at the tense-interpretation level that the finite predicate *will* and the infinitive constitute their own clauses and the latter's event time is interpreted as coming after the former's, thus referring to the future, under the influence of time adverbials of future reference or the context; and it is also at this level that the schematic meaning of the predicate *will* is specified, namely, that the type of modal connotations which *will* receives is determined. It should be noted here that a speaker's mental state associated with *will*, i.e. a modality, is only accessible at the speech time (S). On the other hand, since the information associated with the bare infinitive is not directly related to modality, the bare infinitive contributes only to expressing a relative tense (i.e. simultaneity or posteriority in this environment) and does not establish any time-sphere which is related to the speaker's viewpoint and thus the speaker's mental world, i.e. the modality domain (cf. also chapter 8). Thus, the I-situation is viewed as a propositional element and being situated on the time line.

The internal temporal structure of *will*-sentences, which works at the tense-interpretation level, is shown in (23):<sup>6</sup>



Time flows from left to right. The cross symbolizes the position of S. The square with subscript M represents the W-situation; and the shaded rectangle denotes the I-situation (I use a rectangle here only for convenience's sake, and, thus, the I-situation can be either durational or punctual). The vertical line designates a relationship of simultaneity. It should be noted here that in (23) the square is not located on the time line, for the W-situation is interpreted as expressing a speaker's mental state. The W-situation itself is not located on the time line, which is related to the proposition domain, but just denotes a probability or a prediction associated with the modality domain. By contrast, the I-situation is construed by the speaker as constituting (part of) a proposition, and, thus, it can spread on the time line. This means that the W-situation and the I-situation do not constitute a continuum on the time line. Given this, it is predicted that the W-situation does not have any restrictions on the predicate (or situation) type of the I-situation or on the time area to which the I-situation refers (cf. note 6). We will demonstrate this soon.

### 7.3.2. *Be Going To*-Sentences

This subsection considers the internal temporal structure of *be going to*-sentences. We have already stated that the BGT-situation is viewed as belonging to the proposition domain and thus it has an internal temporal structure spreading on the time line. The question, then, arises as to what kind of internal structure the BGT-situation (and thus the *be going to*-sentence) has. As is well known, *be going to* diachronically derives from the verb *go* in the progressive form plus the infinitive of purpose or result by means of reanalysis, so we can say that the BGT-situation can have an internal temporal structure

that reflects the properties of *go*, the progressive form, and the particle *to*.

One might argue against this by saying that the grammatical unit *be going to* has already lost its original sense. Such an objection, however, is not to the point. First, if *be going to* came to have completely lost its original sense and were seen as functioning as a future tense marker or merely expressing a prediction or probability, as *will* does, we cannot account not only for the fact that there are some differences between *be going to*-sentences and *will*-sentences (see the data proposed in section 7.1.2), but also for the fact that the following sentences are ungrammatical.<sup>7</sup>

(24) a. \*He is going to have finished it yesterday.

(Araki, Ono and Nakano (1977:436))

b. \*They are going to have arrived two hours ago. (Klinge (1993:346))

If such a claim were correct, it would be predicted that the I-situation of *be going to*-sentences can refer to the past area. But this is not the case. As will be demonstrated soon, however, if we consider that the original sense of *be going to* remains preserved (if not completely), we can explain both of the above-mentioned problems that proponents of the analysis where *be going to* is treated as functioning as a future tense marker or expressing simply a prediction would face.<sup>8</sup>

Second, as illustrated in Hopper and Traugott (1993:80-93) and Sweetser (1988:390-393), the meaning shift of *be going to* is motivated and thus predictable, not only because the process of loss of meaning is not a sudden but a gradual one, but also because the meaning changes by means of either metonymic or metaphoric inferences, or both. In order to fully understand the internal temporal structure of *be going to*, it is thus important to examine the properties of the verb *go*, the progressive aspect and the particle *to*.

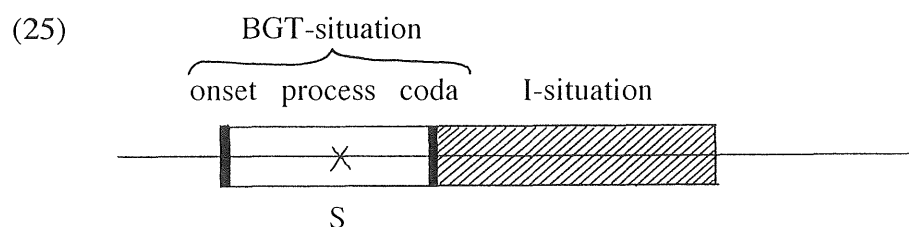
Let us begin with the meaning of *go*. The verb *go* basically expresses physical movement away from the central place (e.g. where a speaker is) and is regarded as a

transitional event verb (see also Leech (1987:20)).

I now turn to the properties of the progressive aspect. A transitional event verb in the progressive describes a durational situation which includes a time of orientation, stretching into the anterior and posterior times with respect to the time of orientation. The verb *go* in the progressive expresses an ongoing process of physical movement away from the central place. The temporal meaning of *be going* comes from this basic meaning by metaphorical extension (see Sweetser (1988:390-393)), expressing an ongoing process of movement along the time line in which the time of orientation is included (in the case of the progressive present, the time of orientation is seen as the speech time). Notice that the ongoing process of a transitional event (e.g. *go*) entails the beginning point of the relevant situation; in order for a transitional event to be in progress at a given time, its beginning point has to have happened before that time. We speak of such a beginning point as an *onset*.<sup>9</sup>

Finally, let us consider the properties of the preposition-like particle *to*. As is well known, the particle in question originally expresses either a result or goal. Thus, *to* in *be going to* can be seen as denoting an end-point under which both of the notions of result and goal are subsumed. We refer to such an end-point as a *coda*.

Putting all these things together, we can now represent the internal temporal structure of *be going to*-sentences:



As is shown in (25), the BGT-situation consists of the three temporal segments (i.e. onset, (ongoing) process and coda). It should be noted that the internal temporal structure at issue works at the tense-interpretation level; as we have seen in section 7.2.1,

the three elements of *be going to* combine into a temporal template at the tense-structure level, and the event time of the BGT-situation ( $E_1$ ) is construed as temporally followed by the event time of the I-situation ( $E_2$ ) because of the lexical property of *to* at the tense-interpretation level. (For further discussion about the details of the lexical property of *to*, see section 2.1.2.)

For a better understanding of the schema at issue, let us consider a sentence like the following:

(26) Mana is going to play the *koto* tomorrow.

The ongoing process of the BGT-situation may be the situation of Mana's being on the way to the performance of the *koto*. The onset is the beginning point of the ongoing process (i.e. her readiness for the performance). The coda is the end-point of the process and at the same time the beginning point of the I-situation, i.e. the situation of Mana's playing the *koto*.

It must be recalled that unlike the W-situation, the BGT-situation is seen as belonging to the proposition domain, spreading on the time line. Thus the BGT-situation and the I-situation can be viewed as constituting a continuum on the time line in such a way that the coda of the BGT-situation is identified with the onset of the I-situation.

From this, it is predicted that the BGT-situation has restrictions on the predicate (or situation) type of the I-situation or on the time area to which the I-situation refers. As for the former, the I-situation must be a non-stative predicate, i.e. a predicate which has an onset. As for the latter, since the I-situation must temporally follow the BGT-situation without interruptions because of the property of *to*, as shown in (25), the I-situation is interpreted as referring to the future area in the case of the *be going to*-sentence in the present tense. Hence the ungrammaticality of (24), repeated here as (27):

- (27) a. \*He is going to have finished it yesterday.  
b. \*They are going to have arrived two hours ago.

These sentences are ungrammatical because the I-situation comes in the past area, which is contradictory to the internal temporal structure of the *be going to*-sentence in the present tense (cf. also Nicolle (1988:228-229)). These two matters will be discussed later again.

#### 7.4. Temporal Focus

This section shows how the notion of temporal focus (TF) is inserted into the temporal schemata of *be going to*- and *will*-sentences constructed in the previous sections in order for the schemata to have a more explanatory power. We introduce temporal focus into the temporal schemata because temporal focus plays an important role in giving a unified account both of why *be going to*- and *will*-sentences are said to be present-oriented and future-oriented respectively, and of differences in meaning and cooccurrence restriction between both sentences; moreover, temporal focus is useful for the explanation of the meaning shifts of *be going to* and *will*, which will be shown in section 7.6 below.

In section 1.4, I presented the definition of temporal focus in the following manner:

- (28) Temporal focus is a speaker's focus which is fixed on the time point (period) of a situation on the time line to which the speaker pays/is paying special attention.

Since temporal focus is defined as being fixed on an event time or part of an event time which is located on the time line (i.e. which belongs to the proposition domain), it cannot be fixed on event times associated with situations which belong to the modality domain.

We can now propose extended versions of the temporal schemata of the *be going to*-sentence and the *will*-sentence:

- (29) a.  $S, \boxed{E_1}_M \text{ ————— } E_2$  TF ↓ E<sub>2</sub> <will>
- b.  $S, E_1 \text{ ————— } E_2$  TF ↓ E<sub>1</sub> <be going to>



The above schemata are intended to show only the relationship between temporal notions; the internal structure of each sentence is not specified here.

Let us start with the *will*-sentence. In (29a), the TF is automatically situated on  $E_2$  in that the TF, by definition, must be situated on an event time on the time line. This is because  $E_1$  is associated with the speaker's mental state which belongs to the modality domain. Thus, in a sentence like the following,

(30) She will be 32 this year.

the TF is fixed on the event time of the I-situation (i.e. the situation of a certain woman's becoming 32), not on that of the W-situation (i.e. a prediction); hence the *will*-sentence is said to be future-oriented.

With the *be going to*-sentence, by contrast, the TF, by definition, can be situated on either  $E_1$  or  $E_2$  because both event times are situated on the time line. Nevertheless, in (29b) the TF is situated on  $E_1$ . We can explain this as follows. It may logically be possible that the TF is situated on  $E_2$ . Taking the position that different forms convey different meanings, however, we can say that the *be going to*-sentence refers to future time in a different way from the *will*-sentence; that is, we use the *be going to*-sentence when our attention is directed to the information that cannot be conveyed by the *will*-sentence, i.e. that associated with an ongoing process holding at the speech time (S). Thus, we can claim that in the case of the *be going to*-sentence, the TF is put on  $E_1$ ; hence present-orientation of the *be going to*-sentence.

## 7.5. Explanation

This section shows how the extended temporal schemata of *will*- and *be going to*-sentences explain their semantic and syntactic phenomena shown in section 7.1.

### 7.5.1. Differences in Meaning

Let us begin by explaining the differences in meaning between *be going to* and *will*. We claim that the semantic differences pointed out in terms of the three perspectives in section 7.1 come necessarily from the difference between the temporal schemata (including the internal temporal structures) of the *will*- and the *be going to*-sentence.

#### 7.5.1.1. Near vs. Remote Future

First of all, consider (1) again, repeated here as (31):

- (31) a. I hear you're going to make a speech tonight.  
b. ? I hear you will make a speech tonight.

The perfect grammaticality of (31a) can be explained in terms of the internal temporal structure of the *be going to*-sentence. It is often the case that the addressee is ready for a speech, physically or mentally, at the speech time if he or she is supposed to give a speech on the night of the day at issue. Thus, the situation of the addressee's being ready for a speech is represented as an ongoing process associated with *be going to*, which is highlighted by the temporal focus.

The anomaly of (31b) is not due to the remoteness associated with the *will*-sentence. The W-situation, which constitutes a modality, does not combine with the I-situation to form a continuum on the time line, and thus does not place any restrictions on the time area which the I-situation refers to; i.e., the I-situation can refer to the present and even the past. The *will*-sentence is neutral as to the contrast between near and remote future; thus, it can refer to the near future (e.g., *It will rain tonight*). The oddity of (31b) should therefore be ascribed to the mismatch between the internal temporal structure of the *will*-sentence and the context where the sentence appears. It would be unnatural if at S the addressee had not gotten ready for a speech on the night of the day at issue. Since *will* represents just a prediction holding at S, but not an ongoing process which leads to the actualization of the I-situation, it is pragmatically hard for us to view the W-situation

as describing the situation of the addressee's being ready for the speech. Hence (31b) is odd.

The internal temporal structure of the *be going to*-sentence proposed in section 7.3 shows that the sentence is also neutral as to the contrast between near and remote future, as in (32):

- (32) a. I'm going to be a policeman when I grow up. (=2a))  
b. If Winterbottom's calculations are correct, this planet is going to burn itself out 200,000,000 years from now. (=2b))

Objectively, each sentence refers to the remote future. Subjectively, however, in each case the speaker regards a certain situation as being in the process of actualizing in the future: the ongoing situation may be the situation of the speaker's having a dream of becoming a policeman in (32a); and it may be the situation of nuclear fusion going on now in (32b). In both cases, the speaker views the actualization of the future situation as related to the present; more specifically, he or she regards it as following the ongoing situation without a break. This is brought about by the TF's being fixed on the BGT-situation.

#### 7.5.1.2. Assured vs. Contingent Future

The internal temporal structures of the *will*- and the *be going to*-sentence proposed in section 7.3 also explain why the *be going to*-sentence can express the assured future and the *will*-sentence the contingent future. Consider (4) again, repeated as (33):

- (33) a. ... most Congressmen are dubious about what is going to happen to money in local hands.  
b. ... most Congressmen are dubious about what will happen to money in local hands.

As seen in section 7.1, the utterance of (33a) is appropriate after passage of the revenue-

sharing plan: something necessary for money's being in local hands is in progress at S, which can best be represented by the BGT-situation highlighted by the TF. Unless it is withdrawn, the plan will surely be actualized. Thus, sentence (33a) can denote the assured future. By contrast, the utterance of (33b) is appropriate before passage of the plan. This suggests that at S, something necessary for the money's being in local hands is not in progress yet. Therefore the speaker only makes a prediction about the actualization of the situation at issue; i.e., it is possible that the revenue-sharing plan will not pass Congress. This is attributed to the temporal schema of the *will*-sentence, where the TF is located on the I-situation referring to the future, which is an uncertain time domain. This suggests that with the *will*-sentence, nothing assures us of the actualization of the future situation. Hence the *will*-sentence sometimes expresses the contingent future.<sup>10</sup>

#### 7.5.1.3. Future Performance of Present Situation vs. Present Prediction of Future Situation

Finally, we are concerned with the fact that *be going to* can describe the future performance of a present situation and *will* the present prediction of a future situation. We regard this contrast between *be going to* and *will* as basic, because the contrast typically reflects the difference in internal temporal structure between the *be going to*- and the *will*-sentence. Look at (6) again, which is repeated here as (34):

- (34) a. She's going to have twins.  
b. She will have twins.

Sentence (34a) is typically uttered when the woman in question is pregnant: at S the birth of twins is literally in the process of actualizing in the future; and the situation of the babies' growing in her womb is interpreted as being highlighted because the TF is fixed on this ongoing situation, i.e. the BGT-situation. Hence the use of the *be going to*-

sentence. Sentence (34b), by contrast, is uttered, for example, when a prophet makes a pronouncement. This implies that the future performance of the birth of the twins is predicted at S. That is, the actualization of the birth of the twins is focused on because the TF is directed not to the present situation, but rather to the future actualization of the I-situation (i.e. the birth of the twins) which belongs to the uncertain time area. Hence the *will*-sentence is used.

The observations and explanations have thus far justified our claim that the above three semantic contrasts all derive from the differences in temporal schemata including internal temporal structure between the *be going to*- and the *will*-sentence. In what follows, we will show that their differences in temporal schemata also shed light on the differences of the syntactic environments in which *be going to* and *will* can appear.

## 7.5.2. Syntactic Environments

### 7.5.2.1. *If*-Clauses

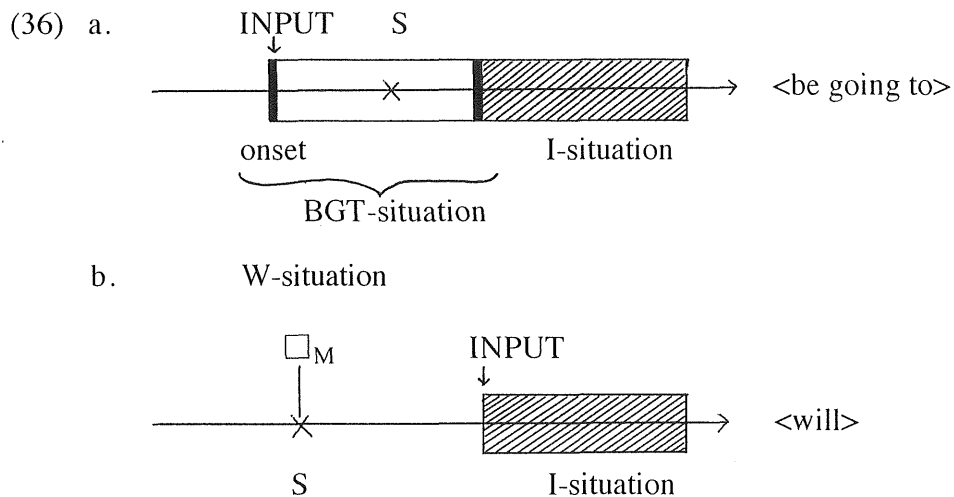
Let us first examine the cooccurrence of *be going to*-/*will*-sentences with *if*-clauses. Consider (7) again, which is re-presented as (35):

- (35) a. If you accept that job, you'll never regret it.  
b. \*If you accept that job, you're never going to regret it.

The internal temporal structure of the *be going to*-sentence can explain the ungrammaticality of (35b). As is clear from (36a) below, when using the *be going to*-sentence, we usually think of the condition for the situation described in the apodosis (i.e. the situation described by the protasis) as having already actualized by the speech time (S); i.e., in order for a given situation to be, at S, in the process of actualizing in the future, a condition for the occurrence of (at least part of) that situation has to obtain before S, i.e. at the same time as (or, more precisely, just before) the onset of the BGT-situation. In (35b), however, the condition in question is viewed as obtaining after S,

and, accordingly, its actualization (i.e. the addressee's accepting the job) happens in the future. Thus, the information conveyed by the protasis is contradictory to the internal temporal structure of the *be going to*-sentence; hence (35b) is ungrammatical.

Sentence (35a), by contrast, does not include such a contradiction. With the *will*-sentence, there exists no ongoing situation holding at S. Thus, the condition for the occurrence of the situation described in the apodosis (i.e. the addressee's accepting the job) can obtain after S. The speaker can make a prediction about the future situation triggered by the actualization of the condition; i.e., he or she can predict that the addressee will never regret the job by accepting it. This is suitable for the internal temporal structure of the *will*-sentence (see (36b) below).



The term INPUT denotes the input of the situation described by the protasis. The tip of an arrow under the term INPUT denotes the point of the time line at which the protasis situation obtains.

The schematized internal structure of the *be going to*-sentence can also explain the grammaticality of the following sentences:<sup>11</sup>

- (37) a. If you have lost your passport, you're going to have a lot of trouble with the police. (Declerck (1991a:115))
- b. We're going to find ourselves in difficulty if we go on like this.

(Leech (1987:61))

Sentence (37a) can be paraphrased as follows: if the addressee's losing his or her passport has already actualized by the speech time (S), his or her having a lot of trouble with the police is already in progress at S. Recall that in order for a situation to be, at S, in the process of actualizing in the future, a condition for the occurrence of that situation necessarily precedes S. This is true of (37a), as is clear from the above paraphrase. The situation of the addressee's losing the passport itself comes in the past area, so it can come at the same time as the onset of the BGT-situation. Therefore the content of the protasis is suitable for the use of the *be going to*-sentence; hence (37a) is acceptable.

The same applies to (37b). In (37b), the property of the verb phrase *go on* in the protasis implies that at S the speaker and his or her fellows are already going in a certain direction to do something. This means that the decision to do something has already been made by S. We can thus consider that making the decision at the onset triggers the BGT-situation: the speaker and his or her fellows being in the process of facing the difficulty begins at the same time that, or just after, the decision is made. The content of the protasis is not contradictory to the internal temporal structure of the *be going to*-sentence; hence the acceptability of (37b).

#### 7.5.2.2. Stative Predicates

We move now to the cooccurrence of *be going to*-/will-sentences with stative predicates. As we have already mentioned, the W-situation is viewed as a modality. Thus, it is not situated on the time line, but rather is accessible only at S. Hence there are no restrictions on the predicate (or situation) type of the infinitive: for example, the I-situation is not necessarily non-stative (see section 7.3.1). In contrast, the BGT-situation belongs to the proposition domain, so it can extend along the time line. Recall that the BGT-situation entails an end-point. As is evident from the internal temporal structure of

the *be going to*-sentence in (25), since the BGT-situation and the I-situation constitute a continuum on the time line (associated with the proposition domain), the predicate type of the infinitive must be non-stative; thus the I-situation must have an onset (see section 7.3.2). Hence the following sentences, i.e.

- (38) a. \* I wonder if she's going to know you.  
b. \* We're going to see the finish soon.

are ungrammatical because the predicate type of the verbs in the infinitive form in (38) is stative.<sup>12</sup>

The same explanation applies to the difference in acceptability between the *be going to*-plus-perfect and the *will*-plus-perfect sentence. Observe (10) again, repeated as (39):

- (39) a. He will have received a letter from her before he writes to her.  
b. ?\*He is going to have received a letter from her before he writes to her.

The perfect tense is used when we highlight the resultant state, which is affected, directly or indirectly, by the occurrence of its corresponding preceding situation. That is to say, the perfect tense consists of two situations: the resultant state associated with perfect *have* and the preceding situation associated with the past participle complement (for details as to the perfect tense, see chapters 4 and 5). As has already been demonstrated in section 4.1.2, perfect *have* is a stative predicate. Given these, we can say that sentence (39b) is very bad, since the *be going to*-sentence requires that the predicate type of the I-situation be non-stative.

### 7.5.2.3. Imperatives

This subsection deals with the cooccurrence of *be going to*-/will-sentences with the imperative-plus-coordinating conjunction construction. We begin with the case of the coordinating conjunction *and*. Consider (11) again, repeated here as (40):

- (40) a. Come closer and I'll give you five pounds.



- b. ?Come closer and I'm going to give you five pounds.

The reason why (40b) is less acceptable than (40a) is explicable from the fact that (40a) and (40b) are paraphrased as (41a) and (41b), respectively.

- (41) a. If you come closer, I'll give you five pounds.

- b. ? If you come closer, I'm going to give you five pounds.

It has been pointed out in section 7.5.2.1 that a sentence like (41b) is bad on the grounds that the content of the protasis is not appropriate for the use of *be going to*. Therefore (40b), which is semantically equivalent to (41b), is anomalous.

Let us proceed to the cooccurrence of *be going to*-/*will*-sentences with the coordinating conjunction *or*. Take a closer look at the following pair of sentences, which are already presented as (12) in section 7.1.2.

- (42) a. Be off or I'll push you downstairs.

- b. Be off or I'm going to push you downstairs.

Sentences (42a) and (42b) are semantically equivalent to sentences (43a) and (43b), respectively.

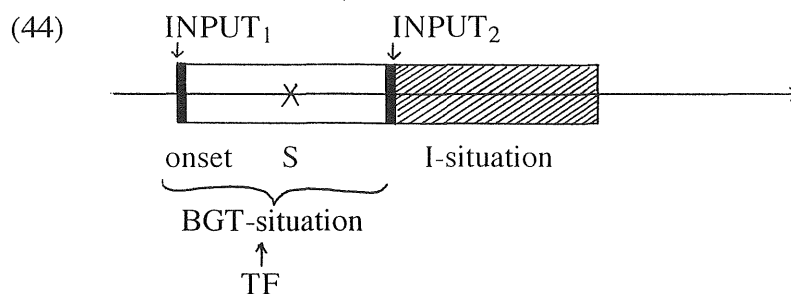
- (43) a. If you don't leave, I'll push you downstairs.

- b. If you don't leave, I'm going to push you downstairs.

As for (43a), why *will* can go with *or* is explained in the same way as in (41a). The problem here is why, unlike (40b), *be going to* can go with *or*, as in (42b).

Let us apply Binnick's (1971) observation to (43b): in the speaker's mind, pushing the addressee downstairs is already in progress at S; i.e., the speaker regards the actualization of the situation at issue as inevitable unless the addressee leaves. In other words, the relevant condition is not the situation described by the protasis, but rather an unspecified condition (e.g. the addressee's nervous gestures irritating the speaker) which has already obtained before S. It should be noted here that (43b) can imply that if the addressee leaves, the speaker will not push the addressee downstairs. This means that

the actualization of the addressee's leaving can interrupt, but cannot trigger, that of the speaker's pushing the addressee downstairs. The temporal structure of sentence (42b) (or sentence (43b)) is represented schematically as in (44):



INPUT<sub>1</sub> denotes the input of an unspecified condition and INPUT<sub>2</sub> that of the situation of the addressee's leaving in (42b). The latter is not contradictory to the former, but merely has the ability to cancel the actualization of the I-situation of the apodosis. From the above observations, we can conclude that the internal temporal structure of the *be going to*-sentence explains why the *be going to*-sentence can cooccur with *or*, while its combination with *and* is odd.

#### 7.5.2.4. *Already*

The last issue as to cooccurrence restriction is the combination of *be going to/will* with *already*. Observe (13), which is repeated here as (45):

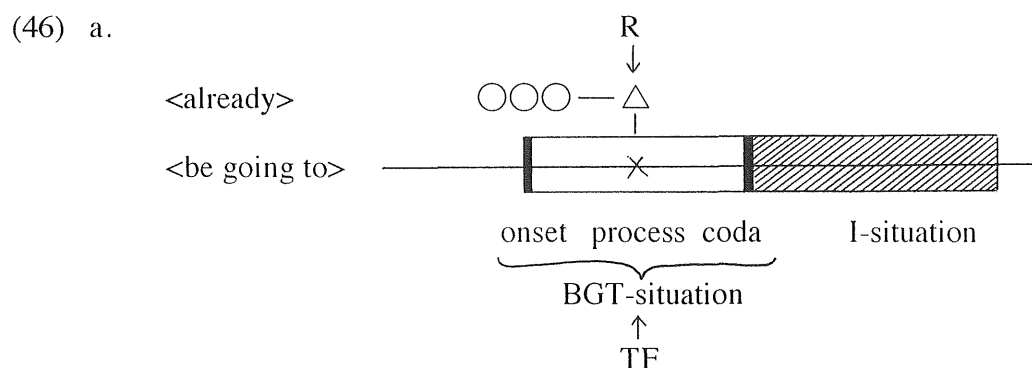
- (45) a. We are already going to have the kitchen redecorated, we cannot have the builders in too.<sup>13</sup>
- b. ? We already will have the kitchen redecorated, we cannot have the builders in too.

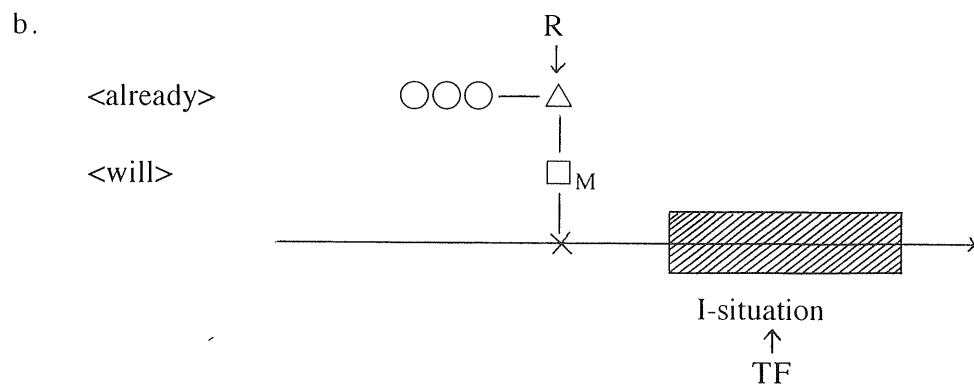
As is evident from (45), the cooccurrence of *will* with *already* is less acceptable than that of *be going to* with *already* when *already* modifies a situation in the present. Here, the situation at issue is the BGT-situation in (45a) and the W-situation in (45b). In (45b), *already* precedes *will*, which leads us to consider that *already* modifies the W-situation

associated with *will*. In (45a), the position of *already* (i.e. the position after *be*) leads us to think that *already* modifies the BGT-situation associated with *be going to*.

In order to illustrate this, let us first examine the characteristics of *already*. Michaelis (1992:327) notes that *already* refers not only to a state at a reference time (R), i.e. a time of orientation in our terminology, but also to a time-span prior to that time of orientation. With the present tense, the time of orientation is identified with the speech time (S).

With this in mind, let us explain why (45a) is acceptable while (45b) is odd. Sentence (45a) is perfectly grammatical because the BGT-situation, i.e. an ongoing situation at S, which leads to the actualization of the redecoration of the kitchen, is highlighted by the temporal focus (TF), while the state described by *already* is highlighted by virtue of the presence of the reference time, so that both of them are related to each other in that they are both focused on in some sense (see the schema in (46a) below). On the other hand, sentence (45b) is less acceptable because the TF is situated on the I-situation in the future (i.e. redecorating the kitchen), whereas the state in the present described by *already* is highlighted which is interpreted as sharing the time position with the reference time; i.e., there is a discrepancy in the position of the (part of) time highlighted between the temporal structure of the *will*-sentence and that of *already* (see the schema in (46b) below).<sup>14</sup> The schematized internal temporal structures of (45a) and (45b) are shown in (46a) and (46b), respectively:





A cross symbolizes the position of the speech time (S). Three circles represent a time-span prior to the time of orientation (in this case the speech time) and a triangle a state holding at S.

To sum up, the internal temporal structures of *will*-sentences and *be going to*-sentences presented in sections 7.2 to 7.4 provide an explanatory basis for their differences in meaning and cooccurrence restriction.

## 7.6. Grammaticalization/Subjectification

This section considers the temporal schemata (including the internal temporal structures) of *will*- and *be going to*-sentences in terms of grammaticalization and subjectification in the sense of Traugott (1989), and explains not only why in contemporary English *will* and *be going to* are said to have a number of uses, but also why in the course of the history of English they have come to express the functions or uses which they are supposed to represent.

### 7.6.1. Further Facts

We have thus far claimed that the W-situation is seen as a speaker's mental state while the BGT-situation is viewed as a propositional element; and the basic (internal) temporal structures of *will*- and *be going to*-sentences can provide an explanatory basis

for the differences between the two future expressions presented in section 7.1.

However, things are not as simple as they seem. Observe the following sentences:

(47) a. I'm going to be forty in a few years.

(S. Sheldon, *Master of the Game*, p.204)

b. Tomorrow is going to be Sunday.<sup>15</sup> (Kashino (1993:177))

c. They're going to be watching football next Saturday afternoon.

(Leech (1987:62))

These sentences include a stative predicate in the infinitive part.<sup>16</sup> It is difficult to interpret these *bes* in the *be going to*-sentences as representing the sense of 'become'. Thus, these sentences should be bad from the point of view of the internal temporal structure of *be going to*-sentences shown in (25); but this is not the case.

Moreover, consider the following sentences:

(48) a. If John will be in London tomorrow, Bill will be there, too.

(Declerck (1991b:201))

b. It is likely/expected that John will come this evening.

(Nakau (1994:249))

These *wills* in the subordinate clause can be conceived of as propositional elements of sentences (i.e. objective epistemic modals), rather than modality elements (i.e. subjective epistemic modals), for the following reasons. First, Lyons (1977:805-806) treats modals in the protasis as objective; on this basis, *will* in the protasis of (48a) is classified as part of the proposition in our system. Second, Nakau (1994:249) states that this type of *will* in the subordinate clause in (48b) should be treated as expressing simple future rather than modality; on this basis, *will* in (48b) is viewed as a propositional element in our system. These facts might appear contradictory to our claim that the W-situation is viewed as belonging to the modality domain and thus the schema in (23) as it stands cannot explain the sentences in (48) appropriately.

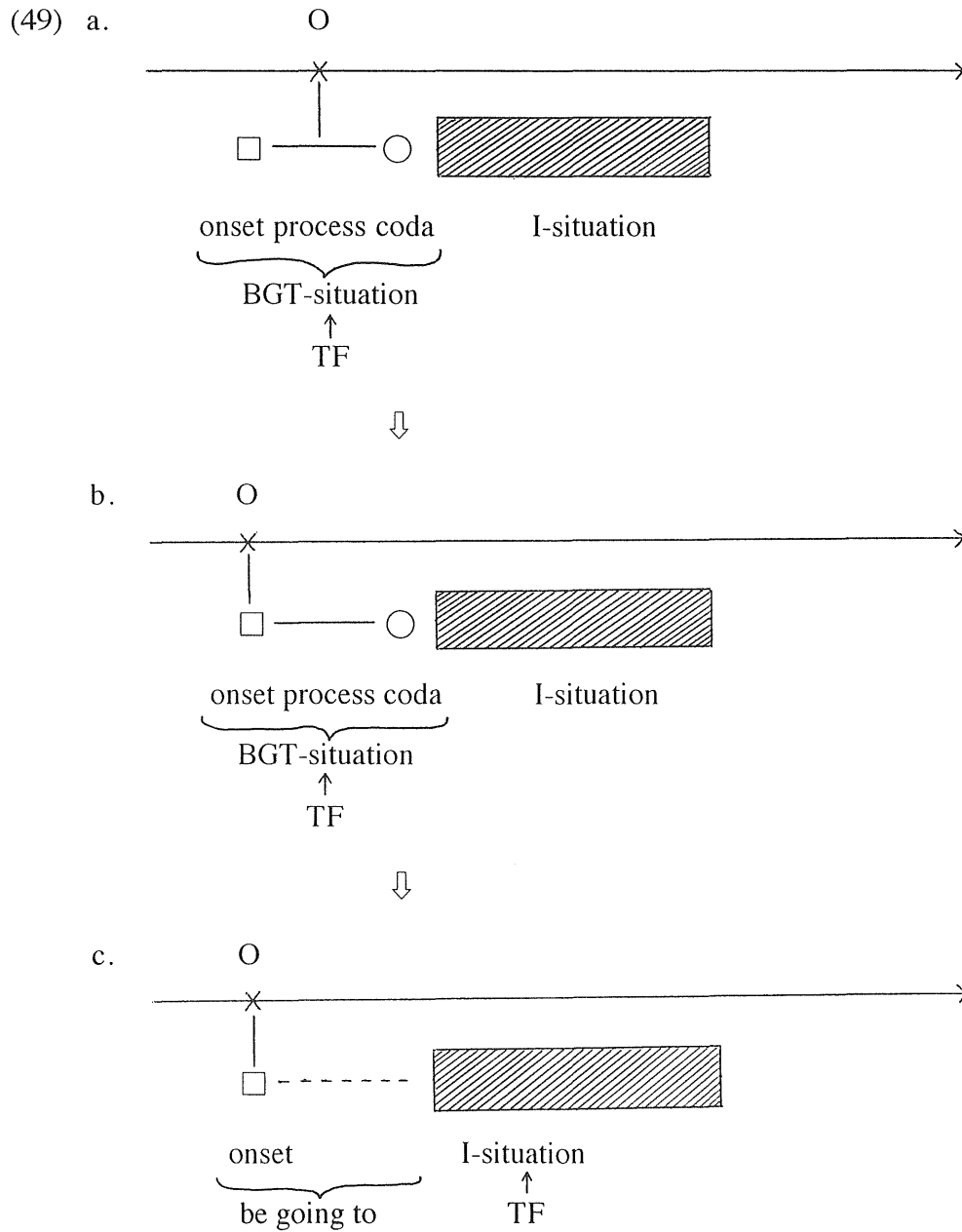
In order to account for the above-mentioned data, we need to make use of the concepts of grammaticalization and subjectification. Generally speaking, the meaning of a lexical item shifts from the proposition domain (related to the objective world) to the modality domain (related to the subjective world). (See Hopper and Traugott (1993), Sweetser (1988, 1990), Traugott (1989), among others.) This tendency applies to *be going to* and *will*. In the compositional tense theory proposed in this study, the processes of grammaticalization and subjectification with respect to *be going to* and *will* are viewed as working at the tense-interpretation level. In what follows, it will be shown that the temporal schemata (including the internal temporal structures) of *be going to*- and *will*-sentences, together with the concepts of grammaticalization and subjectification, can account for data like those in (47) and (48).

#### 7.6.2. *Be Going To*

We will first investigate the meaning shift of *be going to*. In the development of grammaticalization, *go* in *be going to* has lost the original sense of physical motion and then has come to express the metaphoric sense of temporal process (i.e. *ongoing process* in our terminology), finally gaining the sense of future prediction or intention via the stage of simple future sense (see Sweetser (1988:390-393) for details). This process is brought about by subjectification.<sup>17</sup>

This can explain the grammaticality of (47). Each *be going to* in (47) expresses its simple future use, so it is analogous in function to *will*. To put it another way, in (47) *be going to* does not denote an ongoing process, but merely functions as a time of orientation from which a future situation is evaluated: in (47a), for example, the BGT-situation has lost the sense of temporal ongoing process and its event time has come to function merely as a time of orientation, i.e. an orientational event time from which the situation of the speaker's being forty is evaluated (cf. section 3.3).

From the point of view of subjectification, we can say that each *be going to* in (47) is diachronically derived from *be going to* in the sense of temporal ongoing process. The temporal schema of the *be going to*-sentence proposed here can, in a motivated way, answer the question of why this has happened and why the sentence has a variety of uses in contemporary English. For a better understanding of this, let us schematize the process of the meaning shift of *be going to*:



The temporal schema in (49a) is for the basic *be going to*-sentence, which we have considered in sections 7.1 to 7.5 (cf. the schema in (25)). The temporal schema in (49c) is for the *be going to*-sentence of simple future/future prediction,<sup>18</sup> which is exemplified in (47). What is the temporal schema in (49b) for? This is for the *be going to*-sentence of the middle stage which is viewed as coming between the temporal schema of the basic *be going to*-sentence and the *be going to*-sentence of simple future/future prediction.

The schema in (49b) is similar to that in (49a) in that both of them represent the unit *be going to* as describing a temporal ongoing process. The only difference between them is that in (49a) the BGT-situation is depicted as being in progress at the time of orientation, while in (49b) the BGT-situation is reinterpreted as beginning at the time of orientation. The existence of the *be going to*-sentence of the middle stage represented schematically in (49b) is verified by the existence of the following sentences:

- (50) a. We are not going to call what we eat '[tʰəmə:touz]' any more; from now on we *are going to* call them '[tʰəmeɪdʒ]'.

(Chapman (1996:391; italics mine)

- b. "Good," Michael said. "Just sit tight. And I guess that's what I want to say to all of you. Just sit tight. Don't react to any provocation. Give me a few weeks to straighten things out, to see which way the wind *is going to* blow. Then I'll make the best deal I can for everybody here. Then we'll have a final meeting and make some final decisions." (M. Puzo, *The Godfather*, pp.411-412; italics mine)
- c. "Wrong!" Buford roared. "It's yours! So from now on you better look behind you when you walk, 'cause one day you're *going to* get a bullet in your back...."

(C. Gardner, *Back to the Future III*, p.94; italics mine)

*Be going to* in these sentences, whether volitional (e.g. (50a)) or predictive (e.g. (50b,



c)), is seen as representing the BGT-situation which leads to the actualization of the I-situation as beginning at the speech time (i.e. the relevant time of orientation) rather than being in progress at the speech time or functioning merely as an orientational event time. This is supported by the existence of the adverbial *from now on* as to (50a, c). As for (50b), the context forces us to interpret the *be going to* at issue in the sense of temporal process with its onset simultaneous with the time of orientation. The point here is that the situation suggested in (50b) is that although another conflict is likely to happen, they still do not know exactly which way the wind is going to blow. Thus, the BGT-situation is interpreted as starting to go in a certain direction from the moment of the utterance on in (50b).

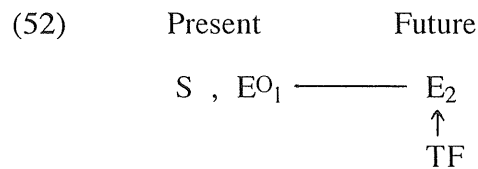
The schemata in (49) clearly show how *be going to* in contemporary English has come to gain the sense of simple future or future prediction. First, the onset of the BGT-situation is reinterpreted as related to the time of orientation by subjectification, but the internal structure of the BGT-situation remains preserved at this stage (this is represented by the schema in (49b)). Next, as subjectification goes on, the senses of the ongoing process part and the coda part are weakening more and more, finally being lost: at this stage, represented by the schema in (49c), only the onset has come to be highlighted; thus, it is interpreted as functioning merely as a time of orientation which is an evaluation point for the I-situation, but not as expressing the full-fledged BGT-situation any more. (A broken line represents the lost parts.) As a result, this type of *be going to* is no longer viewed as an ongoing process with a coda, and, thus, it can be followed by a stative predicate because the I-situation does not necessarily have an onset. This is how (47) is explained by the temporal schema of *be going to*-sentences with the notions of grammaticalization and subjectification.

Moreover, it can also be explained in the same way why some *be going to*-sentences can go with the perfect tense:

(51) He is going to have completed the work by next April. (Ota (1972))

It has been shown that the situation described by perfect *have* is stative. Since *be going to* in (51) is viewed as expressing the sense of simple future or future prediction, it does not restrict the predicate type of the I-situation, and, thus, can go with the perfect tense.

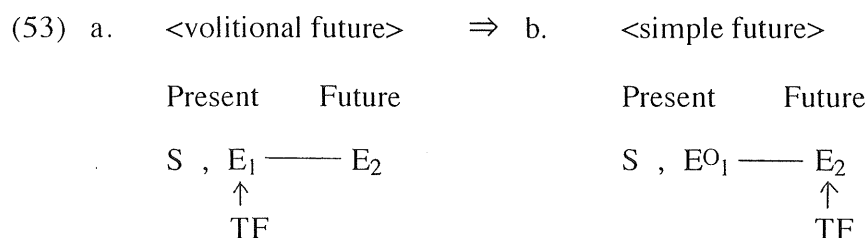
The schema in (52) is a simple version of that in (49c), where the event time  $E_1$  with superscript O means an orientational event time, as has already been mentioned in section 3.3.



It should be noted that as is clear from (49), the temporal focus shift promotes such subjectification. The TF is moved from the BGT-situation to the I-situation, because when we refer to future time, we tend to pay attention to the temporal position of the I-situation (i.e. a future situation), rather than that of the BGT-situation (i.e. a present situation). Our main concern is usually the realization of the I-situation in the future unless the situation of temporal ongoingness at S has much to do with, and is crucial to, the interpretation of a given *be going to*-sentence (cf. Higuchi (1991)). The problem still remains as to why *be going tos* in (47) are somewhat felt to be modalized, i.e. why they are accompanied by a sense of prediction. We will return to this matter in section 7.6.4.

### 7.6.3. *Will*

We now proceed to the meaning shift of *will*. It is well known that future-reference use of *will* diachronically stems from volitional *will* (e.g. Traugott (1989) and Nicolle (1998)).<sup>19</sup> This process of meaning shift is illustrated in (53):<sup>20</sup>



Why and how does this change happen? Our temporal schema-based account can answer this question. Before going further, we have to consider what "volitional future" is. It is plausible to say that a volitional future sentence semantically consists of two parts: a present volition and a future actualization of the I-situation (cf. Huddleston (1995a)). The former is connected with the present-time component and the latter with the future-time one. In (53a), E<sub>1</sub> denotes a present volition and E<sub>2</sub> a future actualization of the I-situation (e.g. the speaker's loving the addressee in *I will always love you*). The reason why the TF is fixed on E<sub>1</sub> is that someone's having a volition or will to do something usually brings about the I-situation; in other words, the future actualization of the I-situation is viewed as usually accompanied by the occurrence of the volition at S.

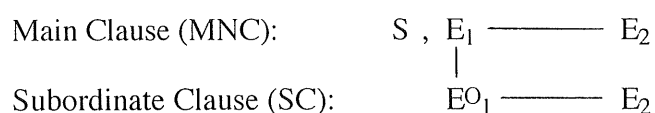
We now return to the explanation of the question at issue. In the development of grammaticalization, the sense of volition is lost; the present-time component thus has come to have no semantic content, just serving as a time of orientation (or being interpreted as an orientational event time) on which reference to a future situation is based. This shift is brought about by the position shift of temporal focus (TF): in the *will*-sentence of simple future, the TF is located on the I-situation (represented by E<sub>2</sub> in (53b)), thus contributing to emptying the semantic content of the present-time component. Here, a temporal focus shift also brings about subjectification. This process is shown schematically as follows:

- (54) <volitional future>
- |                   |   |                   |
|-------------------|---|-------------------|
| Present Component | / | Future Component  |
| <present volition | + | future situation> |
| ↓                 |   |                   |
- (55) <simple future>
- |                   |   |                   |
|-------------------|---|-------------------|
| Present Component | / | Future Component  |
| < $\phi$          | + | future situation> |

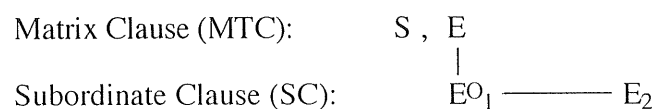
The symbol  $\phi$  means that there is no semantic content.

This type of *will*, i.e. the simple future *will*, is seen in both of the subordinate clauses in (48); *will* denotes an orientational event time which is simultaneous with the event time of the main clause, which in turn coincides with the speech time. Sentences (48a) and (48b) and their temporal schemata are shown below:

- (48) a. If John will be in London tomorrow, Bill will be there, too.  
 b. It is likely/expected that John will come this evening.
- (56) a. Temporal schema for (48a):



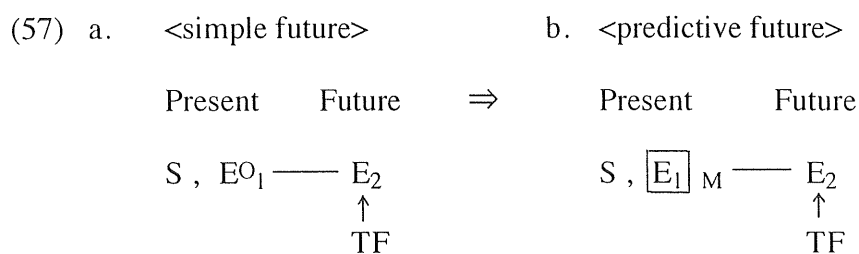
- b. Temporal Schema for (48b):



In (56a),  $E_1$  in the main clause denotes the event time of predictive *will* and  $E_2$  in the main clause the event time of the situation of Bill's being in London (we will return to this use of *will* in (58) below);  $EO_1$  in the subordinate clause designates a time of orientation and  $E_2$  in the subordinate clause the event time of the situation of John's being in London. In (56b), the event time E in the main clause denotes likelihood/expectation; in the

subordinate clause,  $E^{O_1}$  symbolizes an orientational event time and  $E_2$  the event time of the situation of John's coming. In each case,  $E^{O_1}$  is simultaneous with the event time in the main clause: it is simultaneous with  $E_1$  in (56a) and  $E$  in (56b). What is crucial here is that as far as the subordinate clause is concerned, its elements are all objectified and the situation associated with *will* should therefore be viewed as belonging to the proposition domain. Since volitional *will* is a subject-oriented root modal, i.e. an element of the proposition domain, and the meaning shift of *will* goes from volitional to simple future to predictive use, we can claim that simple future *will* (symbolized by  $E^{O_1}$ ) still belongs to the proposition domain: simple future *will*, not being modalized, is not directly connected with a speaker's mental world.<sup>21</sup> Thus, the *W*-situation is represented by  $E_1$  in volitional use and by  $E^{O_1}$  in simple future use, both of them being connected with the proposition domain.

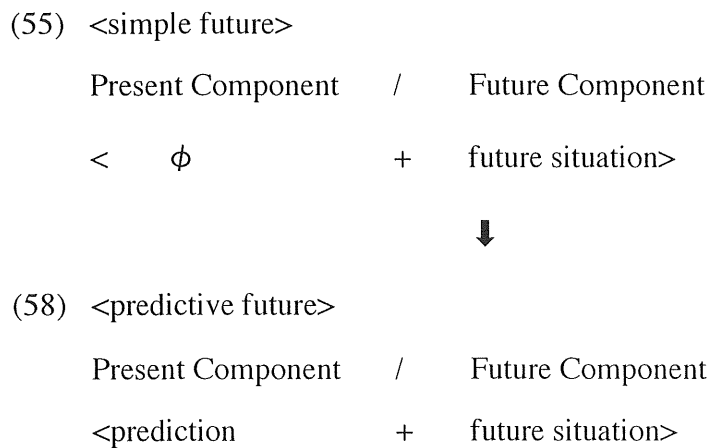
The question, then, arises as to why and how the "predictive future" sense of *will* is brought about. Before answering this question, let us schematize the meaning shift from simple future *will* (which belongs to the proposition domain) to predictive *will* (which belongs to the modality domain) as below:



This meaning shift is convincing from the point of view of the general tendency of the meaning shift of modal auxiliaries, i.e. the shift from root to epistemic (cf. Traugott (1989)).

Let us now consider the reason and the way that this happens. This seems to have much to do with our cognitive mechanism. As we have mentioned in section 7.2, since

the future is a non-real time area, in English we tend to relate it to other notions that belong to a real time area (e.g. volition and prediction), which can provide a basis for future time reference. In the case of volitional future, the present-time component, i.e. the real time part, is already filled, as shown in (54). In the case of simple future, by contrast, the present-time component is semantically empty, as in (55); we thus tend to fill the empty part. Since the meaning shift goes from the root (a propositional element) to the subjective epistemic (a modality), it is very likely that the empty part is supplemented with a modality, specifically with the notion of prediction.<sup>22</sup> This is diagrammed as in (58):



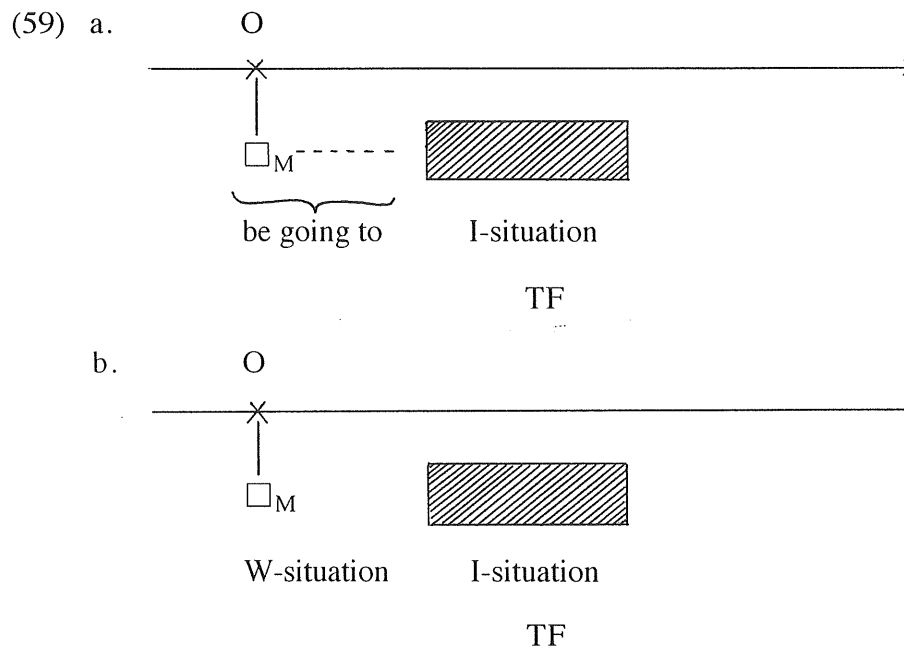
This trend is predictable to some extent, because a modality, by definition, is a speaker's mental state accessible only at the speech time, tending to combine with the present-time component of a sentence of future time reference.

#### 7.6.4. Predictive *Be Going To* and *Will*

Let us now return to the matter which I have left unsolved in subsection 7.6.2. I argue that the tendency gives an answer to the question of why *be going tos* in (47) are felt to be related to a modality, i.e. a prediction. Once the present-time component of the *be going to*-sentence becomes semantically empty, the empty part tends to require filling, especially in the unembedded clause; since the empty part is the present-time component,

it is easily connected with a modality which is simultaneous with the speech time, which is centered in the present area. Therefore, *be going to* of this stage is almost equivalent in use and meaning to predictive *will*, thus cooccurring with stative predicates.<sup>23</sup>

However, the *be going to*-sentence of future prediction (i.e. the sentence with modalized *be going to*) does not have completely the same internal temporal structure as the *will*-sentence of future prediction. Compare (59a) with (59b):



The schemata in (59a) and (59b) are for the *be going to*-sentence and the *will*-sentence at issue, respectively. Note that the onset of the BGT-situation which functions merely as an orientational event time in the schema of *be going to* of simple future is replaced by a modality, i.e. a prediction.

The difference between the schema in (59a) and the schema in (59b) is that in (59a) the temporal template *be going to* implies not only a modality (i.e. a prediction), but also the trace of the ongoing process reaching the I-situation which will be actualized in the future. This difference is illustrated by the fact that predictive *will* can refer not only to the future but also either to the present (e.g. (60)) or to the past (e.g. (61)),

(60) a. Mary will be at home now.

- b. He will be traveling right now. (Ota (1972))
- (61) a. They will have arrived two hours ago.
- b. He will have come yesterday. (Ota (1972))

whereas predictive *be going to* cannot refer to the present (e.g. (62)) or to the past (e.g. (63)).

- (62) a. \* Mary is going to be at home now.
- b. \* He's going to be traveling right now. (Ota (1972))
- (63) a. \* They are going to have arrived two hours ago.
- b. \* He's going to have come yesterday. (Ota (1972))

Because the trace of the ongoing process in (59a) is seen as suggesting the future orientation, predictive *be going to* is restricted to expressing a future prediction.

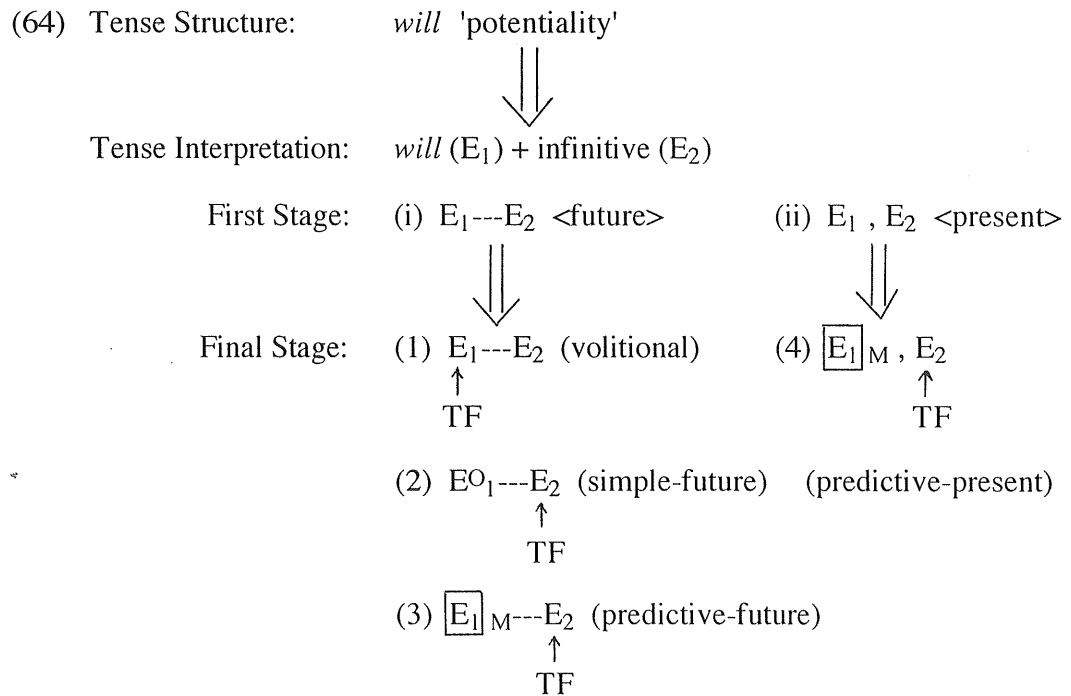
#### 7.6.5. The Interpretation Mechanism of *Will* and *Be Going To*

This subsection briefly shows the interpretation mechanism of *will* and *be going to*. To this end, let us first consider why in contemporary English, both *will* and *be going to* have a variety of uses which we have seen thus far. As is often stated in the literature (e.g. Bybee, Perkins and Pagliuca (1994) and Nicolle (1998)), the notion of "semantic retention" gives an answer to this question. With this notion, in the course of grammaticalization uses of earlier stages of *be going to* and *will* can be retained even after uses of later stages of both forms come about. Therefore, it is possible that in contemporary English *will*- and *be going to*-sentences can be interpreted as expressing a number of uses.

The question, then, arises as to how the shift of senses of *will* and *be going to* is matched with the interpretation mechanism based on the two tense levels, i.e. the tense-structure level and the tense-interpretation level. Let us begin with *will*. I consider that as *will* gains one more use in the course of grammaticalization at the tense-interpretation



level, the general semantic value of the temporal template *will* at the tense-structure level is accommodated to cover both an earlier and a later use. Thus in contemporary English, it can be assumed that the general semantic value of *will* at the tense-structure level has come to be viewed as something like "potentiality" (cf. Nicolle (1998:235)).<sup>24</sup> At the tense-interpretation level, this general semantic value of *will*, together with other semantic and pragmatic factors, develops to any of the above-mentioned four uses, i.e. the volitional, the simple-future, the predictive-future, and what I call the predictive-present use (e.g. *That'll be the postman*). This interpretation path is schematically represented as follows:



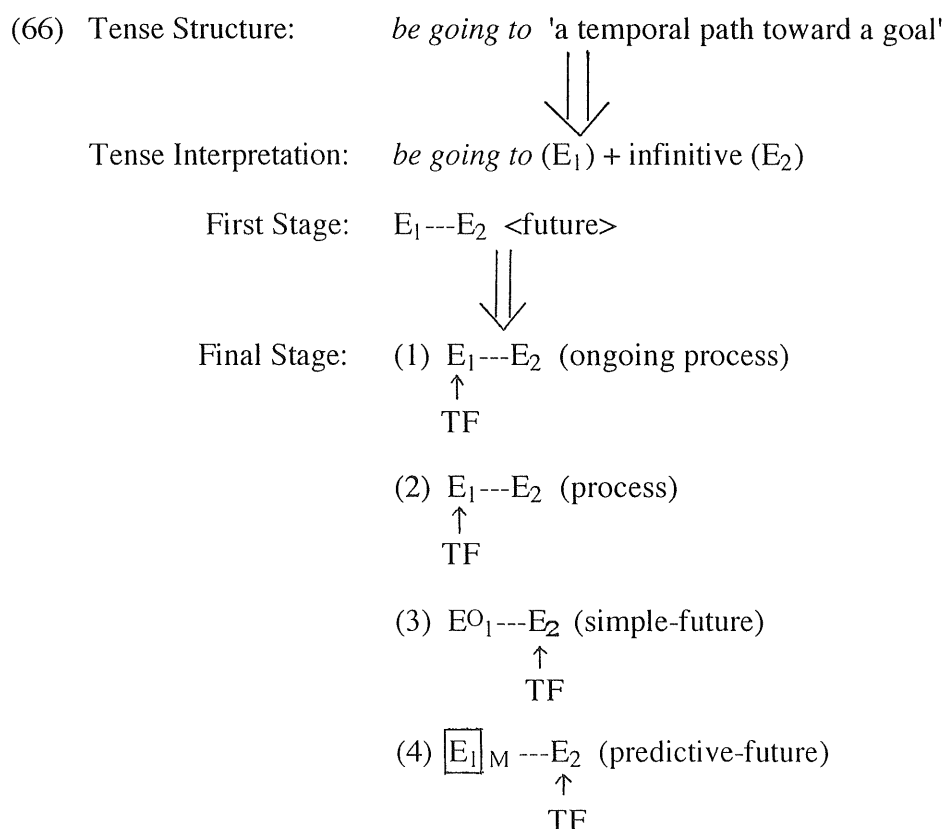
Let us consider, for example, the case of the volitional use. When the general semantic value of potentiality associated with *will* is cast in first-person declarative clauses like (65),

(65) I will play baseball tomorrow.

the sentence is accompanied by volitional overtones to arrive at the volitional-future use at the tense-interpretation level because the notion of potentiality is compatible with future

reference, and it is usually the case that when the first-person subject is used in future-reference sentences, the subject has a will to do something in the future.

Let us turn to *be going to*. I assume that in contemporary English, the general semantic value of *be going to* at the tense-structure level retains the metaphorical meaning of 'the subject is on a temporal path moving towards a goal', or simply 'a temporal path toward a goal'; at the tense-interpretation level, the general semantic value of *be going to* interacts with the information conveyed by other semantic and pragmatic factors to give rise to an appropriate pragmatic interpretation. This interpretation path is schematized as in (66):



Note that the second use labeled "process" is the one where the BGT-situation is reinterpreted as beginning at the time of orientation (cf. (49b)).

Let us consider the case of the simple-future use. When the schematic meaning of *be going to*, i.e. the sense of 'a temporal path toward a goal', is cast in a certain context,

namely in sentences with inanimate subjects and stative predicates such as (47b), i.e. *Tomorrow is going to be Sunday*, the sense of 'the path toward the actualization of the I-situation' is semantically bleached and only its trace is left at the tense-interpretation level. Hence the simple-future use of *be going to*-sentences comes about as an output.

#### 7.6.6. Summary

The above observations and arguments make it clear why there exists a diversity of uses (or senses) of *will* and *be going to* in contemporary English. The temporal schemata of *be going to*-sentences and *will*-sentences proposed in this thesis, working together with the notions of grammaticalization and subjectification, can explain both why the meaning shift of *be going to* goes from the semi-modal (i.e. the stage of temporal ongoingness) to the volitional, the simple-future, and the predictive-future use, and why the meaning shift of *will* goes from the volitional use to the simple-future to the predictive-future use. The temporal schemata at issue can also explicate the interpretation mechanism of *will*- and *be going to*-sentences, namely, how the schematic meaning of *will* and *be going to* give rise to particular uses. That is to say, our temporal schema-based account can give a systematic explanation for a variety of phenomena concerning *be going to* and *will* from a unified point of view.

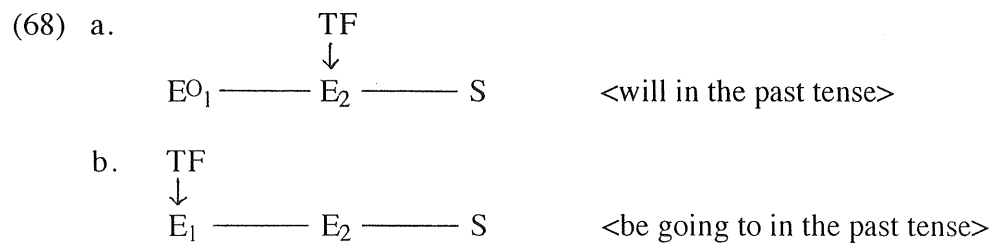
#### 7.7. *Be Going To* and *Will* in the Past Tense

In this section, we will show that the temporal schemata of *be going to*- and *will*-sentences can also account for the fact that in unembedded clauses, *be going to* in the past tense often implies non-fulfilment of the I-situation, while *will* in the past tense indicates fulfilment of the I-situation. Consider:

- (67) a. The Queen would arrive three hours later.  
b. The Queen was going to arrive three hours later.<sup>25</sup>

As is well known, sentence (67a) suggests that the queen arrived three hours after the time of orientation in the past, whereas sentence (67b) suggests that the queen did not arrive three hours after the time of orientation in the past. It is often said that this is due to pragmatic implicatures.

The past tense versions of the temporal schemata of the *be going to* - and the *will*-sentence can illustrate the concrete mechanism of these pragmatic implicatures. The temporal schemata for (67a) and (67b) are shown in (68a) and (68b), respectively:



Note that the schemata in (68a) and (68b) are parallel to that of *will* of simple future and that of *be going to* of temporal ongoingness, respectively. Thus, the same kind of explanation applies to this phenomenon. In (68a), there is only one event time associated with a semantically-filled situation on the time line, i.e.  $E_2$  (the event time of the situation of the Queen's arrival), for the event time of the W-situation represented by  $E_1$  is no longer a pure event time but an orientational event time; since the temporal focus (TF) is normally fixed on the (part of) pure event time, it is thus typically fixed on  $E_2$ , which is related to the proposition domain. This is how the speaker focuses on the actualization of the I-situation (associated with  $E_2$ ). On the other hand, it is usually the case that we have already known whether a past event actualized or not. So with the past tense, the *will*-sentence tends to indicate fulfilment of the I-situation.

On the other hand, in (68b) there are two event times associated with semantically-filled situations on the time line, i.e.  $E_1$  (expressing the intention or the plan) and  $E_2$  (expressing the Queen's arrival). The reason why the TF is fixed on  $E_1$  in the case of *be*

*going to*-sentences with the past tense is explained as follows: if we intended to direct our attention to a future-in-the-past situation alone, we would use the unambiguous version, i.e. the *will*-sentence; we use the *be going to*-sentence to focus on the information that the *will*-sentence cannot convey, i.e. an intention or plan in the past (represented by  $E_1$ ); thus with the *be going to*-sentence, the TF is fixed on  $E_1$ . Moreover, it is very likely that we have already known whether or not a past situation actualized. Hence, with the past tense, since the BGT-situation (i.e. the intention or plan) is highlighted, the *be going to*-sentence can pragmatically imply non-fulfilment of the I-situation.

Taking the above matters into consideration, we can conclude that the pragmatic implicatures associated with the *be going to*-sentence and the *will*-sentence in the past tense are due to the interaction between their temporal schemata and pragmatic inference.

## 7.8. Concluding Remarks

In this chapter, we have demonstrated that the temporal schemata (including the internal temporal structures) of *be going to*- and *will*-sentences proposed in sections 7.2 to 7.4 provide a unified and systematic explanation for the various phenomena concerning *be going to* and *will*.

Our temporal schema-based analysis of *will*- and *be going to*-sentences not only can account for the differences in meaning and cooccurrence restriction, but also can explain, together with the notions of grammaticalization and subjectification, why a diversity of uses of *be going to* and *will* have emerged. Moreover, the analysis can account for why in the case of the past tense, *be going to* contributes to unfulfilment of the infinitive's situation while *will* contributes to fulfilment of the infinitive's situation.

## NOTES TO CHAPTER 7

\* This chapter is a developed version of Wada (1996).

1 The sentence is grammatical in the following sense: Ryo is going somewhere in order not to play tennis here tomorrow.

2 Of course, the time in question can be past. Consider (i):

- (i) a. John intended coming tomorrow.
- b. John was coming tomorrow.

(Huddleston (1969:780))

In both cases, the future situation of John's coming is evaluated from a time point in the past, which is also real and thus we are certain of.

3 As we have mentioned in note 23 of chapter 1, as far as main or independent sentences (or clauses) are concerned, modality in my sense is equivalent to modality in Nakau's sense.

4 In Nakau's system of modality, Lyons' (1977) subjective (e.g. *may* in *It may be raining*) and objective epistemic modality (e.g. *possible* in *It is possible that he is serious*) correspond to a member of the modality domain and a member of the proposition domain, respectively. For further discussion, see Nakau (1997).

5 Minoru Nakau (personal communication) has pointed out that the situation type (or the Aktionsart) of a modalized element is neutral.

6 Since the W-situation is a modality and thus it is not located on the time line, it does not place any restrictions on the range of time that the relevant I-situation refers to; thus, the I-situation can refer to present and even past time, as in:

- (i) a. That'll be Jill [response to knock at door].
- b. They will have made the decision last week.

The I-situation in sentence (ia) refers to the present area and that in sentence (ib) to the past area. The grammaticality of (ib) might appear to cast doubt on our claim made in

section 2.2.2.1 that the bare infinitive in the position after a modal auxiliary represents either simultaneity or posteriority. However, this is not contradictory to our compositional tense theory. On the contrary, the fact under discussion strengthens our theory. In (ib), the I-situation consists of the resultant state represented by perfect *have* and the situation represented by the past participle. It is the perfect auxiliary *have* that is in the bare infinitive form. Since the resultant state associated with *have* is construed as simultaneous with the event time of the W-situation associated with *will*, the existence of sentence (ib) is not counter-evidence to our theory. It is the situation described by the past participle *made* that refers to the past area.

7     Needless to say, the *will*-sentence counterparts of (24a) and (24b) are grammatical.

8     Cf. Nicolle (1997, 1998).

9     The terms *onset* and *coda* are due to Freed (1979).

10    As illustrated in (5), with the past tense morpheme the *be going to*-sentence often implies non-actualization of the I-situation. We will come back to this point in section 7.7.

11    The sentences in (37) cannot be explained by a general view which simply says that since *be going to*-sentences are present-oriented, they cannot go with *if*-clauses which contain future situations. This is clear from the fact that in (37a) the *if*-clause situation refers to the past and in (37b) it refers to the present.

12    The predicate *be* often follows *be going to*, as in (i):

(i)    She's going to be a tennis player.

However, this type of *be* is used in the sense of 'become' and, thus, should be classified as a non-stative type.

13    These *haves* are regarded as expressing causative *have*, so they are non-stative.

<sup>14</sup> An anonymous *EL* reviewer has pointed out that the oddness of (45b) might be due to that of the position of *already*. However, an account based on the syntactic position alone cannot explain the difference in acceptability between (ib) and (iib).

(i) a. The trees will already have shed their leaves (when we arrive).  
(Declerck (1991a:108))

b. ? We already will have the kitchen redecorated, we cannot have the builders in too. (=45b)

(ii) a. John will send the money immediately back to the girl.

b. John immediately will send the money back to the girl.

(Jackendoff (1972:67))

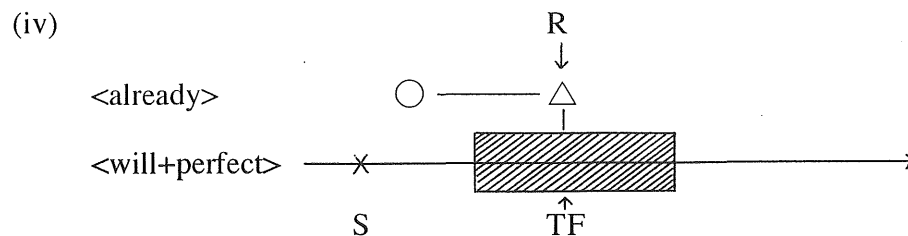
Jackendoff (1972:67) states that both of the adverbs in (ii) occur in the VP, so they are VP adverbs. It is safe to say that *already* is also a VP adverb. Thus, it is predicted in terms of the syntactic-position account that the syntactic position of *already* is the same as that of *immediately*. However, as is clear from the above paradigm, *immediately* can appear just before *will* without difficulty, while *already* cannot. We can therefore claim that the less acceptability of (ib) is ascribed not to the syntactic position, but to semantic factors. The temporal schema of the *will*-sentence proposed in this study, along with the semantic structure of *already* proposed by Michaelis (1992), not only gives an answer to the question of why *already*'s appearing just before *will* is odd (on this point, see the text), but also explains why a sentence like (iii), which I owe to the anonymous reviewer, is perfectly grammatical.

(iii) John is late. The train will have already left when he arrives.

As the anonymous reviewer points out, *already* in (iii) is primarily associated with the perfect tense, modifying its resultant state (i.e. the train's being gone). In section 3.2.2 and in chapters 4 to 6, it has been proposed and demonstrated that the temporal schema of the perfect tense consists of two situations, i.e. a situation prior to a time of orientation



and its corresponding resultant state holding at that time of orientation on whose event time the temporal focus (TF) is fixed. Thus, we can say that the resultant state of the perfect tense is connected with the state described by *already*, as shown in (iv) below, where the shaded rectangle represents the resultant state described by the perfect tense:



Thus the *will*-sentence in (iii) is grammatical. I note in passing that this explanation also applies to (ia), because though the position of *already* in (ia) is different from that of *already* of the second sentence in (iii), both adverbs specify the resultant state represented by perfect *have*.

<sup>15</sup> According to Kashino (1993), not all native speakers accept this sentence as a grammatical sentence.

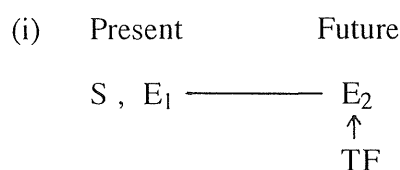
<sup>16</sup> As Declerck (1991a:157) states, the progressive form *be* + present participle is used when the speaker focuses on the middle of the situation, disregarding its beginning and end points. That is, a predicate in the progressive form represents only the process of a situation, not the onset and the coda. Thus a predicate in the progressive form can be viewed as a state-like one, not having an inchoative sense. This characteristic derives from the property of *be*.

<sup>17</sup> In this connection, Langacker (1990:23) points out that by means of subjectification, the verb *go* has lost the sense of its locational reference point of physical movement and instead has come to gain a new sense of temporal reference point.

<sup>18</sup> Strictly speaking, the *be going to*-sentence of simple future has a different internal temporal structure from the *be going to*-sentence of future prediction. See section 7.6.4 for details.

19 Note here that future-reference use of *will* does not mean that it is a future tense marker. As is clear from (53b), this *will* is interpreted as functioning as a time of orientation which is simultaneous with the speech time. Thus the tense associated with this *will* is regarded as the present tense.

20 Coates (1983:Ch.7) divides the volitional use of *will* into the sense of "willingness" and that of "intention." She notes that in the case of the sense of "willingness" the subject's willingness is focused, while in the case of the sense of "intention" the future event is focused. The subject's willingness is related to  $E_1$  and the future event to  $E_2$  within our framework. If we take this finer distinction into account, it may be the case that (53a) is reserved for the "willingness" sense of *will* and the temporal schema for the "intention" sense of *will*, which comes between the "willingness" sense and the "simple future" sense of *will*, is schematically represented in (i):



I will investigate this point in my future research.

21 In this connection, Bybee, Pagliuca and Perkins (1991:26-29) present a similar approach to semantic stages for futures based on the modality use, claiming that the semantic development of *will* goes from the stage of intention to the stage of future prediction, though their approach differs in some respects from my approach here. First, I explicitly distinguish the stage of simple future from that of future prediction on the basis of the notions of the modality and the proposition domain, while they do not. Second, they do not give an explanation in terms of the internal temporal structure and the temporal schema.

22 The reason why the modality in question must be a prediction, but not an assertion, is due to the fact that we usually cannot make an assertion, but make a

prediction, about the future.

23 Kashino (1993) observes plenty of data which show that the range of use of *be going to* is encroaching on that of use of *will*.

24 Patrick Duffley (personal communication) reserves the term *potentiality* for the common semantic feature of modal verbs; so it may be appropriate for us to substitute the term *high probability of occurrence* for the term *potentiality* not only to represent the schematic meaning of *will* exactly, but also to distinguish it from the schematic meaning of other modals.

25 Haegeman (1989) argues that *will*-sentences are semantically equivalent to, but pragmatically different from, *be going to*-sentences. However, as she herself admits, this argument cannot explicate the reason why the difference in meaning in (67) emerges. In this connection, see Declerck (1991b:382-383) and Higuchi (1991:63-69) for further criticism of Haegeman's approach. It is thus appropriate to think that the difference in temporal schema (including internal temporal structure) between *be going to*- and *will*-sentences triggers such a difference.

## CHAPTER 8

### THE MECHANISM OF INTERPRETING TENSES IN INDIRECT SPEECH COMPLEMENT CLAUSES\*

#### 8.0. Introduction

The mechanism of interpreting English tenses in indirect speech complement clauses (CCs), widely known as the sequence of tenses phenomenon, has been analyzed by many grammarians and linguists. Among previous studies on this phenomenon, two types of analyses have been prevalent: the "sequence-of-tenses rule" analysis (e.g. Comrie (1986), Costa (1972), Coulmas (1986), and Hornstein (1990)) and the "relative time" analysis (e.g. Dahl (1987), Declerck (1991b, 1995), Smith (1978, 1981b), and Wekker (1980)).<sup>1</sup> However, they all have either some theoretical or empirical problems, or both. Some of them do not give a systematic explanation for the phenomenon; others pay little attention to the nature of indirect speech, thus failing to illuminate the mechanism of the phenomenon.

The present chapter aims to provide a principled explanation of how to interpret English tenses, especially past tenses, in indirect speech CCs. To this end, I claim that Hirose's (1995, 1997a, 1997b, 1998) theory of reported speech, which presents the notions of "public self" and "private self" that presuppose the notions of "public expression" and "private expression," must be introduced into the compositional tense theory proposed in this study. It will be demonstrated that our analysis based on the two theories can not only solve the problems with the previous analyses, but explain a variety of related phenomena in indirect speech from a unified point of view. This chapter is a case study showing that the tense structure (or the schematic meaning) of a given tense form (or temporal template) combines, at the tense-interpretation level, with other theories such as Hirose's theory of reported speech and the theory of modality surveyed in chapter

1 to give a more systematic and principled explanation for a certain tense phenomenon than other tense theories.

## 8.1. Previous Analyses

### 8.1.1. The Sequence-of-Tenses Rule Analysis

The proponents of the sequence-of-tenses rule analysis state a formal rule in the following manner: when a direct speech sentence is changed into an indirect speech counterpart, the tense of the original utterance in the reported clause must be backshifted if the verb in the reporting clause is in the past tense, while the tense of the original utterance in the reported clause must be retained if the verb in the reporting clause is in the non-past tense.<sup>2</sup>

This analysis, however, raises some problems.<sup>3</sup> Let us first examine the following pairs of sentences:

- (1) a. They will report tomorrow that Harry is transmitting.
- b. They will report tomorrow: "Harry was transmitting (yesterday)."
- (2) a. One day John will regret that he is treating me like this. (Dowty (1982:50))
- b. One day John will regret: "I was treating her badly."

(Declerck (1991b:162))

Take (1) for example. In (1a), the event time of the CC situation can be viewed as referring to present time. In this case, (1a) can be seen as an indirect speech version of (1b), so that the formal rule cannot account for why the tense of the original utterance (i.e. the past tense) in (1b) is changed into the present tense in (1a); for the rule wrongly predicts that the tense of the original utterance in (1b) should be retained. The same observation applies to (2).

Moreover, the formal rule cannot explain why the pluperfect in the reported clause is not backshifted when a direct speech sentence is changed into an indirect speech

counterpart (cf. Declerck (1991b:178)):

- (3) a. Mary said, "Nancy had gone to Italy."
  - b. Mary said that Nancy had gone to Italy.
- (4) a. Yoko said, "Toru had been here for two hours."
  - b. Yoko said that Toru had been there for two hours.

Consider (3) for example. The fact is that in (3b), when interpreted as an indirect speech version of (3a), the pluperfect is not backshifted. If the sequence-of-tenses phenomenon were caused by the formal rule at issue, backshifting a pluperfect would theoretically be possible. However, this is not the case.<sup>4</sup> The same applies to (4).

### 8.1.2. The Relative Time Analysis

Let us now turn to the relative time analysis, where the CC time can be related to the matrix clause (MTC) time semantically. Previous studies of this type also pose problems. Most of the studies deal only with a limited number of data, not providing a systematic or principled explanation for the sequence-of-tenses phenomenon. In this subsection, I will examine two major relative-time analyses and point out their problems.

#### 8.1.2.1. Smith (1978, 1981b)

Let us first examine Smith's (1978, 1981b) analysis. Smith analyzes the phenomenon in terms of two interpretive principles, i.e. the "sharing" and "orientation" principles, and a performative analysis. With the sharing principle, the MTC time functions as the reference time of the CC; this is exemplified in a sentence like *The nurse explained that the doctor was busy*. With the orientation principle, the MTC time serves as a time of orientation from which the CC time is computed; this is exemplified in a sentence like *The report states that the spy was denounced last month*. When the two principles are not effective, a performative analysis is operative: in the interpretation of a

sentence like *Rieko said that Natsumi is happy*, the CC tense is interpreted in relation to the tense in an abstract performative clause (e.g. I SAY); under this condition the sharing principle is operative and thus we can interpret the sentence in question appropriately.

However, she does not clarify why the principles can work in indirect speech nor does she make clear the relation between the two principles. It is stated in Smith (1978) that the sharing principle works when the MTC tense is the same as the CC tense, and the orientation principle works when the MTC tense is different from the CC tense. However, she herself obscures the relation between the sharing and the orientation principle by applying the latter to a sentence in which the MTC tense is the same as the CC tense (see especially Smith (1981b:224)). What is worse, she finally reaches the conclusion that the two principles work only when the MTC tense is the same as the CC tense, and two more special principles are necessary when the MTC tense is different from the CC tense (see Smith (1981b:226)). Thus, not only does Smith herself make obscure the relationship between the two principles in question, but also her analysis has come to need at least four (unmotivated) principles (for other problems with her analysis, see Binnick (1991:352-353) and section 9.1.3.2). It will be shown in section 8.2 that my analysis requires only one motivated principle, i.e. the principle in (15) below.

#### 8.1.2.2. Declerck (1991b, 1995)

Let us now turn to Declerck's (1991b, 1995) analysis. Declerck presents one of the most effective explanations for the phenomenon at issue. However, his analysis also causes some problems.

The first problem, which is common to other relative time analyses, is that his analysis as it stands cannot explain why sentences like those in (5) and (6) cannot receive what I call the posterior reading, where the CC time is interpreted as coming after the MTC time.

- (5) a. Mary said that she was pregnant.
  - b. I heard that Sally was in London.
- (6) a. Mary said that she finished her homework.
  - b. John said that he wrote a book.

The sentences in (5) are temporally ambiguous in two ways (cf. Enç (1987: 635)). One reading is the *anterior* reading, where the CC time is viewed as coming before the MTC time. The other is the *simultaneous* reading, where the CC time is seen as coinciding with the MTC time. On the other hand, the sentences in (6) receive only the anterior reading because of the bounded nature of the CC situations: i.e., in order for a bounded situation to be true at the MTC time, its endpoint must be reached before that time.

Whether or not the simultaneous reading is possible does not matter here (this will be discussed in section 8.2.4). The point is that the CC time is never seen as coming after the MTC time. Declerck considers that the CC tense can be either absolute or relative. Thus, it should be theoretically possible for (5) and (6) to receive the posterior reading. This is because in the use of absolute past tenses in CCs, what is relevant is the temporal relation between the speech time (S) and the CC time, not that between the MTC and CC times. This implies that in his system, CC times can come after MTC times insofar as they are in the past. Indeed he argues that in the case of the posterior reading, the CC verb must be in the predictive form (i.e. *would* + infinitive), but he still does not, in a principled way, answer the fundamental questions: why (5) and (6) cannot allow the posterior reading of absolute past tenses in CCs and why the predictive form should be used when we refer to a future-in-the-past situation (In this connection, he gives an ad hoc solution to the fact from a pragmatic point of view, however (cf. Declerck (1991b:184). See also section 9.3.2.) These points will be explained in a principled way within our compositional tense-theoretic framework.

Still another problem is that his analysis in terms of "temporal domain," i.e. a set of



one time or more, cannot explain the ungrammaticality of (7).

(7) a. \*Rieko said that she would leave when I arrived tomorrow.

b. \*John expected that he would be there when I arrived tomorrow.

He claims that in a past (temporal) domain whose central situation is represented by the MTC verb in the absolute past tense expressing anteriority relative to S, the relative (simple) past tense represents simultaneity, the pluperfect anteriority, and the conditional or the future-in-the-past tense (i.e. *would* + infinitive) posteriority. Thus in (5a), the absolute past tense *said* establishes a past domain, representing the MTC time as a base time for the calculation of subordinate tenses, and the relative past tense *was* expresses simultaneity relative to the MTC time as the base time. He also claims that the semantic structure of *when* is equivalent to *at the time at which* (cf. Declerck (1996)). Thus, the sentence *I loved her when I was young* is equivalent to *I loved her at the time at which I was young*.

The criticism proceeds in the following way. First, as (8) shows, the conditional tense can refer to future time relative to S.

(8) a. Rieko said that she would leave tomorrow.

b. John expected that he would be there tomorrow.

What is important is that in (8a), for example, the CC tense associated with *would leave* represents posteriority in the past domain established by the MTC verb, i.e. *said*, and the time of Rieko's leaving, even if referring to the future, can be incorporated into that past domain. This implies that the same applies to the predicate *would leave* in (7a). Secondly, in (7) the semantic structure of the relative past tense in the *when*-clause (WC), i.e. *arrived*, is assumed to represent simultaneity with respect to the implicit time indicated in *when*, i.e. *the time* in its paraphrase mentioned above, which is in turn simultaneous with the time of Rieko's leaving because of the lexical property of the first *at* in the same paraphrase. Thus, it should be the case that in his system, all the times in (7) exist in the

past domain established by the MTC verb. As a result, his analysis predicts that under syntactic environments like those in (7), the relative past tense in the WC should go with future-time adverbials, and, thus, (7) should be grammatical; but this is not the case (see also section 9.3.2).<sup>5</sup>

### 8.1.3. Summary

Let us summarize this section. We have thus far seen that none of the previous analyses have succeeded in explaining tense phenomena appropriately in indirect speech CCs. This might be partly due to the fact that they have paid little attention to the nature of indirect speech complements with respect to interpretation of tenses in CCs, or partly because they mix the semantic structure (i.e. the tense structure in our terminology) of a tense form per se with the interpretation of a tense form. To the best of my knowledge, it is Hirose (1995, 1997a, 1997b, 1998) who provides a principled explanation of the nature of indirect speech phenomena including tense phenomena. However, he does not deal with the behavior of tense in detail; in addition, he does not explain why his principle about tenses in indirect speech (presented in section 8.2.1 below) should be as it is.

In the next section, I will establish a new analysis of tense phenomena in indirect speech CCs by developing Hirose's analysis a little more fully in terms of our compositional tense theory. It will be shown that our new analysis provides a more principled and motivated explanation not only for the problems with the previous analyses, but also for further related tense phenomena in English indirect speech CCs.

## 8.2. An Alternative Analysis

This section shows that our compositional tense theory, together with Hirose's theory of reported speech, is useful for the explanation of tense phenomena in indirect speech CCs. More specifically, the original temporal value of the finite (past) tense form

interacts with the semantic nature of indirect speech clarified by Hirose's theory at tense-interpretation level to provide a new analysis of the phenomenon in question.

### 8.2.1. Hirose's Theory of Reported Speech

Let us first outline Hirose's theory of reported speech briefly. One aim of his theory is to provide a principled explanation for syntactic and semantic differences between Japanese and English indirect speech.<sup>6</sup> Above all, how to explain tense behavior in indirect speech within his framework is directly relevant to the present discussion. Thus, I restrict myself to the tense behavior. Hirose (1997a:33) offers the following principle:

- (9) The use of tenses in the indirect speech CC is attributed to the private self in Japanese, while it is attributed to the public self in English.

Before examining how this principle works, we have to see the background to understand this principle. First of all, as a basis for his explanation, Hirose (1995:226) proposes the following hypothesis:

- (10) Direct speech is a quotation of 'public expression' and indirect speech is a quotation of 'private expression.'

He defines "public expression" as the level of linguistic expression corresponding to the communicative function of language, and "private expression" as the level of linguistic expression corresponding to the non-communicative or thought-expressing function of language. The hypothesis in (10) thus means that while direct quotes can report communicative attitudes of the original speaker, indirect quotes correspond to mental-state representations or subjective thoughts of the original speaker. It should be noted here that the communication of thoughts presupposes the expression of thoughts. This means that public expression consists of private expression and communicative attitudes (or addressee-orientedness).

To illustrate this point, consider (11):

- (11) a. Rieko said, "Natsumi is sick."  
b. Rieko said that Natsumi was sick.

In (11a), by using the direct quote the reporter reports the communicative attitudes of the original speaker, i.e. Rieko. In other words, the reporter reports Rieko's original utterance, i.e. her public expression. In (11b), by contrast, by using the indirect quote the reporter represents only the mental state or thought of the original speaker, i.e. Rieko's private expression. That the indirect speech CC corresponds to private expression is indirectly justified by the fact that verbs of mental activity such as *think*, *believe* and *imagine* cannot take direct speech CCs, but rather must require indirect speech CCs.<sup>7</sup>

Let us now consider the concepts of "public self" and "private self," which play an important role in the principle in (9). Public self is defined as the subject of public expression, i.e. the subject of a communicating act, and private self as the subject of private expression, i.e. the subject of a thought-expressing act. Public self and private self are two different aspects of the same speaker. Thus in (11a, b), the reporter is, by definition, depicted as public self, because he or she is communicating the content of the sentences to the addressee. By contrast, in (11a), the original speaker (i.e. Rieko) is depicted as public self by the reporter because the reporter is reporting her original utterance including her communicative attitudes; in (11b), Rieko is depicted as private self in that the reporter is reporting her original thought without her communicative attitudes.<sup>8</sup>

There is good evidence to prove that in indirect speech, the subject of a whole sentence is represented as a private self. Mental-attitude adverbials like *probably* and *possibly* are used to express a mental attitude of an original speaker toward a given proposition in the indirect quote (cf. Hirose (1995: 234)). Consider (12):

- (12) a. John says that the news is probably true.

- b. John thinks that Mary may possibly be a spy.

In (12a), for example, *probably* represents the mental attitude of the original speaker (i.e. John) toward the proposition of the news being true. Since a private self is the subject of a mental-state expressing act, John is depicted as a private self. The same applies to Japanese data (see Hirose (1995:232-233)).

Having seen the background, we can now examine how the principle in (9) works. Observe (13):

- (13) a. Mary said (that) Nancy was pregnant.  
b. Mary-wa Nancy-ga ninshin shiteiru to itta.  
Mary-Top Nancy-Nom pregnant be-Pres Quot say-Past  
'Mary said that Nancy was pregnant.'

In (13b), Top, Nom and Quot stand for topic marker, nominative case marker and quotative particle, respectively. Both sentences are represented schematically as follows:

- (14) a. [Mary said <Nancy [was] pregnant>]  
b. [Mary wa <Nancy ga ninshin shiteiru> to itta]

The square brackets represent public expression and the angle brackets private expression. In (13a, b), the reporting clauses are the reporter's public expressions. With the CCs, English behaves differently from Japanese.<sup>9</sup> In the Japanese version (13b), all the elements in the CC are attributed to the private self because they constitute private expression. In the English version (13a), by contrast, the preterite *was* in the CC is attributed to the reporter as public self. To put it another way, the pastness represented by *was* is determined by the reporter's responsibility.

This fact is compatible with the nature of indirect speech complements; in indirect speech, the reporter is free to blend some information from the reporter's own point of view with the original speaker's mental state insofar as the reporter preserves what the original speaker intends to convey (cf. Coulmas (1986:2-3)). It is thus possible that in

English, as far as tenses are concerned, the reporter as public self superimposes his or her public expression on the original speaker's private expression. In (13a), for example, underlying the reporter's public expression *was* is the original speaker's private expression *am*.

### 8.2.2. Justification and Extension in Terms of the Compositional Tense Theory

We can now justify and extend Hirose's principle in (9) in terms of our compositional tense theory, which requires the distinction between the level of tense structure and that of tense interpretation, on one hand, and the distinction between the A(bsolute tense)-component and the R(elative tense)-component, on the other.

First, let us consider why the use of tenses must be attributed to the public self in English indirect speech CCs. Our compositional tense theory can answer this question. As we have seen, the tense theory requires that an English finite predicate have the A-component represented by a tense morpheme which establishes a time-sphere. Furthermore, in the theory the A-component is absolute in the sense that the establishment of a time-sphere is based on a direct relation to the speaker's point of view, which adheres to the speech time (S), i.e. the absolutely-fixed time point from which any temporal calculation usually starts. Thus for example, in the indirect speech sentence (13a) the A-component of *was pregnant* represents the past time-sphere which is past relative to S, to which the reporter (i.e. the speaker of the whole sentence) as public self pertains. This means that in indirect speech, using English absolute tense forms, i.e. finite predicates, amounts to reflecting the point of view of the reporter as public self. We can thus say that the statement with respect to English tenses in Hirose's principle comes necessarily from the tense structure of English finite predicates.<sup>10</sup>

Let us now turn to an extension of the principle in (9). In order to explain why sentences like those in (5) and (6) allow no posterior reading, considering the role of

*modality* in indirect speech CCs is necessary. As stated in section 1.5, modality is defined as a speaker's subjective mental state or attitude toward a proposition. Since within our framework a speaker can be either the speaker of the whole sentence or the speaker of the original utterance in an indirect speech sentence, a speaker can be depicted as either a public or a private self.

Moreover, distinguishing the *viewpoint* of a public self from his or her *consciousness* is also inevitable because in some cases, the viewpoint of the public self is separated from the consciousness of the public self (I will discuss this in section 8.3.4). Consciousness is defined as the mind of an individual doing any kind of mental activities. On the other hand, a viewpoint is defined as an *evaluation pivot* from which one evaluates or calculates something linguistic or non-linguistic. As far as time reference is concerned, it is often the case that a viewpoint corresponds to a time of orientation, i.e. a base time from which a given event time is computed. However, this does not necessarily mean that every time of orientation reflects a speaker's viewpoint. Consider, for instance, the case of the past perfect tense in an independent clause like *Mana had left the hall when I arrived there*. In this case, the time of orientation directly relevant to the perfect tense is that in the past (i.e. the time established by the event time of the speaker's arrival) which is simultaneous with the event time of the resultant state represented by perfect *have*, whereas the speaker's viewpoint is fixed on the speech time. Moreover, we can also use a viewpoint as an evaluation pivot in, say, determining which pronoun we should choose. Thus, a viewpoint can be seen as a different notion from a time of orientation. It must be kept in mind that through the viewpoint, a speaker's consciousness can have access to the outer world (note that usually, a speaker's consciousness and viewpoint coexist).

Taking these matters into account, I will offer a principle like the one in (15), which consists of both an extended version of the statement as to English tenses in (9) and a

generalization about English modal elements.

- (15) In English indirect speech CCs, the R-component of a finite predicate can be connected with the viewpoint of the public self either directly or via the viewpoint of the private self; modal elements must be attributed to the private self.<sup>11</sup>

This principle provides an explanatory basis for interpreting the mechanism of English indirect speech CCs, working at the level of tense interpretation.

Let us first examine the above statement pertaining to the relation between modal elements and private self. It suggests that as with modal adverbials like *probably* in (12), modality-related notions like assertion, prediction and uncertainty are private expressions, i.e. subjective thoughts of the private self, in that the modality-related notions also express the speaker's subjective attitudes (cf. also Yukio Hirose (personal communication)). Thus, modality cannot freely be changed by the reporter as public self. Consider (16):

- (16) a. Mana said that she won the fourth prize in the *koto* contest.  
b. Rieko said that she would move to another office.

In (16a) the CC verb *won* is in the assertive form and in (16b) the CC verb *would move* is in the predictive form. Since the assertion and the prediction involved are ascribed to Mana and Rieko respectively, the reporter cannot replace them with other modalities without a change of meaning.

Let us now consider the above statement with respect to the relationship between viewpoints and the R-component (associated with the event time) of a finite predicate. It suggests that the public self can attribute the interpretation of the event time of the CC predicate, either directly or via the viewpoint of the private self, to the viewpoint of the public self. This is highly motivated in the sense that since there are two viewpoints of speakers (i.e. the viewpoints of a reporter and an original speaker) in indirect speech, a



CC situation has the potential to be related to either of the two viewpoints.<sup>12</sup>

Observe the following:

(17) Bruce said that Mary was pregnant.

(18) Rieko said that Natsumi celebrated her birthday three days ago.

(19) One day, Naomi said to Oscar that she saw him the day before.

(Comrie (1986:273))

In (17), the preterite in the CC can receive either a deictic or non-deictic interpretation. The A-component of *was pregnant* establishes the past time-sphere; the time of the situation of Mary's being pregnant, which constitutes the R-component of *was pregnant*, can be connected with the reporter's viewpoint, either directly or via Bruce's viewpoint. This ambiguity is disambiguated by the co-occurrence with temporal adverbials, as exemplified in (18) and (19). In (18) the deictic time adverb *three days ago* causes the deictic interpretation of *celebrated*, while in (19) the non-deictic time adverb *the day before* causes the non-deictic interpretation of *saw*.<sup>13</sup>

### 8.2.3. Explanation

We are now in a position to solve the problems with the previous analyses. I begin with Declerck's first (and other relative time analyses') problem, namely, why the simple past tense in CCs is not allowed to receive the posterior reading. From (15) above, it follows that modality in the CC is attributed to the private self. In order to assert something, normally it is already known at the time when the assertion is made. In other words, we can usually make an assertion only about a situation which coincides with, or is prior to, the time of assertion. Given this, it follows that the private self can make an assertion about the CC situation only when the CC time coincides with, or comes before, the MTC time. Since the CC predicates in (20) and (21) are in the assertive form, both sentences do not allow the posterior reading.

(20) Mary said that she was pregnant. (=5a)

(21) Mary said that she finished her homework. (=6a)

Principle (15) can also account for the ungrammaticality of (22), where the time adverbs make it clear that the CC times come after the MTC times.<sup>14</sup>

(22) a. \*Two days ago Betty said that she threw a party last night.

(Declerck (1991b:183))

b. \*In 1970, Graham said that he got tenure in 1980. (Comrie (1986:281))

When referring to a situation which is future relative to a base time, we usually cannot make an assertion about that situation, but rather predict it. In (22), on the other hand, the assertive forms are used to refer to the situations in the future relative to the MTC times as the base times (i.e. the times of orientation). Such a contradiction makes (22) ungrammatical.

Let us now move to the explanation for Declerck's second problem, i.e., why sentences like those in (7), which is repeated here as (23), are ungrammatical.

(23) a. \*Rieko said that she would leave when I arrived tomorrow.

b. \*John expected that he would be there when I arrived tomorrow.

Take (23a) for example. In our tense theory, the finite predicate *arrived* in the WC has the A-component establishing the past time-sphere, so that the time of arriving must happen in the past. Thus the co-occurrence of *arrived* with the future time adverb *tomorrow* results in a contradiction. Hence the ungrammaticality of (23a). The same explanation can be extended to (23b).

It is worth noting here that our analysis can also account for the grammaticality of (8), which is repeated as (24).

(24) a. Rieko said that she would leave tomorrow.

b. John expected that he would be there tomorrow.

Take (24a) as an example. Since the nonfinite predicate *leave* itself does not have the A-

component, its event time does not necessarily happen in the past time-sphere. At the tense-structure level, the infinitive *leave* merely expresses an abstract image of the integral actualization of its situation; i.e., it can express any kind of temporal relation (see chapter 2). At the tense-interpretation level, because of the property of future *will*-sentences represented by the form of *will* + infinitive, the nonfinite predicate in question can represent posteriority relative to the time of a prediction associated with *would* (see chapter 7 for details). It is thus possible that the event time of *leave* is interpreted as occurring in the future relative to the speech time (S); the verb *leave* can go with the future time adverbial *tomorrow*.

Note that our analysis can, from a unified point of view, solve the problems with the sequence-of-tenses rule analysis, which are exemplified in (1a) and (3b), repeated here as (25a, b).

- (25) a. They will report tomorrow that Harry is transmitting.  
b. Mary said that Nancy had gone to Italy.

In (25a), at the tense-structure level, both *will* and *is transmitting* establish the present time-sphere in which their event times are located. At the tense-interpretation level, the event time of *is transmitting* is connected with the speech time,<sup>15</sup> but not the time of reporting, because of the context. Let us now turn to (25b). In our analysis, whether the reference time (i.e. the event time of the resultant state associated with perfect *have* in our terminology) of *had gone* is simultaneous with, or comes before, the time of *said* is irrelevant when we use the pluperfect; for at the tense-structure level, the pluperfect itself establishes the past time-sphere and represents its event time (i.e. the event time associated with the past participle complement) as coming before its reference time (i.e. the event time associated with perfect *have*) in that time-sphere. At the tense-interpretation level, which interpretation we should choose is determined by the context.

#### 8.2.4. Two Readings of Unbounded Sentences and Temporal Focus

It remains an unsettled question how to distinguish the simultaneous from the anterior reading of unbounded CCs like those in (5). First, observe (5a) again, which is repeated here as (26):

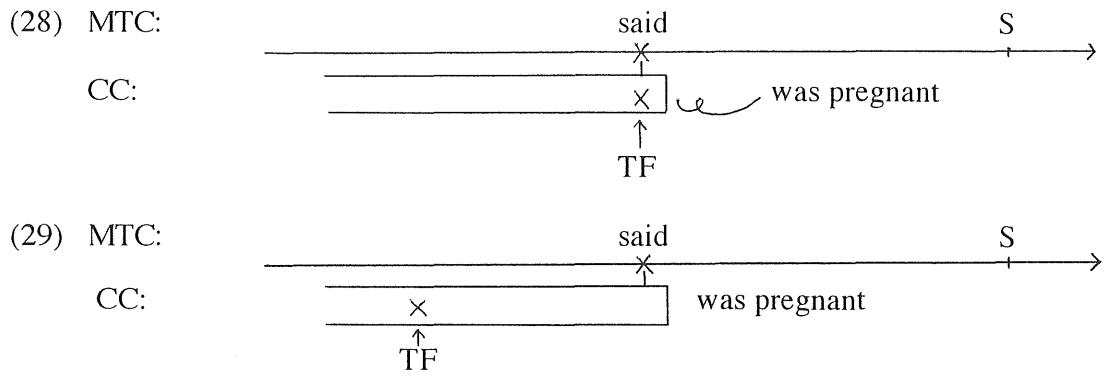
(26) Mary said that she was pregnant.

As has been mentioned in section 8.1.2, a sentence like (26) allows the two readings: the anterior and the simultaneous reading. This is due to the interaction between the homogeneous nature of the unbounded clause in the CC and the nature of the assertive form *was*; i.e., although the homogeneity of *was pregnant* makes it possible that the CC situation holds throughout the past time-sphere, the nature of assertion ascribed to the private self (i.e. Mary) causes the situation at issue to hold only in the period which starts before, and leads up to, the time of Mary's utterance.

We can now consider how to distinguish the anterior from the simultaneous reading. I argue that the notion of temporal focus (TF) contributes to the distinction between the two readings. For convenience' sake, let us repeat the definition of temporal focus below:

(27) Temporal focus (TF) is a speaker's focus which is fixed on the time point (period) of a situation on the time line to which the speaker pays/is paying special attention.

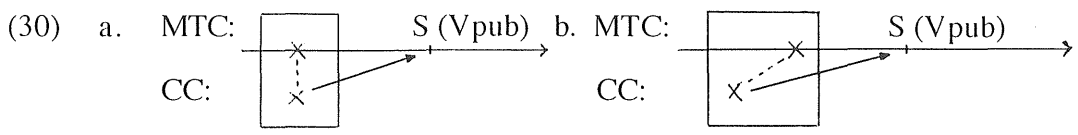
It should be noted that in the case of indirect speech, we regard *a speaker* in (27) as corresponding to the reporter as public self. Given this, we can say that whether sentence (26) receives the simultaneous or the anterior reading depends on which part of the time of the situation (which corresponds to the relevant event time) the public self directs the TF at. Both readings are schematized below:

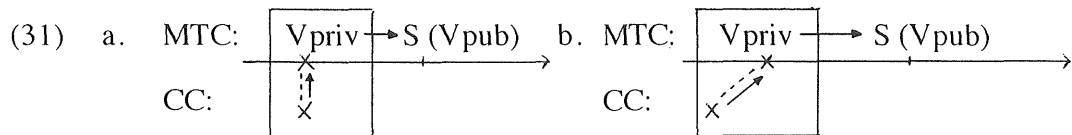


The schema in (28) represents the simultaneous reading and the schema in (29) the anterior one. Time flows from left to right. A cross denotes the position of an event time and a rectangle with its left open symbolizes the zone where the private self's assertion holds. It is clear from the above schemata that both readings are distinguished from each other by means of the difference of the position of the TF. I note in passing that the distinction is done at the tense-interpretation level.

8.2.5. Homophonous vs. Polysemous

Before concluding this section, I will touch on the question of whether English past tenses represent a homophonous or polysemous relationship. In my theory, as with past tenses in independent clauses and MTCs, past tenses in CCs have the A-component. There is, however, one difference between the former and the latter type of past tenses. The former type is usually interpreted deictically. This is the default case. As we have seen, by contrast, past tenses in CCs can be interpreted either deictically or non-deictically because of the presence of the two viewpoints, i.e. those of the public self and the private self. Taking the discussion thus far into consideration, the two possible deictic and non-deictic interpretations of the past tense can be schematized in (30) and (31).





$V_{pub}$  and  $V_{priv}$  symbolize the viewpoints of the public self and the private self, respectively. The box represents the past time-sphere and the cross the position of the event time. An arrow represents a mental path reaching a viewpoint and a broken line the temporal relation between the MTC and CC times. Both diagrams in (30a) and (31a) indicate the simultaneous reading while both diagrams in (30b) and (31b) indicate the anterior reading.

In terms of the temporal schema working at the tense-interpretation level, the past tenses schematized in (30) are different from the ones schematized in (31) in that the event time of the former type is interpreted in a direct relation to the speech time (S), while that of the latter type is connected with S via the MTC time as a base time (or a time of orientation). This means that both of the past tenses have distinct (basic) semantic structures at the tense-interpretation level. However, both types of past tenses are tense-structurally related to each other because they both contain the A-component expressing the past time-sphere. With respect to past tenses in independent clauses and MTCs, they also have the past time-sphere in their temporal structure. We can thus say that since they can all be subsumed under the concept of the past time-sphere, English past tenses represent a polysemous relation.<sup>16</sup> This is one of the merits of the compositional tense theory which requires the distinction between the tense-structure level and the tense-interpretation level because we can give a motivated answer to the question of why predicates in the same tense can be interpreted ambiguously (e.g. *said* and *was* in (26)).

In this section, I have proposed an alternative approach to the interpretation of English (past) tenses in indirect speech CCs, solving the problems with the previous analyses, and demonstrated that English past tenses are polysemous. In the next section, it will be shown that our approach can further explain related phenomena in English

indirect speech from a unified point of view.

### 8.3. Further Related Issues

#### 8.3.1. Present Tenses in Complement Clauses

I will first consider the case which is traditionally regarded as an exception to the sequence-of-tenses rule, namely the case where the CC tense is present while the MTC tense is past. Consider (32):

(32) Bruce said that Mary is pregnant.

Note that the content of the CC situation is asserted by Bruce, whose viewpoint adheres to the MTC time. The assertive form *is* is used to describe a situation in the present, not one in the future, vis-à-vis Bruce's viewpoint. This can be verified by the fact that (32) is equivalent to (33), not to (34) (Yukio Hirose (personal communication)).

(33) Bruce said, "Mary is pregnant."

(34) Bruce said, "Mary will be pregnant."

This fact is accounted for by the principle in (15). (34) cannot be a paraphrase of (32) because the reporter as public self cannot change the modality which is to be attributed to Bruce. Why, then, is the present tense used in (32)? The reason is that the reporter regards the CC situation as being true at S as well as at the MTC time, relating its event time directly to his or her own viewpoint.<sup>17</sup>

The principle in (15) can also explain the contrast in (35), where the predictive form is used.

(35) a. Ryoko said that she would come with me tomorrow.

b. Ryoko said that she will come with me tomorrow.

It is only the CC tense that the reporter as public self can change on his or her own responsibility. Since the prediction associated with the predictive form is attributed to the private self, i.e. Ryoko, the reporter has to use the predictive form to satisfy (15).

### 8.3.2. Future in the Past

Let us now examine some apparent counterexamples to our analysis. Observe the following:

(36) a. John said that the train left at 4:50. (Declerck (1991b:67))

b. The nurse explained that the doctor was working on Tuesday.

(Smith (1978:59))

In (36), the CC verbs are both in the assertive form; nevertheless, they represent their event times as coming after the MTC times.

The fact might appear contradictory to our explanation, but (36a, b) are not counterexamples to our analysis because they are past versions of so-called futurate sentences (cf. Declerck (1991b:66-67; 1994:90)). Consider:<sup>18</sup>

(37) a. Emily leaves next Thursday.

b. Emily is leaving next Thursday.

(Smith (1981a:369))

In (37a), for instance, the verb is in the present tense while the actualization of the situation is in the future. Smith (1981a:372-373) notes that the evaluation of futurate sentences is based on a certain situation holding at S. This suggests that the speaker uses futurate sentences only when at S the speaker is certain of Emily's leaving next Thursday because of the content of the situation at S. Only in this case can the speaker assert the actuality of the situation at issue .

Based on this observation, it can be said that in (36) the private self associated with the MTC time is certain of the actualization of the CC situation. In (36a), the situation of the train's leaving at 4:50 is pre-determined by the timetable at the time of John's utterance before four-fifty. Thus John, i.e. the private self, can make an assertion about such a future-in-the-past situation. The same applies to (36b).



### 8.3.3. Past Tenses in *When*-Clauses

This subsection will show that the principle in (15) can account for two phenomena concerning past tenses in WCs embedded in CCs. The first concerns the case where past tenses in WCs are simple past tenses. Observe:

- (38) a. Mana said that she practiced the *koto* in earnest for the concert when she was alone.<sup>19</sup>
- b. She said that they were happier when they lived in Ashford.

(Declerck (1991a:524))

Take (38a) for example. Suppose that the time of Mana's utterance was on the day when the concert at issue was held. In this context, let us first consider the verb *practiced*. The past-tense morpheme of that verb establishes the past time-sphere, and the event time is located somewhere in that time-sphere. The bounded nature of *practiced the koto in earnest for the concert*, together with the nature of assertion, allows (38a) to receive the anterior reading. Let us now turn to the verb in the WC. Since the preterite *was* is also a finite predicate, it establishes the past time-sphere in which its event time is situated.

How, then, can we explain the reason why the WC time is construed as simultaneous with the time of Mana's practicing the *koto*? As is widely assumed (cf. Araki, Ono and Nakano (1977:122) and Ota (1963:113)), I take the position that the lexical property of *when* itself is responsible for the relationship of simultaneity. Thus, the event time of *was* is construed as simultaneous with that of *practiced* by virtue of the property of *when* in the past time-sphere.

I now turn to the second phenomenon, i.e. the difference in grammaticality between the (a)- and (b)- sentences in (39) and (40).

- (39) a. He said that he would help her mother when she was in trouble.
- b.\*He said that he would help her mother when she would be in trouble.

(Declerck (1996:243))

- (40) a. I said I would do it when I was back home.  
b. \*I said I would do it when I would be back home.

(Declerck (1991a:151))

Both *would be* and *was* in the WCs contain the past time-sphere in their tense structures. The question, then, arises as to why the predictive form (i.e. *would* + infinitive) in the WC is not allowed in such syntactic environments as those in (39) and (40).

To answer this question, we have to consider the scope theory of modal logic briefly. Let us first look at cases of present tense sentences. The verb in *if*-clauses and temporal clauses (TCs) cannot usually be in the predictive form when the main verb is also in that form. Observe the following:

- (41) a. \*If it will rain tomorrow, the game will be canceled.  
b. \*John will leave when Bill will arrive.

It is often said that in these sentences, the main clause (MNC) and the subordinate clause (SC) situations make an intensional domain, i.e. a set of propositions (cf. Lyons (1977:170-171)), and the domain as a whole is within the scope of the modal operator associated with *will* (see section 1.5 and section 2.2.1). James (1986:37-39;41-43) convincingly notes that the main purpose of *if*-clauses is to represent the condition for the occurrence of the MNC, and the main purpose of TCs is to specify their temporal relation to the MNC, so that such relations of the SCs to the MNCs are objective. There is thus no room for subjective elements like modality to enter into the SC situations. Hence the ungrammaticality of (41).

With this in mind, let us return to (39) and (40). Sentence (39a), for example, is analyzed as follows. First, the situation of his helping her mother and that of her being in trouble make an intensional domain in the past. Secondly, *was* in the WC is a finite predicate and thus expresses the past time-sphere. Note, however, that the predicate at

issue is neutral as to modality, since modality cannot enter into situations like those in *if*-clauses or TCs which constitute part of intensional domains.<sup>20</sup> It may be true that the neutral form is superficially the same as the assertive form, but just because it is so does not mean that *was* in the WC is accompanied by assertion. Thirdly, the intensional domain represented by the whole CC is within the scope of the modal operator associated with *would*. From (15), it follows that the prediction represented by *would* is attributed to the private self, i.e. the subject of the whole sentence. Hence (39a) is grammatical.

Why, then, are sentences (39b) and (40b) ungrammatical? We can explain this by saying that they violate (15). Take (39b) for example. Since the intensional domain is associated with the modality ascribed to the private self, inserting another *would* into the WC would lead to the situation which, in the same intensional domain, would require another private self to which the prediction represented by that *would* is attributed. However, the real truth is that there is no such private self in (39b). The same applies to (40b). Hence, the (b)-sentences in (39) and (40) are ungrammatical.

#### 8.3.4. Past Tenses in the Future

Finally, I will analyze past tenses in the future. Observe:

- (42) a. Mana will say that she played the *koto*.  
b. Someday, when they ask me if I knew you, I will smile and say that you were a friend of mine.
- (43) a. In 2010, Ebenezer will say that he got tenure in 2000.  
b. In 2002, Rieko will announce that she married him in 1999.

In (42a), for example, the CC time referred to by *played* does not necessarily come before S; all the temporal relation in (42a) indicates is that the CC time comes before the MTC time. This is justified by the sentences in (43) (suppose we are now in 1998). This fact might appear contradictory to our account, for we have stated that a past finite predicate

establishes the past time-sphere in which its event time is located.

In order to explain this apparent contradiction, we have only to present the following generalization:

- (44) In English indirect speech, the viewpoint of the public self can be shifted from S to the MTC time when the MTC time is in the future.

This generalization is compatible with (15) because in (44), the CC tense is still associated with the viewpoint of the public self. The difference between this case and the case where the MTC verb is in the past tense is as follows: in the latter case, both the consciousness and viewpoint of the public self are located at S; in the former, the consciousness of the public self is located at S, but the viewpoint of the public self is shifted to a future time.<sup>21</sup> Thus in (42) and (43), the CC verbs in the past tense establish the past time-sphere in relation to the MTC times in the future to which the viewpoint of the public self is shifted. This point can be verified by the grammaticality of (45).

- (45) Tomorrow, Mana will say that she played the *koto* tonight.<sup>22</sup>

In (45), the CC tense is past because the CC situation is located in the past relative to the viewpoint of the public self in the future; on the other hand, the consciousness of the public self is still located at S, and, thus, the speaker uses the deictic time adverbs *tonight* and *tomorrow*.

This kind of explanation is possible because we have made a distinction between the level of tense structure and that of tense interpretation. At the tense-structure level, a predicate in the past tense (i.e. an absolute tense form) establishes a past time-sphere relative to the speaker's viewpoint adhering to S. At the tense-interpretation level, under certain conditions the base time (or the relevant time of orientation) to which the past time-sphere is related can be shifted from S to a future time because of the shift of the speaker's viewpoint.

Before concluding this section, let us briefly look at (46):

(46) Mana will say that she played the *koto* when she was alone.

To analyze this complicated sentence, we have only to use the scope theory of the modal logic seen in section 8.3.3 in addition to (15) and (44). First, it can be said from (44) that the viewpoint of the public self is shifted to the MTC time in the future. Secondly, it follows from (15) that the preterites *played* and *was* in the embedded clause both establish the past time-sphere in relation to the viewpoint of the public self. Finally, with the modal logic, the situation of Mana's playing the *koto* and that of her being alone constitute an intensional domain which is within the scope of the modal operator associated with the assertion ascribed to the private self, i.e. Mana. The relationship of simultaneity between the two situations is due to the lexical property of *when*. This is how we can interpret (46) appropriately.

#### 8.4. Conclusion

This chapter has provided a systematic and principled explanation of a variety of tense phenomena in English indirect speech CCs based on our compositional tense theory with Hirose's theory of reported speech.

First, I have pointed out that the previous analyses, whether the sequence-of-tenses rule analyses or the relative time analyses, cannot give a satisfactory explanation for tense phenomena concerning indirect speech CCs. I then introduced Hirose's theory of reported speech, especially the concepts of public and private self, into our compositional tense theory in order to gain a more explanatory power. As a result, we came to be able to explain tense phenomena concerning English indirect speech from a broader perspective. In particular, we proposed the principle shown in (15), which can not only solve some problems with, and account for exceptions to, the previous studies, but also explain various tense phenomena in indirect speech CCs. Moreover, it has been demonstrated that English past tenses are in a polysemous relation to one another because

they all share the core meaning of pastness relative to the viewpoint of the public self.

## NOTES TO CHAPTER 8

\* This chapter is a slightly revised version of Wada (1998b).

<sup>1</sup> Two other analyses of the phenomenon at issue are the "absolute deixis" analysis (e.g. Brecht (1974), Heny (1982)) and the "pragmatic" analysis (e.g. Salkie and Reed (1997)). For criticism of the former, see Comrie (1986) and Declerck (1991b). For criticism of the latter, see Declerck (1999a).

<sup>2</sup> This kind of analysis needs an additional semantic account to explain the case where in indirect speech the CC tense is present while the matrix clause tense is past (cf. Comrie (1986) and Costa (1972)). For further discussion and criticism of the analysis, see Tanaka (1991). It is shown in section 8.3.1 that our analysis can explain this fact from a unified point of view.

<sup>3</sup> One might say that Hornstein's (1990) sequence-of-tenses analysis can deal with the temporal interpretations in (1) to (4). He assumes two rules: a sequence-of-tenses rule which links the CC time with the matrix clause (MTC) time and a default rule which links the CC time with the speech time (S). Thus, it virtually bears the same result as the relative time analysis (see note 5). However, he does not answer the fundamental question of why the morphological change of the CC tense is brought about when the MTC tense is past, whereas it is not when the MTC tense is non-past. Moreover, he cannot explain why in a sentence like *Bruce said that Mary was pregnant* (see (5) in the text), the CC time cannot be viewed as posterior to the MTC time; for when a default rule is operative, it should be logically possible that it is so. These points are discussed in detail in section 8.2. See section 9.1.2.2 for further criticism of Hornstein's analysis.

<sup>4</sup> One might say that the impossibility of backshifting the pluperfect is due to the lack of having a tense expressing further anteriority to the pluperfect in English. The question, then, arises of why it is so (cf. Declerck (1991b:178)). A convincing answer will be given in section 8.2.3.

5 In fairness to Declerck, I have to say that his system (and perhaps other relative time analyses) can explain both the tense phenomenon shown in (1) and (2) and that shown in (3) and (4). In (1a), since the CC situation is interpreted in relation to S, the present progressive, an absolute tense form, is chosen which refers to a specific ongoing situation holding at S. In the relevant reading of (3b), the reason why the pluperfect is not backshifted is that even in this case, the pluperfect still expresses anteriority in the past domain.

6 Hirose's theory of reported speech also aims to explain deictic phenomena not only in direct speech but also in represented speech and thought (or free indirect speech). See Hirose (1995, 1997a, 1998) for details.

7 The verb *think* can describe what Hirose calls a quasi-communicative act, communicating in a speaker's mind, as in (i):

- (i) He thought to himself that it had been his fault all along.

See Hirose (1995:235-237) for details.

8 An anonymous *EL* reviewer has pointed out that *Bruce* in (i) below might be a public self, saying that Bruce is the subject of communicating the content of the CC to John.

- (i) Bruce said to/told John that Mary was pregnant.

As is shown in the text, however, the reporter's use of the indirect quote indicates that the CC does not represent Bruce's original utterance, but rather represents his private expression or what he intends to convey; it no longer reflects Bruce's original utterance including his communicative attitude. This is verified by the fact that in a sentence like *Bruce said (to John) that frankly, Mary was lying*, the communicative-attitude adverb *frankly* cannot express a communicative attitude of the original speaker, i.e. Bruce, but it expresses the reporter's one. Hence, Bruce is depicted as a private self.

9 Hirose's main concern is to explain why Japanese pronouns behave differently



from English ones in indirect speech, though I ignore reference to pronouns because they are not directly relevant to the present discussion. A short sketch of his explanation of Japanese and English pronouns is as follows. Hirose (1997a:11-13) notes that Japanese has a special word for private self, i.e. *jibun*, and a number of words (e.g. *boku* 'I' and *kimi* 'you') are used to represent public self, depending on who is talking to whom. By contrast, Hirose (1997a:16) states that English does not have any special word for private self, but has words for public self such as *I*, *you* and *she*; thus, "in English, personal pronouns, which are primarily defined as public expressions, are diverted to represent the private self, depending on whether the subject of the private expression in question is the first, second, or third person (Hirose (1997b:7))." See Hirose (1995, 1997a, 1997b, 1998) for details.

<sup>10</sup> Our tense theory can also provide a more principled explanation for why in (9), the use of Japanese tenses in indirect speech CCs is attributed to the private self.

To this end, let us first consider how our compositional tense theory can be extended to the Japanese tense system. I assume that the basic semantic structure of Japanese predicates consists only of the R-component; the *ta*-form represents anteriority, a stative predicate in the *ru*-form simultaneity, and a non-stative predicate in the *ru*-form posteriority. Like English finite predicates, however, Japanese predicates can also receive either a deictic or non-deictic interpretation at the tense-interpretation level. Observe (i):

(i) a. Mana-wa kinoo koto-o hiita.

Mana-Top yesterday koto-Acc play-Past

'Mana played the *koto* yesterday.'

b. Kanojo-ga asu goji-ni shuppatsushita-atode, boku-wa

she-Nom tomorrow five-at leave-Past after I-Top

kokyo-e kaeru (tsumorida).

hometown-to return-Pres

'After she leaves at five tomorrow, I will return to my hometown.'

Acc stands for accusative case marker, Nom for nominative case marker, and Top for topic marker. In (ia), the tense structure of *hiita* 'played' expresses anteriority. At the tense-interpretation level, the absolute time adverb *kinoo* 'yesterday' causes it to refer to past time relative to S. Thus *hiita* receives a deictic interpretation. In (ib), at the tense-structure level, *kaeru* 'return' expresses non-anteriority and *shuppatsushita* 'left' (i.e. a *ta*-form) expresses anteriority. At the tense-interpretation level, the event time of *kaeru* is construed as posterior to S because *kaeru* is a non-stative predicate in the *ru*-form, and a main-clause predicate has a strong tendency to be connected directly with S; on the other hand, the event time of *shuppatsushita* is interpreted as anterior to the event time of *kaeru* because temporal clauses are usually subordinate to main clauses syntactically and semantically. Thus, *kaeru* receives a deictic interpretation while *shuppatsushita* receives a non-deictic one. The point here is that in our system, although Japanese predicates lack the A-component, they can receive deictic interpretations.

Let us now return to the justification of the statement as to the Japanese tense in indirect speech CCs in (9). Take (13b) for example. In (13b), *ninshin shiteiru* 'being pregnant' has only the R-component. This implies that its temporal interpretation does not necessarily depend on the point of view of the public self, but that it can depend on the point of view of some other person. Since the CC is subordinate to the MTC, it is possible that the event time of *ninshin shiteiru* in the CC is to be computed from the point of view of the private self. This is how we can explain why the use of Japanese tenses in indirect speech CCs is ascribed to the private self.

<sup>11</sup> Mihara (1992:43-44) claims that in indirect speech, the viewpoint is fixed on S, citing a sentence like (36b) from Smith (1978). As is discussed in section 8.3.2, however, this does not necessarily adduce evidence for his claim. What is worse,

Mihara's claim cannot explain why (22) is ungrammatical.

<sup>12</sup> In this sense, our analysis is superior to Smith's (1978, 1981b) one.

<sup>13</sup> Smith (1978:60; 1981b:219) notes that some native speakers interpret a deictic adverb like *three days ago* in such a way that its base time is the MTC time (see also Binnick (1991:345) and Comrie (1985:107; fn. 7)). In this case, we can say that such speakers take the non-deictic interpretation of the event time of the CC predicate. Thus, the fact does not undermine, but rather supports, my theory.

<sup>14</sup> Declerck (1991b:160) claims that the use of the absolute (past) tense is allowed "only if the temporal order of the situations is clear from a temporal adverb, the context or from the hearer's pragmatic knowledge of the world." However, this kind of account is falsified by the ungrammaticality of (22).

<sup>15</sup> Strictly speaking, we should speak of the event time of *is*, but not the event time of *is transmitting*, because as we have seen in section 3.4, the progressive form consists of two event times, i.e. an orientational event time (associated with progressive *be*) and a pure event time (associated with the present participle complement).

<sup>16</sup> In this respect, we should touch on Lakoff's (1970) ambiguity test, which is presented in Declerck (1995:22) as an argument for his claim that English absolute and relative past tenses are homophonous.

(i) John said Mary was ill, and so did Bill.

Declerck observes that (i) shows ambiguity results: the second conjunct receives the same reading of temporal relation as the first one. However, this does not necessarily prove that his claim is right. First, as Geeraerts (1993) points out, the test can yield indeterminate or vagueness results. Secondly, as Tuggy (1993) observes, ambiguity and vagueness constitute a continuum with polysemy in between. Thus the ambiguity results can apply to polysemous cases since polysemy can be a peripheral case of ambiguity.

<sup>17</sup> This kind of tense shift seems possible only when CC situations are

unbounded. Unlike bounded situations, unbounded situations can happen in the past and continue up to S. See Declerck and Tanaka (1996) and references cited there with respect to conditions for the use of the present tense at issue. Note, in passing, that Tanaka (1991) explains, in terms of "principle of discourse cohesion," why in some cases the past tense is odd and the present tense is preferable in the CC even if the MTC tense is past.

<sup>18</sup> There are some differences in meaning and restriction between the simple present and the progressive present versions. However, explaining such differences is beyond the scope of this chapter. See Smith (1981a) and Goldsmith and Woisetschlaeger (1982).

<sup>19</sup> Although the CC situation in (38a) can express a past habit of Mana which is interpreted as simultaneous with the MTC time, the relevant reading here is an anterior one, which is possible according to my informants.

<sup>20</sup> As is also stated in Klein (1994:218), there is general agreement that subordinate clauses do not serve to make an assertion of the speaker (in the case of complement clauses the reporter). This is on a par with the statement in the text.

<sup>21</sup> One might ask why this kind of viewpoint shift is possible only when the MTC time is in the future. Although I cannot give a decisive answer to the question, the reason may be related to the mechanism of how the future area is captured in English. Unlike the past and the present areas, the future is a time area yet not realized; thus, whichever time point the relevant time of orientation may be, the relevant event time to be calculated must be in the time area which the speaker is uncertain of; i.e., the object or referent to be observed has not come into existence yet on the time line. This may lead to the situation in which in the system of English language the speaker easily shift his or her viewpoint to the future area. (Cf. also Harder (1996:438), where a similar explanation for the question at issue is offered.) I am grateful to Yukio Hirose for bringing this point to my

attention.

<sup>22</sup> According to Comrie (1985:113), the following sentence (and the same kind of sentence) is acceptable for some native speakers, while it is marginally acceptable or unacceptable for others.

(i) John will say on the twentieth of May that he arrived tomorrow.

(Comrie (1985:113))

It is supposed that (i) is uttered on the fifteenth of May. My informant, Nina Padden, states that (45) is acceptable, but (i) is a bit odd. It seems to me that a hint as to the explanation of this discrepancy lies in the different characteristic in time reference between *tonight* and *tomorrow*, but I leave it for future research.

**PART III: PREVIOUS APPROACHES TO THE ENGLISH TENSE SYSTEM**

## CHAPTER 9

### CRITIQUE OF PREVIOUS STUDIES

#### 9.0. Introduction

We have so far presented a new compositional theory of the English tense system and demonstrated that it is capable of explaining some major English tense phenomena such as issues concerning perfect sentences, compatibility of certain tenses with certain time adverbials, issues concerning future expressions, and issues concerning indirect speech for which previous studies cannot give adequate explanations. The preceding chapters, however, did not show the superiority of the proposed compositional tense theory to representative approaches to the English tense system. The aim of this chapter is thus to prove that our tense theory is superior to major previous tense theories by pointing out problems with them and offering solutions to the mentioned problems within the framework of the compositional tense theory proposed in this study.

The organization of this chapter is as follows. Section 9.1, which is composed of four subsections, is devoted to the survey and the criticism of three major Reichenbachian approaches to the English tense system; subsections 9.1.1-9.1.3 deal with Reichenbach's (1947) theory, Hornstein's (1977, 1990) theory and Smith's (1978, 1981b) theory, respectively, and subsection 9.1.4 summarizes the discussion in the section. Section 9.2 discusses Comrie's (1981, 1985) theory of tense. Section 9.3 is concerned with a series of Declerck's (1986, 1991a, 1991b, 1995, 1997) studies on the English tense system. Section 9.4 is spared for the examination of Klein's (1992, 1994) compositional tense theory. Each (sub)section offers, or at least indicates, alternative solutions to problems with the previous theories after the criticism of them.

#### 9.1. Reichenbachian Approaches

### 9.1.1. Reichenbach (1947)

#### 9.1.1.1. Reichenbach's Analysis

This subsection deals with Reichenbach's (1947) tense system. As is well known, he has developed a tense system where every tense is composed of three points of time: the point of speech (S), the point of the event (E), and the point of reference (R). The point of speech is the time point of a speech act, i.e. the moment of utterance. The point of the event is the time point at which the situation involved occurs. The point of reference is considered to be a time point indicated in a given sentence, and is determined either by a time adverbial or by the context.

Reichenbach claims that English basic tenses can be illustrated by ordering the three points of time in thirteen different ways. The thirteen configurations are as follows:

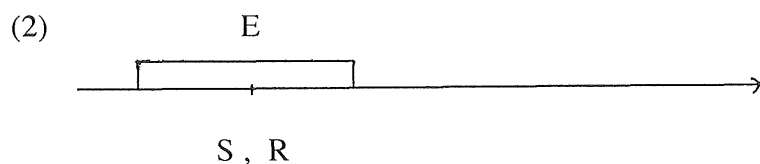
(1)	Traditional Label	Reichenbach's Label
E--R--S	Past Perfect	Anterior Past
E, R--S	Simple Past	Simple Past
R--E--S	_____	Posterior Past
R--S, E		
R--S--E		
E--S, R	Present Perfect	Anterior Present
S, R, E	Present	Simple Present
S--E--R	_____	Anterior Future
S, E--R		
E--S--R		
S, R--E	_____	Posterior Present
S--R, E		Simple Future
S--R--E	_____	Posterior Future

In Reichenbach's terminology, the terms "past", "present" and "future" represent the



position of R relative to S. The terms "anterior" , "simple" and "posterior" represent the position of E relative to R; "simple" stands for the simultaneity relation between R and E.

Reichenbach further argues that in the case of the progressive tense and the construction *be* plus adjective, the time where the relevant situation (or event) occurs is considered to be a stretch of time, representing a time-span.<sup>1</sup> Thus, for example, a sentence in the progressive form like *Mary is singing* and a sentence in the *be* + adjective construction like *Tom is kind* are both schematized as follows:



#### 9.1.1.2. Problems with Reichenbach's Analysis and Their Solutions in Our Compositional Tense Theory

Although Reichenbach's tense system is productive and has no doubt been influential, there are a lot of problematic points with his analysis, and, as a result, his theory has been criticized by many linguists. This subsection points out some of them which are directly relevant to our compositional tense theory.

First of all, Reichenbach's system generates more possibilities than are actually to be found in natural language (cf. McCoard (1978:90-91) and Declerck (1991b:225-226)). For example, he admits three different future perfect tenses whose structures are schematized as S--E--R, S, E--R, E--S--R, respectively; this amounts to saying that the future perfect tense is three-way ambiguous (cf. Comrie (1981:26)). However, this runs counter to the fact that the semantic structure of the future perfect merely expresses 'R comes after S and E comes before R'; the tense form itself does not refer directly to the relation between S and E. Consider (3):

- (3) Naomi will have seen *Back to the Future III* by next Sunday.

All sentence (3) suggests is that the event time of Naomi's seeing *Back to the Future III* comes before the point of reference clarified by the time adverb *by next Sunday*, which in turn comes in the future relative to the point of speech. According to Comrie (1981:26), the reason why in this case E is interpreted as coming after S is a pragmatic one, so it is logically possible that E is interpreted either as simultaneous with S or as coming before S if appropriate contexts are given. However, the point is that the possible three relations between E and S are pragmatic variants rather than express structural ambiguity; i.e., the future perfect in (3) is vague, having only one temporal structure. This kind of problem seems to happen because Reichenbach mixed up the semantic structure of a tense with the interpretation value of that tense. In our compositional tense theory, the first stage of the tense-interpretation level deals with the (basic) semantic structure of a given tense and the following stages deal with how we can achieve specific interpretations of the tense under the influence of factors such as the context (see Introduction and section 3.2.2 for details), so that the problem under discussion does not arise.

A second problem to note is that Reichenbach regards the event time as expressing a stretch of time only in the case of the progressive form and the *be* + adjective construction. However, habitual and generic sentences also represent their event times as time-spans, as in (4):

- (4) a. Ken plays tennis (every day).  
b. Beavers build dams.

In our tense theory, the length of the event time is determined subjectively and in every sentence it can be possibly viewed either as a point or as a period (see section 1.4).

A third problem to be criticized is the characterization and the status of the point of reference (R). First, although Reichenbach simply stated that R is a time between the point of the event (E) and the point of speech (S), introducing it for the first time when he describes the temporal structure of the past perfect tense, many linguists following him

have agreed that R is the base time for the calculation of E; and this may be the case. If so, as Prior (1967:13) points out, it is unnecessary to draw a sharp distinction between S and R because S is the first base time which usually serves as the starting point for the calculation of all the temporal relations.

Second, it should also be noticed that E and R are not exclusive temporal notions (cf. Declerck (1991b, 1997)); it is possible that E and R are the two sides of the same coin. Consider (5):

(5) John had left when Mary arrived.

Here, the point of the event of the *when*-clause functions as the point of reference before which the point of the event of the main clause comes. This means that the point of the event in a clause can serve as the point of reference in another clause, so that E and R are not completely distinct primitives, and the character of R is obscure.

Third, although Reichenbach claims that R is the time which is specified by a time adverbial, E can also be specified by a time adverbial, as in (6):

(6) John had left at 3 p.m.

Sentence (6) is ambiguous in two ways with respect to the specification by the time adverb: *3 p.m.* can specify either R or E, depending on the context (cf. Comrie (1981, 1985), Hornstein (1977, 1990), and Smith (1978)).

Fourth, as Prior (1967:13) mentions, Reichenbach's system is too simple to describe the temporal structure of complex-tensed sentences like those in (7) (cf. Prior (1967:13) and McCoard (1978:92)):

- (7) a. Mary would have left there by that day.  
b. I shall have been going to see John.

In (7a), for instance, the temporal structure is:  $R_1--E--R_2--S$ . This suggests that Reichenbach's system has to introduce one more primitive, i.e.  $R_2$ , when treating complex-tensed sentences like those in (7). This undermines the generative aspect of his

system, which concerns the heart of his theory.<sup>2</sup> I note incidentally that Reichenbach's system as it stands cannot analyze sentences like those in (8) in that since they contain two adverbs, his system requires two points of reference which are to be specified by the two time adverbs:

- (8) a. Now I shall go tomorrow, for sure. (McCoard (1978:90))  
b. Now we will have no money at the end of the month.

(Huddleston (1969:789))

I think that the above problems as to the point of reference derives from the fact that Reichenbach himself did not define the point of reference. As we have seen in section 1.4, Reichenbach's point of reference is a complex temporal notion, and, thus, we have divided it into more than one notion and constructed an alternative tense theory which can solve the above four problems, as we have already shown.

A fourth problem to be mentioned is the way of Reichenbach's treatment of *will* (*shall*). Observe (9):

- (9) a. Now I shall go.  
b. I shall go tomorrow.

(9a) and (9b) have the temporal structures S, R--E and S--R, E, respectively. According to Reichenbach, these two are variants of the same tense, i.e. the simple future tense. However, this treatment may pose a problem of whether or not the sentences in (10) are also viewed as representing the simple future tense because their temporal structure is also either S, R--E or S--R, E.

- (10) a. Tom may leave tomorrow.  
b. Mary can go tomorrow.

It is dubious to regard these sentences as representing the simple future tense. Moreover, Reichenbach did not refer to the relation between future *will* and modal *will*, though they are very closely related to each other. For my treatment of this, see chapter 7 and section



cannot show that *the day before* is a relative time adverb which refers to the time point based on the matrix time. In order to express this, two modifications are possible. One is to consider that a time adverb can specify E, and, the rule of the permanence of the reference point is assumed to be operative. If we consider this way, the problem under consideration is resolved.

$$(14) \text{ MTC: } \quad E_1, R_1--S$$

$$\quad \quad \quad |$$

$$\text{CC: } \quad E_2 -- R_2--S$$

However, this solution poses another problem. In (14), the past tense in the CC results in having the same temporal structure as the past perfect, for the temporal structure of the past perfect is E--R--S in Reichenbach's theory (cf. section 5.3.1).

The other way of modification is to distinguish between the two tense structures by introducing one more R into the temporal structure of the CC tense, as in (15):

$$(15) \text{ MTC: } \quad E_1, R_1 -- S$$

$$\quad \quad \quad |$$

$$\text{CC: } E_2, R_{2b} -- R_{2a}--S$$

In this case, we do not have to assume that E is also specified by a time adverb. However, this modification vitiates the generative aspect of Reichenbach's system, and, thus, is viewed as undesirable.<sup>3</sup> For the solution to these problems about tense phenomena in indirect speech complements, see chapter 8.

### 9.1.2. Hornstein (1977, 1990)

Hornstein (1977, 1990) has developed Reichenbach's tripartite analysis of the tense system within the framework of autonomous syntax. Since it is the latest and comprehensive version of his analysis, I will concentrate on Hornstein (1990) in this section: I will first summarize his theory and then point out some problems with it,

giving an alternative analysis in our compositional tense theory.

#### 9.1.2.1. Hornstein's Analysis

Following Reichenbach, Hornstein also takes the position that the three time points, i.e. the S point (S), the R point (R) and the E point (E), and the two time relations, i.e. the relation of linearity (represented by a line) and that of associativity (represented by a comma), are primitives to form a finite tense structure. The relation of associativity expresses a simultaneity relationship between two time points; the relation of linearity shows not only that a time point located at the left hand of another time point is seen as temporally earlier, but also that the order of the two points is important. Take the tense structure E, R--S, for example. The E point is associated with the R point and thus they are simultaneous with each other. Since in Hornstein's system the relation between S and R represents (absolute) tense, the tense structure under consideration expresses a variant of past tense. The tense structure R, E--S also represents a variant of past tense because the relation of the relative position between S and R is that of anteriority, but it is viewed as expressing a different tense from the one whose tense structure is E, R--S because the positional relation between E and R of the R, E--S structure is different from that of the E, R--S structure.

Hornstein admits the following six basic tenses (BTSSs) in English:

(16) present	(S, R) ° (E, R)
past	(R--S) ° (E, R)
future	(S--R) ° (E, R)
present perfect	(S, R) ° (E--R)
past perfect	(R--S) ° (E--R)
future perfect	(S--R) ° (E--R)

Here, a small circle symbolizes a compositionality operator which says that the R point in





associated with each other in the DTS. The ungrammaticality of sentence (18c) is explained in a similar way. The sentence also violates the first part of the CDTS; moreover, it violates the second part of the CDTS because the relation of the relative position between S, on one hand, and R and E, on the other, in the DTS is changed in comparison with that in the BTS.

#### 9.1.2.2. Problems with Hornstein's Analysis and Their Solutions in Our Compositional Tense Theory

Although Hornstein's analysis is systematic and solves some problems with Reichenbach's original analysis, his analysis is still problematic in some respects.

First, his analysis cannot explain why English present perfect forms cannot go with DTP adverbials like *yesterday* and *at four o'clock*, as shown in (20):

- (20) a. \*Yoko has left for Singapore yesterday.  
 b. \*Mana has played the *koto* at four o'clock.

Since Hornstein admits that temporal adverbials can modify either the R point or the E point, his system predicts that the sentences in (20) are grammatical because DTP adverbials referring to the past modify the E point in the past. But the fact is that the sentences are ungrammatical (or unacceptable). The DTS of the present perfect in (20a) is as follows:

- (21)           E--R, S  
                   |  
               yesterday

There is no contradiction between the time referred to by *yesterday* and the time position of the E point. Nevertheless, (20a) is unacceptable. Thus, Hornstein's analysis would require an ad hoc semantic or pragmatic explanation for the fact.<sup>5</sup> The compositional tense theory proposed in this thesis can give a systematic explanation for this fact (see chapter 6 for details).

Secondly, Hornstein's analysis cannot distinguish the tense structure of the simple present tense referring to the future from the tense structure of the simple future tense.

Consider the following:

(22) Emily will leave tomorrow.

(23) Emily leaves tomorrow.

Both (22) and (23) have the same DTS, as in (24):

(24)            S--R, E  
                       |  
                       tomorrow

Given that both the future tense in (22) and the simple present tense in (23) have the same tense structure at the interpretation level, i.e. the same DTS, Hornstein's theory cannot distinguish the meaning conveyed by the *will*-sentence in (22) from the meaning conveyed by the simple present sentence in (23), i.e. the scheduled future. With our compositional tense theory, this difference of meaning is reflected in the difference in temporal structure between the two sentences, for (22) is seen as having two event times, one associated with *will* and the other with *leave*, while (23) is viewed as having only one event time, i.e. the event time of *leave* (cf. sections 2.1.2 and 3.2.1).

Thirdly, as Declerck and Depraetere (1995:302) point out, Hornstein's analysis wrongly predicts that sentences like those in (25) are grammatical, which they are not.

(25) a. \* John will sing as we will leave the hotel.

b. \* Grannie will walk home if she will miss the last bus tonight.

(Declerck and Depraetere (1995:302))

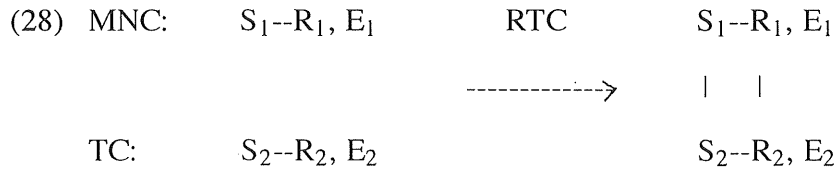
Hornstein proposes a rule like (27), which is intended to combine tenses into multi-tense complexes, and which is assumed to work in an environment like (26):

(26) [S ...TNS<sub>1</sub>... [adjunct TC [S...TNS<sub>2</sub>...]]], where TC is a temporal connective  
 e.g. *when* or *after*.

(27) RTC (rule for temporal connectives): In (26), write the BTS of TNS<sub>2</sub> under

the BTS of TNS<sub>1</sub>. Associate the S points. Associate the R points by moving R<sub>2</sub> to R<sub>1</sub>, placing E<sub>2</sub> accordingly.

Here TNS means "tense structure". The point here is that although sentences (25a) and (25b) both preserve the CDTS shown in (17) above, they are ungrammatical. To illustrate this point, take (25a) as a sample case. The BTSs of the main clause (MNC) and the temporal clause (TC) are combined by the RTC, which is shown in (28):

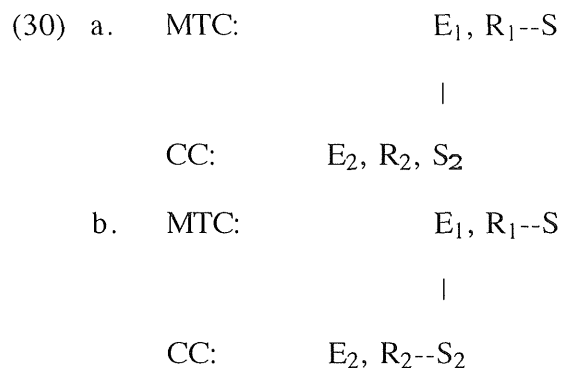


Both the MNC and the TC have the future-tense structure S--R, E. Sentence (25a) does not violate the CDTS even after the application of the RTC to it. The same applies to (25b). Within the framework of the tense theory proposed in this thesis, we can explain the phenomenon under consideration as follows: since the relation of the TC and the *if*-clause to the MNC is normally objective in the sense of James (1986) (see section 8.3.3), there is no room for subjective elements like modality (i.e. *will* in this sense) to enter into the TC or the *if*-clause.

Finally, let us point out that Hornstein's analysis poses some problems with respect to the so-called sequence-of-tenses phenomenon. As I have briefly mentioned in note 3 in chapter 8, he presents two rules in order to account for the temporal interpretation of complement clauses (CCs): one rule is the sequence-of-tenses rule, which links the S point of the CC tense with the E point of the matrix clause (MTC) tense; the other is the default rule, which allows the S point of the CC tense to be interpreted as the time of utterance. (Note that Hornstein considers that the S point can anchor to a time other than the time of utterance.) Thus, his analysis predicts that sentence (29) below can receive either the simultaneous or the anterior reading:

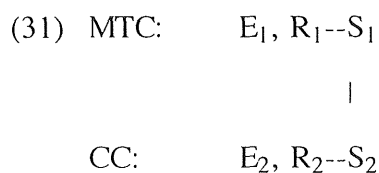
(29) John said that Mary was pregnant.

In the case of the simultaneous reading, the combined multi-tense structure of (29) is shown in (30a); in the case of the anterior reading, the combined multi-tense structure of (29) is shown in (30b):



With the simultaneous reading, the past tense in the CC is considered to be superficial, and, thus, underlying it is the present tense whose structure is E, R, S, as shown in (30a). With the anterior reading, the past tense in the CC is real. When a sequence-of-tenses rule is operative, the S point (i.e. S<sub>2</sub>) of the CC is linked with the E point (i.e. E<sub>1</sub>) of the MTC. Thus, his rule predicts that sentences such as (29) can receive either the simultaneous or the anterior reading.

However, Hornstein's analysis cannot account for why sentences like (29) do not have the posterior reading, where the CC time is interpreted as coming after the MTC time, for his analysis predicts that it is possible when a default rule is operative. This case may be illustrated as follows:



Since the relation between E<sub>1</sub> and E<sub>2</sub> is vague in this case, it is logically possible that E<sub>2</sub> comes temporally after E<sub>1</sub>. However, this is not the case. Thus, his approach cannot explain this phenomenon. Moreover, his analysis cannot give a convincing answer to the question of why the morphological change of the CC tense is brought about when the

MTC tense is past, while it is not when the MTC tense is non-past. Our compositional tense theory can explain these two facts in a systematic and principled way, as we have already done in chapter 8.

### **9.1.3. Smith (1978, 1981b)**

This section first surveys Smith's (1978, 1981b) tense system, which also adopts the Reichenbachian system consisting of the three temporal notions, and, then, points out some problems with her analysis, showing that our compositional tense theory can give answers to the problems.

#### **9.1.3.1. Smith's Analysis**

Smith's analysis is also based on the Reichenbachian tripartite tense system where every (finite) tense structure is composed of the three temporal notions, i.e. the reference time (R), the event time (E) and the speech time (S).<sup>6</sup> However, her analysis derives from the main stream of Reichenbachian approaches such as Reichenbach's and Hornstein's analyses. First, she assumes that English has only two (absolute) tenses, whereas Reichenbach and Hornstein assume that English has three (absolute) tenses. Second, while Reichenbach and Hornstein insist that the reference time is established only by tense elements (tense morphemes and tense markers), Smith insists that the reference time is established by the combination of tense elements and time adverbials.

According to Smith, a basic unit of temporal reference in English is a composite consisting of a tense and a time adverbial, and temporal expressions (including tenses, time adverbials, and so on) are classified into three types in terms of their relational values. Let us first consider (32), which is a diagram of classification of English time adverbials.

(32) Classification of Temporal Adverbials:

ANTERIOR (<--)

yesterday; ---ago; last ---	Explicitly Past
on Tuesday; in April; etc.	Unanchored

SIMULTANEOUS (=)

now; right now; at this moment;	Explicitly Present
---------------------------------	--------------------

POSTERIOR (-->)

tomorrow; next---; in---	Explicitly Future
on Tuesday; in April; etc.	Unanchored

Let us move to the case of tense. She considers that the present tense has the relational value of simultaneity and the past tense that of anteriority. Note in passing that in her system auxiliary *have* has the relational value of anteriority and temporal adverbials containing prepositions are assumed to have any of the three relational values (i.e. anteriority, simultaneity and posteriority), depending on the characteristics of propositions. Thus, which relational value a given English temporal expression has is represented schematically as follows:

(33) ANTERIORITY (<--)  
SIMULTANEITY (=)  
POSTERIORITY (-->)

past tense	present tense	
past adverbial	present adverbial	future adverbial
unanchored adv.	zero adv.	unanchored adv.
before, etc.	at, on, $\emptyset$ , etc.	after, etc.
auxiliary <i>have</i>		
Past RT	Present RT	Future RT

Here, RT means "reference time".

In Smith's system, the combination of tenses and time adverbials establishes the reference time of a given sentence; the reference time may be past, present or future. To

illustrate this system, let us consider the following sentences:

- (34) a. I am playing now.
- b. Chris is working tomorrow.
- c. Emily leaves on Thursday.
- d. Scott won the race a week ago.
- e. I won the race on Thursday.

Take (34b) and (34e) for example. In (34b), the tense is present and the time adverbial *tomorrow* is future; in this combination, the sentence at issue establishes a future reference time, thus referring to the future. In (34e), the tense is past and the time adverbial *on Thursday* is an unanchored type; if a time adverbial which does not have its intrinsic relational value goes with a past tense, the sentence is viewed as establishing a past reference time.

The possible combinations of tenses and time adverbials which can establish the reference time by themselves are the following five:<sup>7</sup>

(35)	tense	adverbial	RT
a.	Present	Present	Present
b.	Present	Future	Future
c.	Present	Unanchored	Future
d.	Past	Past	Past
e.	Past	Unanchored	Past

#### 9.1.3.2. Problems with Smith's Analysis and Their Solutions in Our Compositional Tense Theory

This subsection deals with some phenomena which Smith's analysis cannot explain, but the compositional tense theory proposed in this thesis can account for.

A first phenomenon to be noted concerns Smith's treatment of the present perfect

with time adverbials. Observe (36):

(36) They have eaten all the fudge while you were out.

She explicitly says that in the case of the present perfect, a time adverbial can modify the event time (see Smith (1978: Section 1.4)), and, thus, in (36) *while you were out* is interpreted as modifying the event time.

The question, then, arises why sentences such as the following are ungrammatical or unacceptable.

(37) a. \* Yoko has left for Singapore yesterday.

b. \* Mana has played the *koto* at four o'clock.

Since in (37) the time adverbials are viewed as specifying the event times, Smith's theory wrongly predicts that these present perfect sentences are perfectly grammatical, which they are not.

As we have seen in chapter 6, our compositional tense theory can account for this difference in acceptability between (36) and (37); since the time adverbials in (37) are p-definite, the sentences in (37) violate the revised P-Definiteness Constraint, and, thus, they are ungrammatical (or unacceptable). On the other hand, the time adverbial *while you were out* in (36) is regarded as b-definite because of the lexical property of *while*, so sentence (36) does not violate the revised P-Definiteness Constraint. Because Smith's theory, which is highly dependent on the role of adverbials, does not distinguish between p-definite and b-definite time adverbials, it results in failure to explain the difference in acceptability between (36) and (37).

A second phenomenon to be discussed concerns the status of the reference time. Smith considers the reference time to be a time indicated in a sentence, and established by the combination of a tense and a time adverbial. However, in cases where the reference time is established, time adverbials can specify the event time either in the case of the present perfect sentence (e.g. (36)) or in the case of the complement clause (CC), which



is exemplified in (38):

(38) She said last Tuesday that Vera left three days ago.

This means that the reference time is not the only time which is modified by time adverbials. Thus, the combination with time adverbials does not guarantee the reason for the existence of the reference time as an independent time primitive. Moreover, we can say that not only the reference time, but also the speech time and the event time, are times indicated in a sentence when there is no time adverbial in it. It should also be noted that since Smith introduces into her system the notion of "orientation time", which corresponds to Prior's (1967) "reference time", the reference time in Smith's sense does not function as an evaluation pivot from which other times are computed or evaluated. Given these, we can conclude that Smith does not succeed in characterizing the reference time.

This conclusion enables us to say that we do not need the reference time in Smith's sense if we can construct a tense theory where time adverbials specify the event time, as we have already done in the previous chapters. Even in the case of the perfect tense, whose tense structure requires the event time to come before the reference time, our tense theory, based on the AUX-as-Main-Verb hypothesis, allows time adverbials to modify the event time associated with perfect *have*, which can be substituted for the reference time, so the reference time in Smith's sense is not necessary (see chapters 1-3).

Thirdly, the treatment of certain time adverbials like *before lunch* is inadequate in Smith's theory. Observe:

(39) a. John left before lunch. (Binnick (1991:353))

b. Phyllis decorated the cake before midday. (Smith (1978:49))

Take (39a) for example. As Binnick (1991:353) points out, with Smith's analysis the combination of the past tense and the term *lunch* establishes a past reference time and the event time is regarded as coming before the reference time because of the lexical property

of *before* (see the diagram in (33)). Thus, the tense structure of sentence (39a) is 'E--R--S'. However, this structure corresponds to that of the past perfect in the Reichenbachian analysis. This means that we cannot distinguish the past perfect from the simple past in terms of tense structure in some cases within Smith's framework.<sup>8</sup> As we have seen in section 5.3.1, our tense theory can distinguish these two tense structures.

Moreover, as Saito and Suzuki (1982:152) point out, in sentences like the following habitual sentence, no part of the time adverbial *before midday* contributes to the establishment of the reference time on the time line.

(40) John goes to office before midday. (Saito and Suzuki (1982:152))

Thus, in Smith's system the time adverb *before midday* with sentences referring to specific times has to be treated differently from that of the same adverbial with habitual sentences. In our tense theory the time adverbial *before midday* as a whole is viewed as modifying the (sub-)event time. I note in passing that in our tense theory the presence or absence of temporal focus can distinguish habitual sentences from sentences referring to specific times on the time line (see section 3.1 for details).

Finally, Smith does not clarify the relation between the sharing principle and the orientation principle, which are presented to explain tense phenomena in complement clauses (CCs), nor does she provide a motivation for the two principles' operating in indirect speech, as we have mentioned in chapter 8. Furthermore, she does not give any reason for the claim that the sharing principle operates when the matrix-clause (MTC) tense and the CC tense are the same while the orientation principle is operative when the MTC tense differs from the CC tense. What is worse, not only does she herself make obscure the relationship between the two principles by applying the orientation principle to the case where both the MTC and the CC tense are the same, but also she finally reaches the conclusion that the sharing and the orientation principles work only when both the MTC and the CC tenses are the same and two more principles are necessary

when the MTC tense is different from the CC tense. The tense theory proposed in this study does not face these problems, as we have already shown in chapter 8.

#### **9.1.4. Summary**

This section has been concerned with three major Reichenbachian approaches to tense system and pointed out a number of problems with the three approaches. The most problematic point which is common to all the Reichenbachian analyses of the tense system can be ascribed to the fact that they assume that every tense contains an undefined notion of reference time as a temporal primitive. We have also seen briefly that the compositional tense theory proposed in this thesis can explain the problems which the three Reichenbachian analyses cannot account for.

## **9.2. Comrie (1981, 1985)**

### **9.2.1. Comrie's Analysis**

Comrie's theory of tense is different from the Reichenbachian theory of tense (including Reichenbach (1947), Hornstein (1977, 1990), Smith (1978, 1981b), among others) in that he rejects the view that every (finite) tense consists of the three primitives of time, i.e. the speech time (S), the event time (E) and the reference time (R).<sup>9</sup> He proposes a tense system where absolute tenses, i.e. the present, the past and the future tense, are composed of only S and E, while some complex tenses such as the conditional perfect tense (e.g. *would have gone*) requires more than one reference time. On the other hand, like the Reichenbachian approach his system also needs three temporal relations, i.e. simultaneity, anteriority and posteriority, which are symbolized by 'simul', 'before' and 'after', respectively. Comrie presents the following eight temporal structures of finite tenses.

(41) present tense	E simul S
past tense	E before S
future tense	E after S
pluperfect	E before R before S
future perfect	E before R after S
conditional tense	E after R before S
conditional perfect	E before R <sub>1</sub> after R <sub>2</sub> before S
future-in-the-future tense	E after R after S

Comrie's system is radically different from the Reichenbachian system in that the former abandons the generative aspect of tense theory.

It should be stressed that in Comrie's system, the present perfect and the simple past tense are not different from each other in terms of time location (they both have the structure 'E before S'); they are distinguished from each other only in terms of current relevance. Compare (42a) with (42b):

- (42) a. I saw Tom this morning.  
 b. I have seen Tom this morning.

Although in each sentence the situation of the speaker's seeing Tom took place in the past, the present perfect sentence in (42b) expresses current relevance, namely, that the situation at issue has an influence on the present situation. Thus, it is the case that in (42b) both the event time and the speech time are located in the time period specified by *this morning*, while in (42a) the event time does not necessarily come in that time period.

### 9.2.2. Problems with Comrie's Analysis and Their Solutions in Our Compositional Tense Theory

By abandoning the generative aspect of the tense theory, Comrie can solve such problems as the overgeneration problem about the future perfect or lack of the structure

for the conditional perfect. However, his system still cannot solve some problems; moreover, it results in posing further problems.

First, given that Comrie considers the "before" relation between X and Y as expressing 'X is completely before Y', and defines the event time as "a time point or interval which is occupied by the situation to be located in time" (Comrie (1985:122-123)), his system cannot deal with the fact that unbounded situations with the past tense can hold at the speech time or continue beyond the present moment, as exemplified in (43):

- (43) a. Natsumi was sick last night.  
b. Hideto was singing when I telephoned him a few minutes ago.

As Comrie (1985:41-42) himself admits, in (43a), for example, the situation of Natsumi's being sick can continue up to the present and even into the future. Thus, the event time involved in (43a) can reach or go beyond the speech time. However, the structure for the simple past tense, i.e. 'E before S', by definition, cannot represent this possibility, for in his system the event time must come wholly before the speech time in the case of the past tense. In the case of our compositional tense theory, this kind of problem does not come about because I define the event time as the time point or period of a relevant part of the event or situation which is talked of in a sentence, and, thus, it does not necessarily correspond to the time of the full situation (see section 1.4 and Declerck (1991b, 1997)).<sup>10</sup>

A second problem which Comrie's system is faced with is that his system cannot explain the close relationship between so-called future *will* and modal *will* because he admits an English future tense, usually represented by *will*-sentences, as a separate grammatical category of future time reference (see Comrie (1985:48)). However, seen from both a synchronic and a diachronic point of view, future *will* and modal *will* are semantically closely related and thus cannot easily be separated from each other. Observe

the following:

- (44) a. It will rain tonight.  
b. I will go camping next Sunday if the weather is fine.

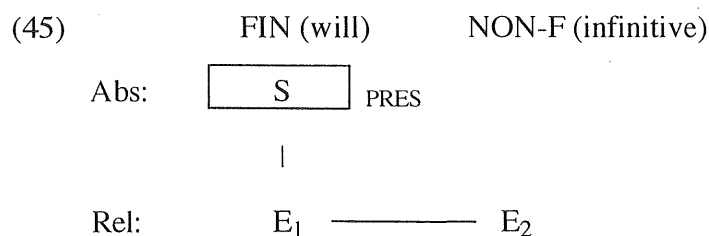
Let us start with a synchronic aspect of the close relationship under consideration. In (44a), for example, *will* can be said to express futurity. However, it can also be said to express a prediction holding at the speech time. Thus, it is not only unnecessary to distinguish the future tense marker *will* from the modal verb *will*, but also hard to explain the close relationship between them if we admit the sharp distinction between them, because we would be faced with the question of why the same form is used to express two grammatical-conceptually distinct categories, i.e. the future tense marker and the modal verb (here, we can ignore the possibility that the two *wills* are homonyms) case of homonymy here); on the other hand, it is easy to explain the phenomenon at issue if we consider the relation between future *will* and modal *will* to be that of polysemy, and thus both senses are reflected in the same form, i.e. the predicate *will*.

One might argue that *will* is a future tense marker because sentences with *will* are unmarked cases of future time reference. But we can say that this is simply because we usually cannot make an assertion, but rather make a prediction, about future situations; thus, the simple present and the present progressive are marked expressions of future time reference (see the discussion in sections 8.2.3 and 8.3.2).

Moreover, if we distinguish the future tense marker *will* from the modal verb *will*, we cannot explain the fact that sentence (44b) can be interpreted as representing the volitional sense and the futurity sense at the same time. With respect to Comrie's treatment of *will*, since the two *wills* are interpreted as constituting their own categories, and, thus, they are viewed as being in an ambiguous (or homophonous) relation, it follows that if the volitional sense is chosen, the *will* at issue cannot express futurity, and, vice versa; for two distinct senses which belong to two grammatical-conceptually

distinct categories cannot be true at the same time. Thus, under Comrie's view we cannot explain the reading where the *will*-sentence in (44b) is viewed as expressing both futurity and volition at the same time.

With our compositional tense theory, this kind of problem does not arise. In our tense theory, both sentence (44a) and the main clause in (44b) are to have the following temporal structure (though the irrelevant details are abstracted away here):



As is clear from the R-component (symbolized by 'Rel'), the *will*-sentence consists of two event times with one in the present area and the other in the future area. Thus, whether E<sub>1</sub> is associated with prediction (e.g. (44a)) or with volition (e.g. (44b)), the *will*-sentence (which refers to a future situation) can always express futurity because E<sub>2</sub> is located in the future area. Therefore, our tense theory can explain the fact that sentences like those in (44) can be interpreted as expressing futurity and modal senses at the same time. I note in passing that in the case of simple (or pure) future, E<sub>1</sub> is viewed as an orientational event time, and, thus, the temporal position of E<sub>2</sub> is focused on because the orientational event time is associated with a situation whose semantic content is unfilled or, more precisely, very general.<sup>11</sup>

Let us now turn to a diachronic aspect of the close relationship between so-called future *will* and modal *will*. It is a clear fact that, as stated or implied in Bybee, Perkins and Pagliuca (1991, 1994), Comrie (1989), and Traugott (1989), the derivation stream of *will* is: volitional *will* --> future (weak epistemic) *will* (including simple and predictive future) --> epistemic *will* (referring to a present situation). Thus, if (pure) future *will* is treated as a future tense marker, it follows that in the course of the derivation, the

categorical change of grammatical concepts happened twice: the first change is the one from a modal verb (volitional) to a tense marker and the second change is the one from a tense marker to a modal verb (epistemic). In this case, however, we cannot explain what motivated the second change, namely, why after *will* goes from a modal verb to a tense marker, it goes from a tense marker back to a modal verb again.<sup>12</sup> By contrast, with our compositional tense theory, where future *will* is treated as a modal verb, we do not face such a difficult problem: the derivation stream of *will* is carried out in the same grammar-conceptual category, i.e. the category labeled "modal sense." For how our temporal schema of *will* can represent the derivation stream in question, see chapter 7. These problems basically apply to other tense systems (including Reichenbach (1947), Hornstein (1977, 1990), Declerck (1991b, 1997), Declerck and Depraetere (1995), Klein (1994)) which admit *will* as a future tense marker and thus consider that English has the future tense as an absolute tense.

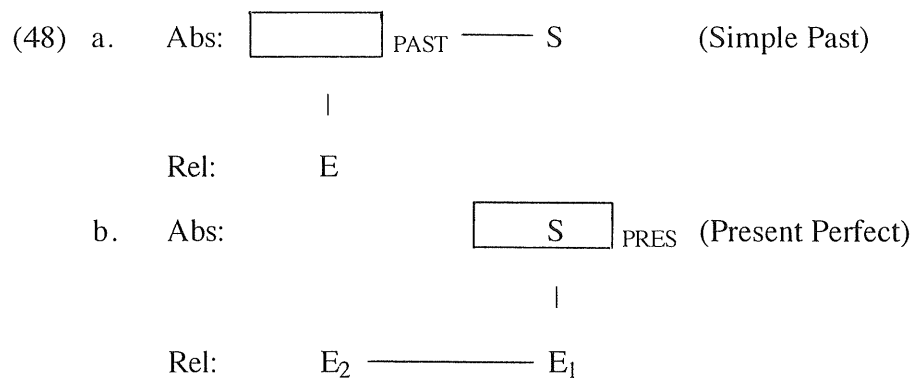
A third point to be criticized is that, as Declerck (1991b:236) also points out, Comrie's system, where the present perfect has the same temporal structure as the simple past, cannot explain why the present perfect cannot go with DTP adverbials (i.e. time adverbials of definite time position) referring to the past. Compare (46) with (47):

- (46) a. \* Yoko has left for Singapore yesterday.  
       b. \* Mana has played the *koto* two hours ago.
- (47) a. Yoko left for Singapore yesterday.  
       b. Mana played the *koto* two hours ago.

Since in Comrie's theory the present perfect and the simple past have the same temporal structure 'E before S', it should be predicted that deictic adverbs of past time reference such as *yesterday* or *two hours ago*, which are compatible with the simple past tense, can go with the present perfect; but this is not the case. Comrie might claim that this difference in compatibility with DTP adverbials between the present perfect and the



simple past can be attributed to perfect aspect. However, there is no indication in Comrie's temporal structure for the present perfect that the present perfect represents current relevance.<sup>13</sup> In this respect, Comrie's treatment of the present perfect is insufficient. In our compositional tense theory, by contrast, the present perfect and the simple past have different tense structures, as shown in (48):



Thus, our tense theory predicts that the present perfect behaves differently from the simple past, so that we can attribute the difference in compatibility with DTP adverbials referring to the past between the present perfect and the simple past to their differences in temporal structure. Moreover, in the compositional tense theory it is predictable that the present perfect expresses current relevance because its temporal structure in (48b) shows that the event time of the resultant state E<sub>1</sub>, i.e. the event time of perfect *have*, is viewed as holding at the speech time (for further discussion, see sections 3.1.2 and 3.2.2, and chapters 4 and 5). As for the fact that the present perfect form cannot go with DTP adverbials, we have already explained the reason in terms of the revised P-Definiteness Constraint (see chapter 6).

Furthermore, Comrie's theory of tense cannot express the temporal value of the continuative use of the present perfect appropriately. Consider (49):

(49) I have known Mana since 1991.

In (49) the event time of the speaker's knowing Mana continues up to the speech time. Recall that in Comrie's theory the temporal structure 'E before S' means that E comes

wholly before S. It is thus the case that his tense theory cannot describe the past situation's continuing up to the present moment with the temporal structure of the present perfect. In our tense theory, by contrast, this phenomenon can be explained in a motivated way in terms of the interaction between the dual structure of the perfect tense and the feature CONTINUOUS, as we have seen in chapter 4.

$$(50) \boxed{E_2} \mid \boxed{E_1} , S$$

The schema in (50) is read as  $E_2$ 's merging into  $E_1$ . Thus,  $E_2$ , the event time of the past participle complement, is appropriately interpreted as continuing up to the present, which is compatible with the temporal value of the continuative use of the present perfect.

Finally, within Comrie's framework, we not only have to admit two distinct temporal structures for the simple past, but also cannot distinguish the temporal structure of the simple past from that of the pluperfect in indirect speech complements, as we have already mentioned in section 5.3.1. Observe (51):

- (51) a. One day, Naomi said to Oscar that she had seen him the day before.  
 b. One day, Naomi said to Oscar that she saw him the day before.

In both cases, the reference point of the complement-clause (CC) tense is the matrix-clause (MTC) time. This indicates that in Comrie's system, the simple past in the CC has the temporal structure of 'E before R before S', which is different from that of 'E before S' that Comrie reserves for the simple past, and which is the same as that of the pluperfect. With our compositional tense theory, how the simple past in the CC differs from, but is similar to, that in the MTC or independent clauses is explained in terms of the two viewpoints, i.e. the private self's and the public self's viewpoints (see chapter 8), and how the simple past tense in the CC differs from the pluperfect is accounted for in terms of the notion of single vs. dual structure (see chapter 5).

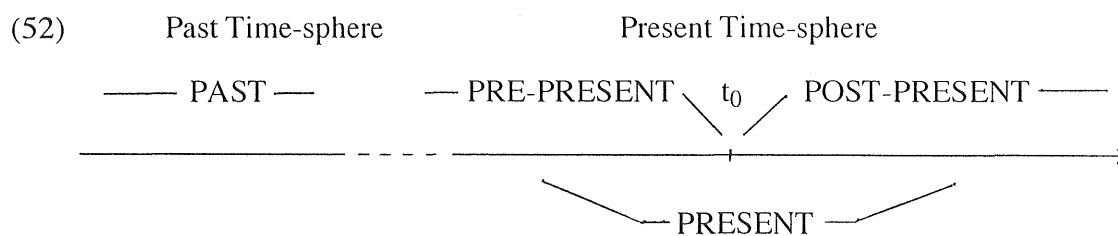
### 9.3. Declerck (1986, 1991a, 1991b, 1995, 1997)

When we talk about the English tense system, we cannot go without a series of Declerck's (1986, 1991a, 1991b, 1995, 1997) studies on it, because they constitute one of the most influential theories of English tense. I will refer mainly to Declerck (1991b) when summarizing his theory of English tense not only because it is the most comprehensive study and involves the most detailed discussion, but also because it constitutes the base for his following studies.<sup>14</sup> In this section, I will first outline Declerck's tense theory briefly and then point out some problems with his theory.

### 9.3.1. Declerck's "Temporal Domain" Analysis

This subsection summarizes Declerck's theory of tense. Before going further, we should note one point: he presents a rather complicated tense system consisting of more than three times as primitives,<sup>15</sup> but for the present discussion it will be sufficient to say that as with other tense theories, his system also needs the speech time (or  $t_0$ ), the time of orientation and the time of the situation (or the event time).

Let us now outline his system.<sup>16</sup> I will start with how time is conceptualized in English grammar. He primarily divides time into two parts, i.e. the past time-sphere and the present (or non-past) time-sphere. The past time-sphere is a time-span of indefinite length which lies completely before the temporal zero-point or  $t_0$  (usually the speech time); the present time-sphere is a time-span of indefinite length which includes  $t_0$  and is divided into three sub-portions, i.e. the pre-present sector (the portion that precedes  $t_0$ ), the present sector (the portion that  $t_0$  is at the center of) and the post-present sector (the portion that follows  $t_0$ ). This is schematically represented as follows:

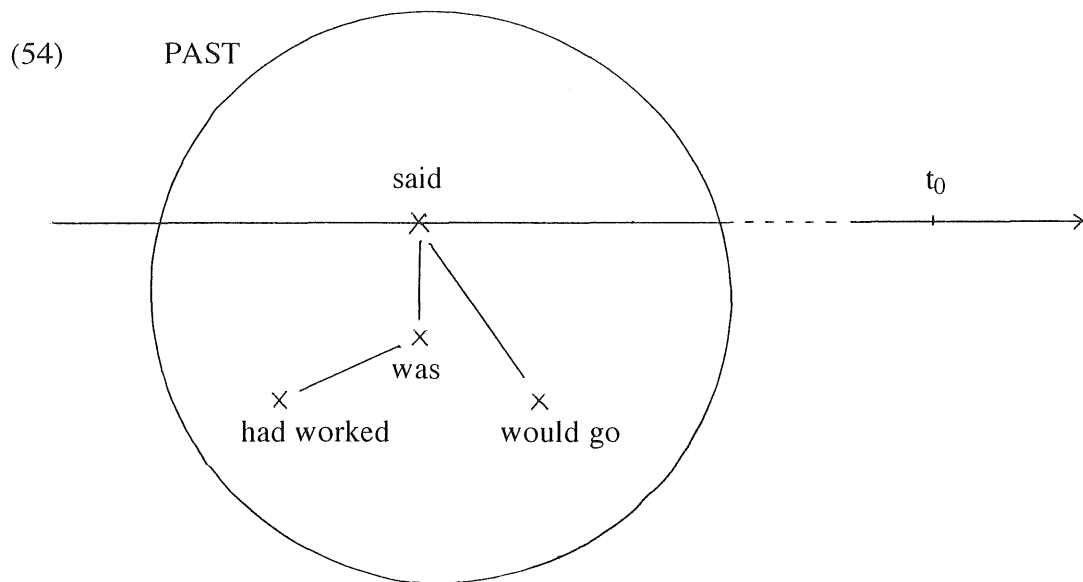


The dotted line means a "subjective break" between the two time-spheres.<sup>17</sup> The four capitalized portions are referred to as absolute sectors: the past sector is associated with the simple past tense, the pre-present sector with the present perfect, the present sector with the present tense, and the post-present sector with the future tense.

Introducing the notion of *temporal domain* characterizes Declerck's tense theory. A temporal domain is defined as a time interval comprising the times of several situations which are related to each other.<sup>18</sup> To illustrate the point, consider (53):

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

In (53), there is only one temporal domain in the past time-sphere (a past domain for short) which consists of the four times of the situations (or event times), i.e. the time of John's utterance, the time of John's being tired, the time of John's working hard and the time of John's going to sleep. Of the above four verb forms (i.e. *said*, *was*, *had worked* and *would go*), only the first verb is regarded as expressing an absolute (past) tense in that the time represented by it is directly related to the speech time or  $t_0$  and the verb form establishes a past domain; on the other hand, the other three are regarded expressing relative (past) tenses in that the times represented by them are related first to the relevant time of orientation, and express temporal relations in that past domain: the pluperfect *had worked* represents anteriority, the simple past *was* simultaneity, the conditional tense *would go* posteriority. The time established by an absolute tense form (e.g. *said*) functions as a central time of orientation. These points are diagrammatically represented as follows:



A circle denotes a temporal domain. A vertical line represents simultaneity, whereas a slanting line represents either anteriority or posteriority. What is to be kept in mind is that in Declerck's system, relative past tense, which represents the simultaneity relation in a past domain, and absolute past tense, which represents anteriority relative to  $t_0$  and establishes a past domain, are homophonous (see Declerck (1995:4;31)).<sup>19</sup>

The juxtaposition of two or more absolute tenses brings about a shift of temporal domain because every absolute tense establishes its own temporal domain. Thus, consider (55), for example:

- (55) a. The man left the town and *was* never *heard* of again.  
 b. John said that Mary *witnessed* the accident.

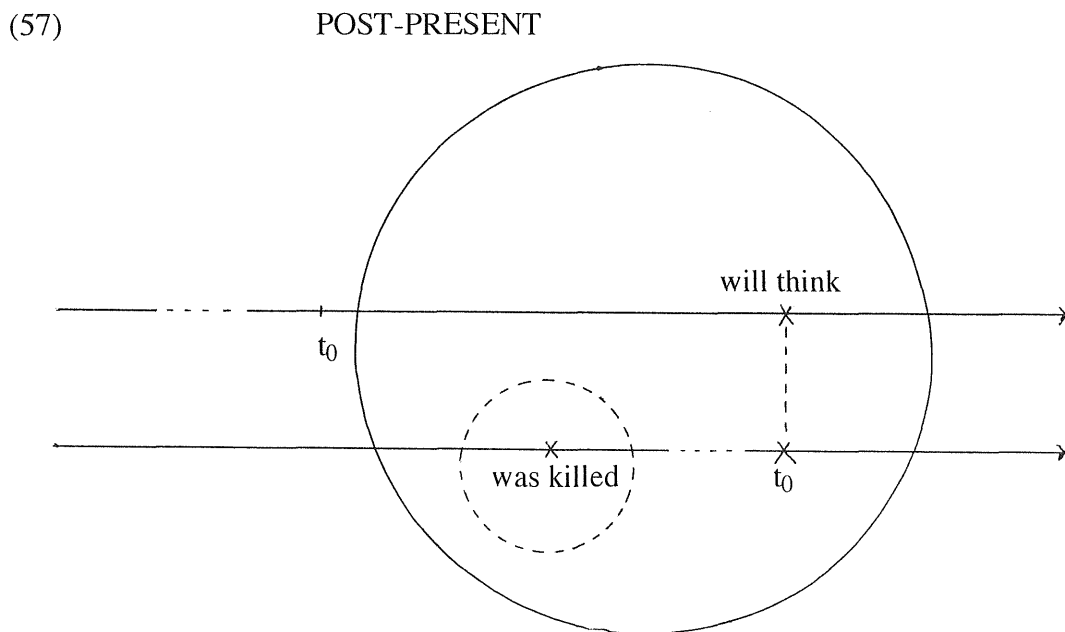
In either case the italicized past tense is viewed as an absolute past tense representing anteriority relative to  $t_0$  because the temporal relation between the past tense in question and the preceding past tense is not the simultaneity one.<sup>20</sup> Thus, the italicized past tenses represent their event times as the central times of orientation for their own temporal domains.

The notion of *shift of temporal perspective* also plays an important role within

Declerck's system. He defines the notion as "the phenomenon that a situation which is interpreted as lying in a particular sector is sometimes treated as if it belonged to another absolute sector" (Declerck (1995:10)). This phenomenon is exemplified by the case where a situation described by a simple past tense in a temporal domain in the post-present sector (a post-present domain for short) is treated as if it belonged to the past time-sphere, i.e. another absolute sector. Consider (56):

(56) [If we dump his body in Soho after we have killed him] the police will think that he *was killed* there.

Here, the time of the situation referred to by the simple past tense *was killed* is viewed as anterior to the time of the police's thinking in a post-present domain. This temporal relation is schematically represented as follows:



A dotted circle symbolizes a temporal sub-domain. In using the past tense *was killed*, the temporal zero-point ( $t_0$ ) is shifted from the speech time to a future time, i.e. the time of thinking, in the post-present domain. The past tense in question is referred to as a *pseudo-absolute past tense* because it has both a characteristic of absolute tense, namely,

that it establishes a temporal domain, and one of relative tense, namely, that it represents its time of the situation as not directly related to the speech time as the relevant time of orientation.

### **9.3.2. Problems with Declerck's Analysis and Their Solutions in Our Compositional Tense Theory**

Although it is one of the most effective and comprehensive tense theories, Declerck's tense theory also encounters a number of problems.

A first problem is that, as we have already mentioned as a second problem with Comrie's analysis, Declerck's theory cannot account for the close relationship between modal *will* and future *will*. Since Declerck also admits the existence of the English future tense represented mainly by what is called the future tense marker *will*, that is, he considers that the future tense marker *will* and the modal verb *will* are ambiguous (more precisely, homophonous), he cannot explain the close relationship between future *will* and modal *will*, let alone the reason why some *will*-sentences can have both futurity and modal connotations at the same time. Furthermore, his theory also faces the same diachronic problem as Comrie's theory, i.e. no motivation for the "going and returning" kind of grammatical-category change: the first change goes from a modal verb (volitional) to a future tense marker and the second one from a future tense marker to a modal verb (epistemic) again. As we have already mentioned in section 9.2.2, our compositional tense theory does not produce these problems at all.

A second problem to be criticized concerns Declerck's treatment of the present perfect. He considers that the present perfect is used when the relevant situation is situated in the pre-present sector, whereas the simple past tense is used when the relevant situation is located in the past time-sphere (or the past sector); this difference of the time sectors is the difference between the two tenses. He does regard the current relevance

represented by the present perfect as an implicature. However, if the current relevance (or the resultativeness) represented by the present perfect were merely an implicature, we could not account for the difference in acceptability between the (a)- and the (b)-sentences in (58) and (59):

(58) a. ?? I have opened the door, but the door is not open.

(Depraetere (1998:604))

b. I opened the door (a few minutes ago), but it is not open now.

(59) a. ? I have read that novel, but I remember nothing about it.

b. I read that novel, but I remember nothing about it.

(Brinton (1988:11))

The perfect in (58a) is a resultative perfect and the perfect in (59a) is an experiential perfect. As is well known, an implicature is cancelable; thus, if resultativeness or current relevance were just an implicature in the use of the perfect tense, we could not explain why (58a) and (59a) are odd, because on that assumption it is predicted that the content of the second conjunct can cancel the current relevance implied by the first conjunct, which it is not. Thus, Declerck's theory as it stands cannot explain this phenomenon.

On the other hand, in the compositional tense theory proposed in this study, we consider that the semantics of the perfect tense "entails" a resultant state (represented by the event time of perfect *have*), direct or indirect, namely, that a resultant state is incorporated into, and thus consists of, the semantics of the perfect tense, so we can easily explain the phenomenon at issue. In particular, since in my theory the present perfect tense is viewed as consisting of the event time of the past participle complement and that of perfect *have*, which is in turn seen as simultaneous with the speech time, the semantics of the present perfect tense per se can express a resultant state. For example, in (59a), since the (indirect) resultant state (e.g. the state of the speaker's knowing much or something about the novel), which holds at the speech time and is entailed in the (basic)



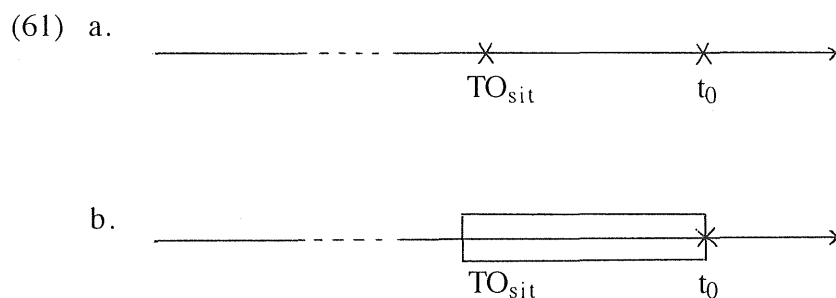
semantic structure of the present perfect tense, is contradictory to the situation referred to by the second conjunct, the sentence is viewed as odd (as we have seen in chapter 4, a perfect sentence can have more than one indirect resultant state while it usually has only one direct resultant state).<sup>21</sup> Since Declerck does not admit the dual structure of the perfect tense, he cannot account for the phenomenon at issue.

Moreover, Declerck's analysis of the present perfect tense cannot deal with the meaning of the following perfect sentences in terms of temporal structure.

- (60) a. A week has elapsed since the preceding scene.  
 b. A month has gone by since then.

(Fenn (1987:74))

As we have seen in chapter 4, the present perfects in (60) have both resultative and continuative overtones. Declerck defines the indefinite perfect (in which the resultative perfect is included) as the perfect whose "situation has reached its terminal point before  $t_0$ ", i.e. bounded, and the continuative perfect as the perfect whose "situation is viewed as still in progress at  $t_0$ ", i.e. unbounded, respectively, giving the following temporal structures to both types of perfects.



The schema in (61a) is for the indefinite perfect and that in (61b) for the continuative perfect.  $TO_{sit}$  represents the event time (or the time of the situation) and the rectangle in (61b) means that the relevant event time holds throughout the period which starts from a certain time in the pre-present sector and reaches the speech time. As is self-evident from the temporal structures in (61), Declerck's theory cannot distinguish the (pure) indefinite

perfect from the perfect in (60), on one hand, and the (pure) continuative perfect from those in (60), on the other; for if he gives the structure in (61a) to the perfects in (60), he cannot distinguish them from the indefinite perfect: if he gives the structure in (61b) to those in (60), he cannot distinguish them from the continuative perfect.<sup>22</sup>

In our compositional tense theory, by contrast, the Janus-faced characteristic of the perfects in (60) is accounted for in the following manner:  $E_2$  (i.e. the event time of the past participle complement) is viewed as merging with  $E_1$  (i.e. the event time of perfect *have*), while the PAP-situation (i.e. the situation described by the past participle complement) itself is seen as conclusive; continuative overtones result from the former and resultative overtones come from the latter. To recapitulate, it is hard for Declerck to attribute the conclusive characteristic of the sentences in (60) to the boundedness nature of the time of the situation ( $TO_{sit}$ ), for in that case  $TO_{sit}$  itself cannot be viewed as reaching the speech time. On the other hand, in our theory the event time of the past participle ( $E_2$ ) itself does not reach the speech time, but rather merges with the event time of perfect *have* ( $E_1$ ) which shares the same time as the speech time;  $E_2$  is indirectly connected with the speech time via  $E_1$ . Now it is clear why Declerck cannot account for this phenomenon. The reason is that he does not admit the dual structure of the perfect tense.

A third problem with Declerck's analysis is that his theory cannot distinguish *will*-sentences from *be going to*-sentences in terms of temporal structure. Declerck (1991b:369-374) divides the future tense marker *will* into two subtypes: the type of *will* whose temporal meaning is ' $TO_{sit}$  wholly after  $t_0$ ' and that whose temporal meaning is ' $TO_{sit}$  from  $t_0$  onwards'; and he regards the temporal structure of *be going to* as equivalent to that of the latter type of *will*. This means that the distribution of *be going to*-sentences is contained in that of *will*-sentences; thus, his theory predicts that where *be going to* can be used, *will* can be used, but not vice versa. However, as we have seen in chapter 7, this is not true: in some cases *be going to* can be used while *will* cannot. One

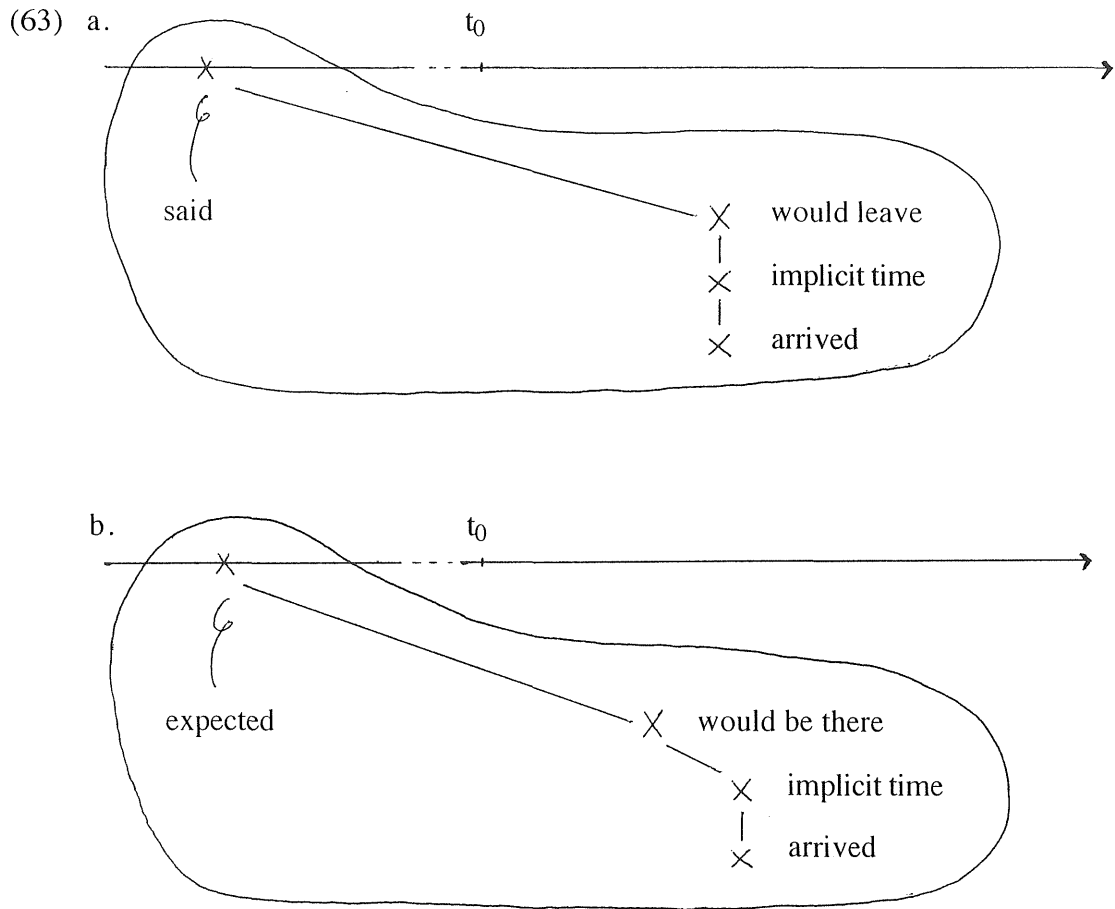
might say that since he claims that *be going to* represents "the future situation as having its roots in the present" (Declerck (1991b:370)), he can say that this present-orientedness may bring about the situation where *be going to*, but not *will*, is required.<sup>23</sup> But saying this seems to be contradictory to his claim that the differences in syntactic behavior between the present perfect and the simple past (such as collocability with DTP adverbials like *yesterday*) should be reflected in the difference in temporal structure between the two tenses, whereby he criticizes Comrie's system where the present perfect and the simple past cannot be distinguished in terms of time location, i.e. temporal structure; since the fact is that, as shown in chapter 7, *be going to*-sentences differ from *will*-sentences in syntactic behavior (such as compatibility with *if*-clauses), he should differentiate the temporal structure of *be going to*-sentences from that of *will*-sentences in order to avoid contradiction. By contrast, in our compositional tense theory, differences between *be going to*- and *will*-sentences can be explained in terms of their temporal structures together with other various semantic and pragmatic factors (see chapter 7).

A fourth problem to be noted is that Declerck admits two homophonous past tenses in English, viz. the absolute past tense, which requires its event time to come before the speech time and establishes a past (time-sphere) domain, and the relative past tense, which requires a simultaneity relation in a past domain established by the absolute past tense.<sup>24</sup> If, as he claims, the semantic structure of a relative past tense per se represented a simultaneity relation in a past domain, the sentences in (62) below would be grammatical, for the past tenses in temporal clauses (TCs) can be incorporated into the past domains established by the absolute past tenses in the matrix clauses (MTCs). However, this is not the case.<sup>25</sup>

- (62) a. \* Rieko said that she would leave when I arrived tomorrow.  
 b. \* John expected that he would be there before I arrived tomorrow.

In his system the temporal relations in (62a) and (62b) would be shown diagrammatically

in (63a) and (63b), respectively:



The four times in each schema are all incorporated into one temporal domain, i.e. the past domain established by the absolute past tense in the MTC. The implicit time in (63a) corresponds to *the time* in the paraphrase of *when*, i.e. *at the time at which*, and the implicit time in (63b) to *the time* in the paraphrase of *before*, i.e. *before the time that*. Since in Declerck's system the relative past tense *arrived* represents simultaneity with the implicit time in the past domain, such sentences as those in (62) should be grammatical (or acceptable); but in fact they are unacceptable (see also section 8.1.2.2).<sup>26</sup> Within our framework, since the past tense *arrived* in the TC represents its event time as being

located in the past time relative to the speech time, we can easily argue that such a past tense cannot go with future time adverbials such as *tomorrow*. For a further explanation of this, see section 8.2.3.

A final point to be criticized is that, as we have also seen in section 8.1.2.2, Declerck's tense theory alone cannot explain why sentences like the following cannot receive the posterior reading, where the CC time is read as coming after the MTC time.

- (64) a. Mary said that she was pregnant.  
b. I heard that Sally was in London.
- (65) a. Mary said that she finished her homework.  
b. John said that he wrote a book.

Take (65b) as a sample case. This sentence receives only the anterior reading, but not the posterior reading.<sup>27</sup> Declerck's tense theory predicts that the sentence under discussion should receive the posterior reading, for he himself admits that the complement-clause (CC) tense can be an absolute tense as a result of the shift of domain (Declerck (1991b:46;159-160)): since an absolute tense is, by definition, a tense related directly to the speech time ( $t_0$ ), it is theoretically possible for (65b) to receive the posterior reading, because in the case where the preterite in the CC expresses an absolute past tense, it is the temporal relation between  $t_0$  and the CC time, not that between the MTC time and the CC time, that is relevant, and the CC time can thus come after the MTC time insofar as it is located in the past.

To avoid this criticism, Declerck (1991b:183-184; 1999b:26) claims that sentences like (65b) cannot receive the posterior reading because "an expectation concerning the future cannot be truthfully reported as a past fact"; hence in the case where we want to express posteriority in a past domain, the conditional tense (i.e. *would* + infinitive) is required, as shown in (66):

- (66) a. John said that he would write a book.

- b. Two days ago Betty said that she would throw a party last night.

Careful examination reveals that this explanation presupposes that the "point of view" for the calculation of the CC (complement-clause) time is situated at the same time as the MTC (matrix-clause) time. However, there is no a priori reason why it must be so; for the "point of view" for the calculation of the CC time can be fixed on the speech time, which is exemplified in (67):

(67) a. John said that Mary is pregnant.

b. I said that Mana will win the first prize at the *koto* concert.

It goes without saying that in (67a), for example, the CC time is calculated based on the reporter's point of view fixed on the speech time. This means that it is theoretically possible for the CC situation with the past tense to be calculated from the reporter's point of view fixed on the speech time.

One might say that Declerck can stipulate that in the case where the CC tense is past, the "point of view" for its calculation must be situated on the MTC time. The question, then, arises as to why it must be so. Moreover, even if he makes the stipulation at issue, his tense theory per se cannot deal with the phenomenon under consideration; i.e., he has to have recourse to the modality of the original speaker to explain why sentences like (65b) cannot receive the posterior reading, and actually he seems to do so. From the above discussion, we can conclude that Declerck's tense theory as it stands cannot account for the phenomenon at issue; it needs an extra explanatory device, i.e. an explanation based on the original speaker's modality (we can say that this explanation is an ad hoc one because he does not construct a tense theory into which a theory of modality is systematically incorporated).

On the other hand, in my compositional tense theory, we can explain the phenomenon at issue in a straightforward way by appealing to the principle as to deictic expression in complement clauses shown in section 8.2.2, which is operative at the tense-

interpretation level and motivated by Hirose's theory of reported speech. Furthermore, as far as the phenomenon in question is concerned, my explanation can explain it without having recourse to an extra explanatory device such as temporal domain, and, thus, is simpler than Declerck's explanation in this respect. Other things being equal, a simpler theory can be seen as better than a more complex one.

### **9.3.3. Summary**

In this section, we have briefly outlined Declerck's tense theory and criticized it in some respects. We have, then, given solutions to the problems with his theory in terms of the compositional tense theory proposed in this study.

## **9.4. Klein (1992, 1994)**

Since Klein's (1992, 1994) "compositional semantic" analysis of the English tense system is in some respects similar to my compositional English tense theory, we cannot go without examining his theory and showing that our analysis is superior to his one. In this section, I restrict myself to pointing out problems with his system that are closely related to the tense phenomena dealt with in the previous chapters, because by doing so we can directly compare my theory with Klein's and thus easily decide which analysis is better.

### **9.4.1. Klein's "Compositional Semantic" Analysis**

This subsection surveys Klein's compositional semantic analysis of the tense system briefly. Klein's tense system needs three temporal notions as primitives, i.e. the time of utterance (TU), the time of the situation (TSit) and the topic time (TT). TT is defined as the time span to which the assertion or claim made by an utterance is constrained and is represented by tense markers such as tense morphemes and

auxiliaries.<sup>28</sup>

First of all, let us see how temporal aspects of finite sentences are analyzed within Klein's framework. He assumes an abstract level where every finite verb phrase, irrespective of the number of verbs (or predicates), has two abstract components, i.e. the finite (FIN) component and the nonfinite (INF) component; the FIN component is occupied by TT and the INF component by TSit. Let us first consider a case where two predicates are included in a finite sentence:

(68) John had left.

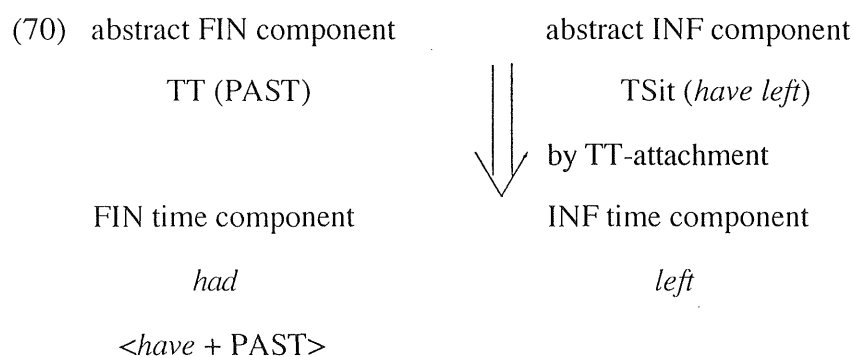
At the abstract level of sentence (68), the FIN component is occupied by a past topic time and the INF component by a time of the situation consisting of the two predicates (i.e. *have* and *leave*). At the level of practical use, the TT attachment, which is shown in (69) below, makes the topmost verb *have* in the INF component fuse with the past topic time, and, as a result, the finite-time marker *had* come about.

(69) *TT-attachment*

The highest verbal element of INF\* is morphologically fused with FIN\*, thus becoming FIN, whereas the remainder of INF\* becomes INF.

(Klein (1994:181))

(A superscript asterisk means that the element with it belongs to an abstract level.) The process of the fusion is schematically represented as follows:<sup>29</sup>



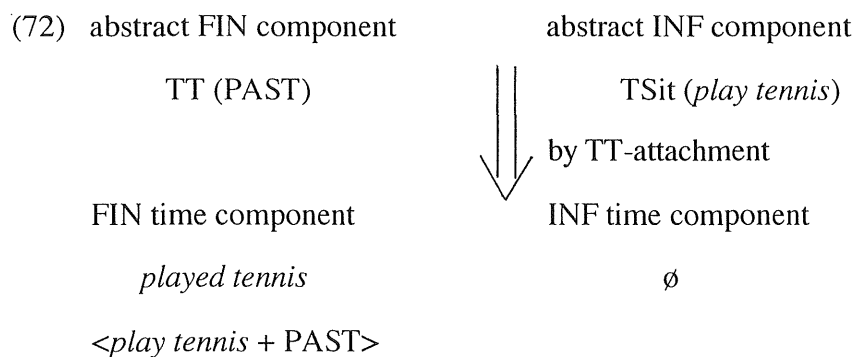
Let us now move to another case where a finite sentence consists only of one



predicate. Consider (71):

(71) Mary played tennis.

In this case, since an abstract INF component contains only one predicate, i.e. *play tennis*, it follows that the INF time comes to be empty after the TT-attachment works because the predicate *play tennis* and the pastness associated with a past topic time fuse into the FIN time element *played tennis*.<sup>30</sup> This is schematically represented in (72):



(A phi means that the component marked by it is empty.)

Let us next see the semantic structure of tenses in Klein's theory. He claims that the relationship between TU and TT expresses tense and the relationship between TT and TSit expresses aspect, considering that every finite clause (or sentence) has its own integrated semantic structure consisting of both the tense and the aspect component.

I start with the tense component. TU is related to TT by any of the three relational notions, i.e. INCL(USION), AFTER, and BEFORE. From this, it follows that there are three (absolute) tenses in natural language (and thus in English) within Klein's framework.

- |                     |              |                     |
|---------------------|--------------|---------------------|
| (73) Present Tense: | TU INCL TT   | e.g. Tom sings.     |
| Past Tense:         | TU AFTER TT  | e.g. Tom sang.      |
| Future Tense:       | TU BEFORE TT | e.g. Tom will sing. |

A present tense has the tense component in which TU is included in TT; a past tense has the tense component in which TU comes after TT; and a future tense has the tense

component in which TU comes before TT.

I now turn to the aspect component. In Klein's system, not only TSit itself, but also the time spans or intervals before or after TSit, play a theoretically important role. The time span before TSit and that after TSit are called the "pretime" and the "posttime", respectively. Because TSit is related to TT by any of the four relational notions, i.e. INCL(USION), AT, AFTER, and BEFORE, Klein's system assumes that there are four types of aspectual relations, as shown in (74):

- (74) IMPERFECTIVE:      TT INCL TSit      e.g. Tom was singing.  
 PERFECTIVE:            TT AT TSit        e.g. Tom sang.  
 PERFECT:                TT AFTER TSit    e.g. Tom had sung.  
 PROSPECTIVE:         TT BEFORE TSit e.g. Tom was going to sing.

Here, we temporarily ignore reference to the relational notion AT and shall return to this soon. In English, the imperfective aspect is realized as the progressive form, the perfective aspect as the simple form, the perfect aspect as the perfect form, and the prospective aspect as the *be going to*-construction.

For convenience' sake, I first show how the imperfective, the perfect and the prospective aspect can be schematized:

- (75) a. IMPERFECTIVE  
 ----- [ \_ \_ ] -----  
 b. PERFECT  
 ----- | |  
 c. PROSPECTIVE  
 [ | ] -----

A series of minus signs denotes TSit and square brackets denote the range of TT. The schema in (75a) says that the speaker confines his or her claim to the middle part of the time of the situation (e.g. the process of the eating in *Ken was eating*); schema (75b)

means that the speaker confines his or her claim to the posttime of the time of the situation (e.g. the "after-state" of the eating in *Ken had eaten*); and schema (75c) shows that the speaker's claim is confined to the pretime of the time of the situation (e.g. the previous stage of the eating in *Ken was going to eat*).

Let us now consider what the relational notion AT means and how it is schematized. As we have seen, the relational notion AT is related to the perfective aspect; and this notion means that TT includes both the end part of TSit and the beginning part of its posttime. This is schematically shown as follows:



This schema shows that the speaker focuses on the completion of a given situation (e.g. the completion of the eating in *Ken ate*).

In Klein's system, a finite sentence is assumed to have a semantic structure which is the combination of any of the three tenses and any of the four aspects. For example, an English perfect form, which is the combination of any of the three tenses, i.e. the past, present or future tense, and the perfect aspect.

- (77) Present Perfect: TU INCL TT & TT AFTER TSit
- Past Perfect: TU AFTER TT & TT AFTER TSit
- Future Perfect: TU BEFORE TT & TT AFTER TSit

In this subsection, we have briefly surveyed Klein's compositional semantic analysis of the tense system.<sup>31</sup> A characteristic of his system is that both tense and aspect are analyzed from a unified point of view, i.e. in terms of relational notions.

#### 9.4.2. Problems with Klein's Analysis and Their Solutions in Our Compositional Tense Theory

Klein's tense system is very elegant and effective to the extent that it can give a

unified account of tense and aspect in terms of relational values. However, his theory also encounters some problems. This subsection points out three of the many problems which are closely related to the compositional tense theory proposed in this thesis, and shows that they are not problems for our compositional tense theory.

A first problem with Klein's analysis concerns the problem of whether or not the future tense exists in English. Like many other linguists, he also admits that English has the future tense, regarding *will* as a future tense marker. Thus, as with Comrie's and Declerck's theories, his theory results in giving no convincing reasons why modal *will* and future *will* count as closely related to each other because *will* can express futurity and a modal sense at the same time; furthermore, his theory inevitably faces the same diachronic problem as Comrie's and Declerck's, namely that the theory cannot provide motivation for why in the course of the derivation of senses of *will*, the "going and returning" kind of categorial change happened, with the first change from a modal verb to a future tense marker and the second one from a future tense marker back to a modal verb again. As we have shown in section 9.2.2, our compositional tense theory does not face such problems at all.

A second problem to be noted is that the P(osition)-Definiteness Constraint, which is a touchstone of whether his analysis of the semantic structure of English perfect forms is appropriate, is not empirically tenable, as we have already seen in section 6.1.2. In particular, the constraint at issue cannot explain why the following sentences are acceptable, though the constraint should predict that they are unacceptable because they violate it.

- (78) a. At that time George had been to the dentist two hours earlier.  
b. On April 1, Mana had graduated from the high school a week earlier/before.  
c. Now we finally know that last night Mary had disappeared 3 months

ago.

In Klein's view, the explanation should go as follows. In (78a), for example, the adverb *at that time* makes the topic time p-definite and the adverb *two hours earlier* makes the time of the situation p-definite; since the constraint roughly says that in a clause both the topic time and the time of the situation cannot be p-definite at the same time, sentence (78a) should be viewed as unacceptable, which it is not. By contrast, as we have shown in section 6.2, our revised version of the constraint, which is revised based on our compositional tense theory, predicts, and thus can explain, the grammaticality (or acceptability) of (78).

A final problem that I'd like to mention in this subsection is derived from Klein's suggestion that the P-Definiteness Constraint can be generalized to a general pragmatic constraint such as what he calls the principle of reasonable contrast (Klein (1994:207)). In particular, his suggestion brings about the problem of why *be going to*-sentences can go with DTP adverbials (adverbials of definite time position) of future reference, as shown in (79) below, because in his system *be going to*-sentences have the semantic structure 'TU INCL TT & TT BEFORE TSit', expressing the prospective aspect with the present tense (see also the previous subsection).

- (79) a. Doc Brown is going to take us back to the future next Saturday.  
b. Makiko is going to drive with me tomorrow.

In Klein's system, in (79b), for example, since the topic time (TT) is inherently p-definite because it includes the time of utterance (TU), and the time of the situation (TSit) is rendered p-definite because of the modification by the DTP adverbial *tomorrow*, it should be predicted that sentence (79b) is unacceptable in terms of the P-Definiteness Constraint; Klein might say that with the generalized pragmatic constraint, i.e. the principle of reasonable contrast, the sentences in (79) provide a reasonable contrast. But in that case, he has to explain in what sense and in what way sentences like those in (79) provide a

reasonable contrast because the semantic structure of *be going to*-sentences is the mirror image of that of sentences in the present perfect tense and thus there is no reason to argue that *be going to*-sentences provide a reasonable contrast, while present perfect sentences do not. Moreover, he has to explain why a sentence like (80) below, which is unacceptable, does not provide a reasonable contrast, which seems difficult to account for from a unified point of view, i.e. the principle of reasonable contrast.

(80) \*Yesterday at four o'clock, Chris had left the room yesterday at three o'clock.

In our compositional tense theory, on the other hand, the generalized version of the revised P-Definiteness Constraint, together with the differences in temporal structure between *be going to*-sentences and perfect sentences, can explain why both the sentences in (78) and those in (79) are acceptable while sentence (80) is unacceptable in a straightforward way.

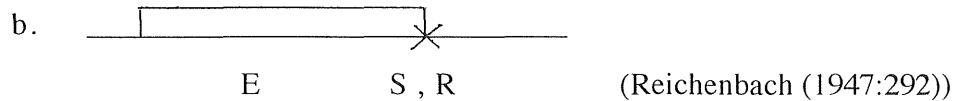
#### 9.4.3. Summary

In this section, we have first surveyed Klein's tense-aspect system and then pointed out three problems with his analysis which are directly relevant to the compositional tense theory proposed in this thesis. We have also shown that our tense theory can account for the problems in a straightforward way.

NOTES TO CHAPTER 9

<sup>1</sup> It should be noted here that in the case of the continuative use of the present perfect tense, the event time is also viewed as representing a stretch of time, as in (i):

(i) a. I have seen him.



(ib) says that the duration of the event continues up to the point of reference, which is simultaneous with the point of speech.

<sup>2</sup> Vikner (1985) presented a temporal system where all the tenses are composed of four time primitives, i.e. S, E, R<sub>1</sub> and R<sub>2</sub>. However, it is the fact that except for a few tenses like those in (7) in the text, in most cases R<sub>1</sub> coincides with R<sub>2</sub>. Thus, the necessity of introducing one more R into temporal structure is dubious.

<sup>3</sup> As McCoard (1978:91) and Declerck (1991b:230-231) state, even if the past perfect tense is substituted for the simple past tense in (11b) in the text, the temporal structure of the CC will also be 'E<sub>2</sub>, R<sub>2b</sub> -- R<sub>2a</sub> -- S', so in any case we cannot distinguish the two tenses from each other in terms of temporal structure within Reichenbach's framework.

<sup>4</sup> Although Hornstein himself does not specify what kinds of factors other than modification by temporal adverbs contribute to this kind of derivation, it is clear from the sentence "one way in which complex tense structures arise is through modification by temporal adverbs" (Hornstein (1990:15)) that he assumes that other factors can contribute to this tense-structural derivation.

<sup>5</sup> Needless to say, this is not a good solution within Hornstein's framework, for his analysis is based on autonomy of syntax, trying to exclude semantic and pragmatic analyses. Moreover, his analysis cannot explain why DTP adverbials such as *tomorrow* or *at five this evening* can go with *be going to*-sentences whose tense structure is the

mirror-image structure of the present perfect, i.e. 'S, R--E', where the E point can be modified by the DTP adverbial *tomorrow*. Within our framework, this asymmetry can be explained systematically (see chapter 6).

6 It is stated in Smith (1981b:25) that the three temporal primitives are the reference time, the event time, and the orientation time (O); but Smith herself considers the speech time to be a default orientation time. Thus, in a sense, saying that her tripartite tense system consists of R, E and S is not contradictory to saying that it consists of R, E and O.

7 In Smith's system, there are four combinations of tenses and time adverbials which do not establish the reference time by themselves.

(i)	Tense	Adverbial	
	a. Past	Future	
	b. Past	Present	
	c. Past <i>have</i>	Unanchored	
	d. Present	Past	(Smith (1978:47))

For example, combination (ic) is exemplified by (ii), where the time adverb *on Tuesday* specifies either the reference time or the event time, depending on the context:

(ii) Ross had left on Tuesday.

I note in passing that in her system sentences without temporal adverbials depend on the context in respect of the establishment of the reference time.

8 The same criterion applies to complement clauses like those in (i):

- (i) a. One day, Naomi said to Oscar that she saw him the day before.  
 b. Susan said yesterday that Max was silly earlier.

In each sentence of (i), with Smith's analysis the relative time adverb in the complement clause (CC) specifies the event time of the CC and the matrix time functions as the reference time; thus, the tense structure of the simple past in the CC is 'E--R--S' (see also



section 8.1.2.1). For how to analyze this kind of sentence within our framework, see section 2.2.1.

<sup>9</sup> Comrie (1981:24) defines the reference time as "the vantage point from which the speaker views the situation referred to." This corresponds to Prior's (1967) version of reference time, and, thus, to our time of orientation.

<sup>10</sup> Declerck (1991b:244-245) also points out this problem, suggesting that if Comrie takes our definition of event time, this kind of problem does not come about.

<sup>11</sup> Our analysis regards *will* as polysemous (though, as we have seen in section 7.6.5, we admit the schematic meaning of *will* at the tense-structure level), which runs counter to Groefsema's (1995) analysis, which implies that *will* has only one schematic meaning from which a variety of interpretations are derived. The most decisive evidence is, according to him, the existence of *will*-sentences like those in (44), which can have future and modal readings at the same time. Although he claims that only the "unitary" analysis based on Sperber and Wilson's (1986) Relevance Theory can give an answer to this phenomenon, our theory can also explain it (as we have seen it in the text). Here, we should consider another case where both volitional and epistemic interpretations seem possible at the same time. Observe (i):

(i) Yuki will wear a pink miniskirt at the concert tomorrow.

I consider that in this case the hearer adjusts the main focus on either of the two senses, deciding which sense is the "foreground"; i.e., if the volitional sense is viewed as the foreground, the epistemic sense is not focused on, and thus seen as the "background," and vice versa.

<sup>12</sup> Comrie (1985:45-46) claims that diachronic relations are irrelevant to the synchronic status of the tense system. However, it goes without saying that a theory which can deal with both synchronic and diachronic aspects of, say, *will*, from a unified point of view is superior to one which can deal only with its synchronic aspects.

<sup>13</sup> The same criterion applies to McCoard's (1978:17) treatment of the present perfect because he claims that "the preterit and the present perfect are not, in fact, distinct in terms of tense or sequence: their distinctiveness lies elsewhere."

<sup>14</sup> I do not refer to Declerck (1986), though it is the very starting point of his series of studies on the English tense system, not only because there are many differences between Declerck (1986) and the following studies, but also because he himself abandoned and revised some points in Declerck (1986).

<sup>15</sup> It should be noted here that Declerck emphasizes the necessity of the notion of "time established," which is the time established by a time adverbial or by the context. In our theory, this notion is omitted because a time established is always simultaneous with an event time in my sense. Declerck insists that a time established is necessary as an independent primitive, saying that in the case of adverbials of time interval, the time established (e.g. *yesterday*) is longer than, and thus includes, the event time (e.g. the time of John's breaking the window), as in *John broke the window yesterday*. It is certain that strictly speaking, the event time shares only a part of the time-span represented by *yesterday*. But this is just a matter of the way of representation. In our compositional tense theory, a time adverbial modifies or specifies the event time and the relation between the actual length of time represented by that time adverbial and the event time is processed or computed based on our pragmatic or encyclopedic knowledge. For this reason, I omit the notion of time established as a primitive from our tense theory. It must be noted that Huddleston (1995b) also presents a tense system consisting of four time primitives, i.e. the speech time, the event time, the reference time in the sense of 'the time referred to' (corresponding to Declerck's time established), and the orientation time in the sense of 'the time referred from' (corresponding to our time of orientation).

<sup>16</sup> Cf. also Wada (1995a).

<sup>17</sup> Here, the term subjective is used in the sense that the borderline between the

two time-spheres is determined based on our subjective judgment.

<sup>18</sup> Note that a temporal domain can consist of the time of a single situation.

<sup>19</sup> Declerck (1995:31) rejects the view that English past tenses are polysemous because he takes the position that one temporal form expresses only one temporal meaning. He regards his position as right because (according to him), for example, a past tense whose structure is 'E before S' and a past tense whose structure is 'E after S' are so different that the idea of polysemous tenses is untenable. However, as I demonstrated in chapter 8, our compositional tense theory, together with Hirose's theory of reported speech, allows us to take the polysemous view of English past tenses. Moreover, the polysemous analysis can answer the question why English past tenses can all be subsumed under the concept of pastness, whereas the homophonous analysis (i.e. Declerck's analysis) cannot.

<sup>20</sup> In (55a) the event time of *was heard* comes after that of *said* while in (55b) the event time of *witnessed* comes before that of *said*. This is due to pragmatic factors such as the characteristics of narrative texts.

<sup>21</sup> One might argue that the simple past tense can also express current relevance. In fact, Declerck (1991b:320) and Klein (1992:531) do so.

(i) A: How do you know that Mr Benson has a different character?

B: I know that Benson is like because I worked for him a couple of years ago. (Declerck (1991b:320))

(ii) Why is Chris so cheerful these days? --- Well, he won a million in the lottery. (Klein (1992:531))

I explain this as follows. In our tense theory, since the present perfect tense represents the event time of *have*, which contributes to current relevance, as being entailed in its tense and basic semantic structure, the current relevance that the present perfect expresses is derived from a semantic entailment; by contrast, since the simple past tense does not

entail such an element as perfect *have*, the so-called current relevance that the simple past is said to express is derived from a pragmatic implicature.

22 Since Declerck (1979) admits the existence of the category " $\emptyset$ -bounded," which comes between the category of "bounded" and that of "unbounded," he might say that the perfects in (60) are categorized into this  $\emptyset$ -bounded category. However, Declerck's temporal structures cannot represent this, as we have seen in the text.

23 It follows that like Haegeman (1989), Declerck's analysis attributes the difference between *be going to*- and *will*-sentences to some pragmatic factors.

24 Declerck admits a third type of past tense, i.e. the pseudo-absolute past tense, which represents the event time as coming before a reference point in the future domain (the post-present domain). However, this type of past tense is irrelevant to the discussion here.

25 Declerck (1999b:27) claims that his British informants all judged (62) to be acceptable, while my informants (three Canadians and one American) judged it to be unacceptable. Interestingly enough, my three informants (two Canadians and one American) judged that even if we take *tomorrow* away from the temporal clauses (TCs) of (62), the sentences are still unacceptable on the reading where the TC times are located in the future relative to the speech time, which is exemplified by (i):

- (i) a. \*Rieko said that she would leave when I arrived.
- b. \*John expected that he would be there when I arrived.

(Here, an asterisk is used to indicate that the sentence in question is unacceptable with the intended reading.) Here again, the judgment of my (north American) informants is entirely different from the judgment of Declerck's (British) informants.

A possible answer to this strange discrepancy is that with respect to the tense phenomenon at issue, the grammar which Declerck's British informants acquired is different from the grammar which my north American informants acquired. Although it

is difficult to say which judgment is right, I note that my informants' judgment is the same as Comrie's (1985) judgment with respect to the same kind of sentence as (i) above.

- (ii) John said that he would leave {before/after/while} John returned.

Comrie (1985:115) states that native speakers of English judge that the past tense in TCs refers to a past time relative to the speech time. At any rate, we should search for a clue for this discrepancy in judgment, but I leave it for future research.

<sup>26</sup> Declerck cannot ascribe the ungrammaticality of (62) to the wrong combination of the past (time-sphere) tenses and the future time adverbial *tomorrow*, because the following sentences are grammatical.

- (i) a. Rieko said that she would leave tomorrow.  
b. John expected that he would be there tomorrow.

Here, the conditional tense, one of the past time-sphere tenses, is compatible with the future time adverbial *tomorrow*. This implies that in principle, the simple past tense, one of the past time-sphere tenses, can also go with future time adverbials as far as it is located in a past domain.

<sup>27</sup> The reason why the sentence in question cannot receive the simultaneous reading is ascribed to the boundedness nature of the complement-clause situation (see section 8.1.2.2).

<sup>28</sup> In a sense, Klein's TT is a kind of the Reichenbachian reference time, which is redefined in terms of his compositional semantic analysis of the tense system (see also section 6.1.1).

<sup>29</sup> Readers should not confuse the distinction between the A(bsolute tense)-component and the R(elative tense)-component in our compositional tense theory with that between the FIN component and the INF component in Klein's compositional theory. First, in our theory at both the tense-structure and the tense-interpretation level, a finite sentence like *John had left* is factored into the A-component (i.e. the past tense

morpheme) and the R-component (i.e. *have left*); by contrast, in Klein's theory at the abstract level the sentence in question is factored into the abstract FIN component (i.e. the topic time represented by the past tense morpheme) and the abstract INF component (i.e. *have left*), whereas at the practical level it is classified into the FIN time (i.e. the time represented by the finite verb *had*) and the INF time (i.e. the time represented by the nonfinite verb *left*). Secondly, in our theory both the tense-structure and the tense-interpretation levels constitute "concrete" levels, while Klein's theory includes one abstract level and one "concrete" (or practical) level. Thirdly, in our theory there are as many event times (times of the situations) as there are predicates, whereas in Klein's theory it is not necessarily the case (e.g. the perfect form consisting of two predicates represents one time of the situation). I cannot decide which theory is theoretically better as to the first two differences, but with the third one, Klein's theory poses some problems which have already taken up in section 6.1.2 and will be shown in section 9.4.2.

<sup>30</sup> It is not always the case that the FIN component is occupied by a topic time. It is true when a finite sentence is a declarative one. In the case of imperative sentences, for example, the FIN component is occupied by what Klein calls the "time of obligation," i.e. the time for which the obligation or instruction is meant to hold. For the sake of simplicity, we restrict ourselves to declarative sentences in this section.

<sup>31</sup> In Klein's system, the "state-type" of TSit also plays an important role. He admits the following three state-types: 0-state, 1-state, and 2-state situations. A 0-state situation is one which expresses a permanent property (e.g. the book's being in Russian). A 1-state situation is one which expresses a temporary property and does not include a change-of-state in itself (e.g. the book's being on the table). A 2-state situation is one which expresses a temporary property and includes a change-of-state in itself (e.g. his leaving Venice). This distinction of state-types can explain why some finite sentences

cannot be in the progressive or the perfect form and why other finite sentences cannot go with certain time adverbials.

## CONCLUSION

In this thesis, I have been devoted to the establishment of a new English tense theory from a compositional point of view, and verified it by showing that it can explain a number of major issues concerning English tense and tense-related phenomena.

The first three chapters have been spared for the construction of the compositional tense theory. In chapter 1, I have surveyed five basic assumptions and theories on which our tense theory depends: the traditional distinction between finite and nonfinite forms, the AUX-as-Main-Verb hypothesis based on a prototype analysis, the two absolute-tense hypothesis, a notation consisting of four temporal notions, and a theory of modality. Based on the basic assumptions and theories shown in chapter 1, chapter 2 has presented the compositional tense theory which distinguishes the tense-structure level from the tense-interpretation level, on one hand, and distinguishes the A(bsolute tense)-component from the R(elative tense)-component, on the other, sketching how our compositional tense theory works in interaction with other semantic and pragmatic factors by using some samples of both finite and nonfinite predicates. In chapter 3, on the basis of our compositional tense theory, I have presented the temporal schemata of the five major tense forms, i.e. the present and the past tense, future *will*-sentences, the perfect form and the progressive form, showing briefly that the established temporal schemata provide a basis for interpreting the temporal value of the five basic tense forms.

Chapters 4 to 8, which have been concerned with a number of specific tense phenomena that have been disputable issues in English, have been devoted to the verification of the proposed tense theory. The topic of chapter 4 is to give a detailed explanation of the interpretation mechanism of the English present perfect. The goal of chapter 5 is to show the parallelism in temporal structure between the present perfect form and the pluperfect. Chapter 6 is concerned with the compatibility of certain types of tense



forms with certain types of time adverbials, especially with DTP adverbials. The aim of chapter 7 is to provide a unified account of both synchronic and diachronic aspects of *will*- and *be going to*-sentences. Chapter 8 concerns the mechanism of interpreting tense phenomena in indirect speech. These five tense phenomena are all touchstones that enable us to judge whether the temporal schema-based analysis based on the compositional tense theory proposed in this study is useful or not, and have verified that our tense theory is tenable.

Chapter 9 has been spared for the survey and criticism of representative previous studies on the English tense system, on one hand, and for the demonstration of how the compositional tense theory proposed in this study can account for the problems with the previous studies.

Finally, I will hasten to point out some residual problems with our compositional tense theory. First, since the verification of the theory is based only on several tense phenomena, we have to examine whether the theory can explain other tense phenomena (e.g. tense phenomena in narrative) from a unified point of view so as to make its grounds more solid. Secondly, the computational process from the first stage to the final stage of the tense-interpretation level must be further specified: for example, how many stages the tense-interpretation level maximally requires should be clarified, the problem of which semantic and/or pragmatic factor has priority over which semantic and/or pragmatic factor when they affect the interpretation mechanism at the tense-interpretation level should be solved, and it must be considered in detail how the tense-structure level and the tense-interpretation level interact with each other to lead to an appropriate interpretation mechanism, as the meaning of a given predicate changes (e.g. *will*, *be going to*, perfect *have*). Thirdly, it should be examined whether or not our tense theory can be applicable to not only to other Germanic languages like German, but also to other unrelated languages like Japanese. I leave these problems for future research. Although our

compositional tense theory is far from full-fledged, I hope I was able to show a new direction in the investigation of the English tense system.

## REFERENCES

- Abe, Hajime (1994) "Ninchi-Imiron kara Mita Eibunpo (3) - Genzaikanryo wo Dou Toraeru ka," *Gendai Eigo Kyoiku* 31, 37-39, 46.
- Ando, Sadao (1983) *Eigokyoshi no Bunpo Kenkyu*, Taishukan, Tokyo.
- Araki, Kazuo, Tsuneo Ono, and Hirozo Nakano (1977) *Jodoshi*, Kenkyusha, Tokyo.
- Bache, Carl and Niels Davidsen-Nielsen (1997) *Mastering English: An Advanced Grammar for Non-native and Native Speakers*, Mouton de Gruyter, Berlin and New York.
- Bauer, Gero (1970) "The English 'Perfect' Reconsidered," *Journal of Linguistics* 6, 189-198.
- Bertinetto, Pier Marco (1986) "Intrinsic and Extrinsic Temporal References: On Restricting the Notion of 'Reference Time'," *Temporal Structure in Sentence and Discourse*, ed. by Vincenzo Lo Cascio and Co Vet, 41-78, Foris, Dordrecht.
- Binnick, Robert I. (1971) "Will and Be Going To," *CLS* 7, 40-52.
- Binnick, Robert I. (1972) "Will and Be Going To II," *CLS* 8, 3-9.
- Binnick, Robert I. (1991) *Time and the Verb: A guide to Tense and Aspect*, Oxford University Press, Oxford.
- Bolinger, Dwight (1977) *Meaning and Form*, Longman, London.
- Brecht, Richard (1974) "Deixis in Embedded Structures," *Foundations of Language* 11, 489-518.
- Brinton, Laurel J. (1988) *The Development of English Aspectual Systems: Aspectualizers and Post-verbal Particles*, Cambridge University Press, Cambridge.
- Bybee, Joan, William Pagliuca, and Revere D. Perkins (1991) "Back to the Future," *Approaches to Grammaticalization* vol.II, ed. by Elizabeth Closs Traugott and Bernd Heine, 17-58, John Benjamins Publishing Company, Amsterdam.

- Bybee, Joan, Revere Perkins and William Pagliuca (1994) *The Evolution of Grammar: Tense, Aspect, and Modality in the Languages of the World*, University of Chicago Press, Chicago and London.
- Caenepeel, Mimo (1995) "Aspect and Text Structure," *Linguistics* 33, 213-253.
- Carey, Kathleen (1994) "The Grammaticalization of the Perfect in Old English: An Account Based on Pragmatics and Metaphor," *Perspectives on Grammaticalization*, ed. by William Pagliuca, 103-117, John Benjamins Publishing Company, Amsterdam.
- Carey, Kathleen (1995) "Subjectification and the Development of the English Perfect," *Subjectivity and Subjectification: Linguistic Perspectives*, ed. by Dieter Stein and Susan Wright, 83-102, Cambridge University Press, Cambridge.
- Carey, Kathleen (1996) "From Resultativity to Current Relevance: Evidence from the History of English and Modern Castilian Spanish," *Conceptual Structure, Discourse and Language*, ed. by Adele E. Goldberg, 31-48, Center for the Study of Language and Information, Stanford.
- Chapman, Siobhan (1996) "Some Observations on Metalinguistic Negation," *Journal of Linguistics* 32, 387-402.
- Chomsky, Noam (1971) "Deep Structure, Surface Structure, and Semantic Representation," *Semantics*, ed. by D.D. Steinberg and L.A. Jakobovits, 183-216, Cambridge University Press, Cambridge.
- Clark, Billy (1993) "Relevance and 'Pseudo-Imperatives'," *Linguistics and Philosophy* 16, 79-121.
- Close, R.A. (1975) *A Reference Grammar for Students of English*, Longman, London.
- Coates, Jennifer (1983) *The Semantics of the Modal Auxiliaries*, Croom Helm, London.
- Comrie, Bernard (1976) *Aspect*, Cambridge University Press, Cambridge.
- Comrie, Bernard (1981) "On Reichenbach's Approach to Tense," *CLS* 17, 24-30.

- Comrie, Bernard (1985) *Tense*, Cambridge University Press, Cambridge.
- Comrie, Bernard (1986) "Tense in Indirect Speech," *Folia Linguistica* 20, 265-296.
- Comrie, Bernard (1989) "On Identifying Future Tenses," *Tempus-Aspekt-Modus: Die Lexikalischen und Grammatischen Formen in den Germanischen Sprachen*, ed. by Werner Abraham and Theo Janssen, 51-63, Niemeyer, Tübingen.
- Costa, Rachel (1972) "Sequence of Tenses in That-Clauses," *CLS* 8, 41-51.
- Coulmas, Florian (1986) "Reported Speech: Some General Issues," *Direct and Indirect Speech*, ed. by Florian Coulmas, 1-28, Mouton de Gruyter, Berlin and New York.
- Cowper, Elizabeth (1995) "English Participle Constructions," *Canadian Journal of Linguistics* 40, 1-38.
- Cowper, Elizabeth (1998) "The Simple Present Tense in English: A Unified Treatment," *Studia Linguistica* 52, 1-18.
- Dahl, Östen (1987) "Comrie's *Tense*," (Review Article: *Tense*, by Bernard Comrie, Cambridge University Press, Cambridge, 1985) *Folia Linguistica* 21, 489-502.
- Daidsen-Nielsen, Niels (1990) *Tense and Mood in English: A Comparison with Danish*, Mouton de Gruyter, Berlin.
- Declerck, Renaat (1979) "Aspect and the Bounded/Unbounded (Telic/Atelic) Distinction," *Linguistics* 17, 761-794.
- Declerck, Renaat (1986) "From Reichenbach (1947) to Comrie (1985) and beyond," *Lingua* 70, 305-364.
- Declerck, Renaat (1991a) *A Comprehensive Descriptive Grammar of English*, Kaitakusha, Tokyo.
- Declerck, Renaat (1991b) *Tense in English: Its Structure and Use in Discourse*, Routledge, London.
- Declerck, Renaat (1994) "On So-called 'Tense Simplification' in English," *Tense and Aspect in Discourse*, ed. by Co Vet and Carl Veters, 77-98, Mouton de Gruyter,

Berlin and New York.

Declerck, Renaat (1995) "Is There a Relative Past Tense in English?" *Lingua* 97, 1-36.

Declerck, Renaat (1996) "Tense Choice in Adverbial When Clauses," *Linguistics* 34, 225-261.

Declerck, Renaat (1997) *When-Clauses and Temporal Structure*, Routledge, London and New York.

Declerck, Renaat (1999a) "Remarks on Salkie & Reed's (1997) 'Pragmatic Hypothesis' of Tense in Reported Speech," *English Language and Linguistics* 3, 83-116.

Declerck, Renaat (1999b) "A Critical Evaluation of Wada's Theory of Tense in English," to appear in *English Linguistics* 16.

Declerck, Renaat and Ilse Depraetere (1995) "The Double System of Tense Forms Referring to Future Time in English," *Journal of Semantics* 12, 269-310.

Declerck, Renaat and Kazuhiko Tanaka (1996) "Constraints on Tense Choice in Reported Speech," *Studia Linguistica* 50, 283-301.

Depraetere, Ilse (1998) "On the Resultative Character of Present Perfect Sentences," *Journal of Pragmatics* 29, 597-613.

Dinsmore, John (1981) "Tense Choice and Time Specification in English," *Linguistics* 19, 475-494.

Dinsmore, John (1991) "The Logic and Function of the English Past and Perfect," *Interdisciplinary Approaches to Language: Essays in Honor of S-Y. Kuroda '91*, ed. by Georgopoulos, Carol and Roberts Ishihara, 101-117, Kluwer Academic, NLD.

Dowty, David (1982) "Tense, Time Adverbs, and Compositional Semantic Theory," *Linguistics and Philosophy* 5, 23-55.

Duffley, Patrick J. (1992) *The English Infinitive*, Longman, London and New York.

Duffley, Patrick, J. (1994) "Need and Dare: The Black Sheep of the Modal Family,"

- Lingua* 94, 213-243.
- Duffley, Patrick J. (1995) "Defining the Potential Meaning of the English *-ING* Form in a Psychomechanical Approach," *Langues et Linguistique* 21, 1-11.
- Ehrlich, Susan (1990) "Referential Linking and the Interpretation of Tense," *Journal of Pragmatics* 14, 57-75.
- Elsness, Johan (1997) *The Perfect and the Preterite in Contemporary and Earlier English*, Mouton de Gruyter, Berlin and New York.
- Enç, Mürvet (1987) "Anchoring Conditions for Tense," *Linguistic Inquiry* 18, 633-657.
- Fenn, Peter (1987) *A Semantic and Pragmatic Examination of the English Perfect*, Narr, Tübingen.
- Frawley, William (1992) *Linguistic Semantics*, Lawrence Erlbaum Associates, New Jersey.
- Freed, Alice F. (1979) *The Semantics of English Aspectual Complementation*, Reidel, London.
- Geeraerts, Dirk (1993) "Vagueness's Puzzles, Polysemy's Vagaries," *Cognitive Linguistics* 4, 223-272.
- Goldsmith, John and Erich Woisetschlaeger (1982) "The Logic of the English Progressive," *Linguistic Inquiry* 13, 79-89.
- Grice, H. Paul (1975) "Logic and Conversation," *Syntax and Semantics 3: Speech Acts*, ed. by Peter Cole and Jerry L. Morgan, 41-58, Academic Press, New York.
- Groefsema, Marjolein (1995) "*Can, May, Must, and Should: A Relevance Theoretic Account*," *Journal of Linguistics* 31, 53-79.
- Haan, Ferdinand (1997) *The Interaction of Modality and Negation*, Garland, New York and London.
- Haegeman, Liliane (1989) "*Be Going To and Will: A Pragmatic Account*," *Journal of Linguistics* 25, 291-317.

- Hamann, Cornelia (1989) "English Temporal Clauses in a Reference Frame Model," *Essays on Tensing in English vol.II: Time, Text and Modality*, ed. by Alfred Schopf, 31-154, Niemeyer, Tübingen.
- Harder, Peter (1996) *Functional Semantics: A Theory of Meaning, Structure and Tense in English*, Mouton de Gruyter, Berlin.
- Heine, Bernd (1993) *Auxiliaries: Cognitive Forces and Grammaticalization*, Oxford University Press, Oxford.
- Heny, Frank (1982) "Tense, Aspect and Time Adverbials: Part II," *Linguistics and Philosophy* 5, 109-154.
- Herweg, Michael (1991) "Perfective and Imperfective Aspect and the Theory of Events and States," *Linguistics* 29, 969-1010.
- Higuchi, Mariko (1991) "Will and Be Going To: Present Thought and Present Reality," *Bulletin of the Faculty of Computer Science and Systems Engineering (Human Science)* 6, 53-70, Kyushu Institute of Technology.
- Hirose, Yukio (1995) "Direct and Indirect Speech as Quotations of Public and Private Expression," *Lingua* 95, 223-238.
- Hirose, Yukio (1997a) "Hito o Arawasu Kotoba to Sho-o," *Shiji to Sho-o to Hitei*, ed. by Minoru Nakau, 1-89, Kenkyusha, Tokyo.
- Hirose, Yukio (1997b) "Direct and Indirect Speech as Seen from Levels of Linguistic Expression: A Contrastive Analysis of Japanese and English," paper presented at the 2nd International Conference at Literary Semantics.
- Hirose, Yukio (1998) "Public and Private Self as Two Aspects of the Speaker: A Contrastive Study of Japanese and English," to appear in *Journal of Pragmatics*.
- Hofmann, Thomas, R. (1993) *Realms of Meaning: An Introduction to Semantics*, Longman, London and New York.
- Honda, Akira (1993) "The Go-Future in English," Universität Duisburg



- Gesamthochschule L.A.U.D. Series A: General and Theoretical Papers, 1-64.
- Hopper, Paul J. (1979) "Aspect and Foregrounding in Discourse," *Syntax and Semantics* 12: *Discourse and Syntax*, ed. by Talmy Givon, 213-241, Academic Press, New York.
- Hopper, Paul J. and Elizabeth Closs Traugott (1993) *Grammaticalization*, Cambridge University Press, Cambridge.
- Hornby, A.S. (1975) *Guide to Patterns and Usage in English*, 2nd ed., Oxford University Press, London.
- Hornstein, Norbert (1977) "Towards a Theory of Tense," *Linguistic Inquiry* 8, 521-557.
- Hornstein, Norbert (1990) *As Time Goes By: Tense and Universal Grammar*, MIT Press, Cambridge, MA.
- Huddleston, Rodney (1969) "Some Observations on Tense and Deixis in English," *Language* 45, 777-806.
- Huddleston, Rodney (1974) "Further Remarks on the Analysis of Auxiliaries as Main Verbs," *Foundations of Language* 11, 215-229.
- Huddleston, Rodney (1984) *Introduction to the Grammar of English*, Cambridge University Press, Cambridge.
- Huddleston, Rodney (1995a) "The Case against a Future Tense in English," *Studies in Language* 19, 399-446.
- Huddleston, Rodney (1995b) "The English Perfect as a Secondary Past Tense," *The Verb in Contemporary English: Theory and Description*, ed. by Bas Aarts and Charles F. Meyer, 102-122, Cambridge University Press, Cambridge.
- Inoue, Kyoko (1979) "An Analysis of English Present Perfect," *Linguistics* 17, 561-589.
- Jackendoff, Ray (1972) *Semantic Interpretation in Generative Grammar*, MIT Press, Cambridge MA.
- James, Francis (1986) *Semantics of the English Subjunctive*, University of British

- Columbia Press, Vancouver.
- Jespersen, Otto (1931) *A Modern English Grammar on Historical Principles IV*, George Allen and Unwin, London.
- Kageyama, Taro (1996) *Doshi-Imiron: Gengo to Ninchi no Setten*, Kurosio, Tokyo.
- Kashino, Kenji (1989) "Chikakudoshi-Kobun no Judotai," *Eigo Seinen* 135:9, 9.
- Kashino, Kenji (1993) *Imiron kara Mita Goho*, Kenkyusha, Tokyo.
- Kato, Kazuo (1993) "Memò no Bun no Genzaikanryo," *Eigo Seinen* 139:3, 29.
- Klein, Wolfgang (1992) "The Present Perfect Puzzle," *Language* 68, 525-552.
- Klein, Wolfgang (1994) *Time in Language*, Routledge, London and New York.
- Klinge, Alex (1993) "The English Modal Auxiliaries: From Lexical Semantics to Utterance Interpretation," *Journal of Linguistics* 29, 315-357.
- Lakoff, George (1970) "A Note on Vagueness and Ambiguity," *Linguistic Inquiry* 1, 357-359.
- Lakoff, Robin (1970) "Tense and Its Relation to Pragmatics," *Language* 46, 838-849.
- Langacker, Ronald W. (1990) "Subjectification," *Cognitive Linguistics* 1, 5-38.
- Lascarides, Alex and Nicholas Asher (1993) "Temporal Interpretation, Discourse Relation and Commonsense Entailment," *Linguistics and Philosophy* 16, 437-493.
- Leech, Geoffrey (1987) *Meaning and the English Verb*, 2nd ed., Longman, London.
- Lyons, John (1977) *Semantics*, Cambridge University Press, Cambridge.
- Lyons, John (1995) *Linguistic Semantics: An Introduction*, Cambridge University Press, Cambridge.
- McCawley, James J. (1971) "Tense and Time Reference in English," *Studies in Linguistic Semantics*, ed. by Charles J. Fillmore and T. J. Langendoen, 97-113, Holt, Rinehart and Winston, New York.
- McCoard, Robert (1978) *The English Perfect: Tense-Choice and Pragmatic Inferences*, North-Holland, Amsterdam.

- Michaelis, Laura A. (1992) "Aspect and the Semantics-Pragmatics Interface: The Case of *Already*," *Lingua* 87, 321-339.
- Michaelis, Laura A. (1994) "The Ambiguity of the English Present Perfect," *Journal of Linguistics* 30, 111-157.
- Michaelis, Laura A. (1996) "On the Meaning and Use of *Already*," *Linguistics and Philosophy* 19, 477-502.
- Michaelis, Laura A. (1998) *Aspectual Grammar and Past-Time Reference*, Routledge, London and New York.
- Mihara, Ken-ichi (1992) *Jiseikaishaku to Togogensho*, Kurosio, Tokyo.
- Mittwoch, Anita (1988) "Aspects of English Aspect: On the Interaction of Perfect, Progressive and Durational Phrases," *Linguistics and Philosophy* 11, 203-254.
- Murata, Yuzaburo (1984) "*not* no Ido," *Eigo Seinen* 130:2, 8.
- Nakano, Hirozo (1993) *Eigo Ho-Jodoshi no Imiron*, Eichosha, Tokyo.
- Nakau, Minoru (1979) "Modariti to Meidai," *Eigo to Nihongo to*, Kurosio, Tokyo.
- Nakau, Minoru (1984-1986) "Imiron no Genri (1)-(24)," *Eigo Seinen* 130:1-12; 131:1-12. ["Imiron no Genri (19)-Reichenbach Jiseiron Hihan" *Eigo Seinen* 131:7, 1985]
- Nakau, Minoru (1992) "Modality and Subjective Semantics," *Tsukuba English Studies* 11, 1-45.
- Nakau, Minoru (1994) *Ninchi-Imiron no Genri*, Taishukan, Tokyo.
- Nakau, Minoru (1997) "Ho-Jodoshi Soshite Shukanteki Modariti-ka," *Eigo Goho-Bunpo Kenkyu* 4, 5-19.
- Nicolle, Steve (1997) "A Relevance-Theoretic Account of *Be Going To*," *Journal of Linguistics* 33, 355-377.
- Nicolle, Steve (1998) "Be Going To and Will: A Monosemous Account," *English Language and Linguistics* 2, 223-243.

- Ota, Akira (1954) *Kanryokei Shinkokei*, Kenkyusha, Tokyo.
- Ota, Akira (1963) *Tense and Aspect of Present-Day American English*, Kenkyusha, Tokyo.
- Ota, Akira (1972) "Modals and Some Semi-Auxiliaries in English," *ELEC Publications* 9, 42-68.
- Palmer, Frank R. (1979) *Modality and the English Modals*, Longman, London.
- Palmer, Frank R. (1986) *Mood and Modality*, Cambridge University Press, Cambridge.
- Palmer, Frank R. (1988) *The English Verb*, 2nd ed., Longman, London and New York.
- Palmer, Frank R. (1990) *Modality and the English Modals*, 2nd ed., Longman, London.
- Parsons, Terence (1990) *Events in the Semantics of English: A Study in Subatomic Semantics*, MIT Press, Cambridge MA.
- Prior, Arthur (1967) *Past, Present and Future*, Clarendon Press, Oxford.
- Quirk, Randolph, Sidney Greenbaum, Geoffrey Leech and Jan Svartvik (1985) *A Comprehensive Grammar of the English Language*, Longman, London.
- Reichenbach, Hans (1947) *Elements of Symbolic Logic*, Free Press, New York.
- Ross, John Robert (1969) "Auxiliaries as Main Verbs," *Studies in Philosophical Linguistics*, ed. by William Todd, 77-102, Evanston, Illinois.
- Saito, Takeo and Hidekazu Suzuki (1982) "Eigo no Jikanhyogen - Reichenbach (1947) to Smith (1978) wo Megutte -," *Gengobunka Ronshu* 12, 137-155.
- Salkie, Raphael (1989) "Perfect and Pluperfect: What Is the Relationship?" *Journal of Linguistics* 25, 1-34.
- Salkie, Raphael and Susan Reed (1997) "Time Reference in Reported Speech," *English Language and Linguistics* 1, 319-348.
- Sawada, Harumi (1992) "Asupekuto kara Mita Jiten-Fukushirui no Imi to Bunpo," *Eigo*

- Seinen* 138:1, 14-16, 63-65.
- Schwenter, Scott A. (1994) "'Hot News' and the Grammaticalization of Perfects," *Linguistics* 32, 995-1028.
- Seto, Ken-ichi (1997) "Imi no Retorikku," *Bunka to Hasso to Retorikku*, ed. by Minoru Nakau, 94-177, Kenkyusha, Tokyo.
- Smith, Carlota (1978) "The Syntax and Interpretation of Temporal Expressions in English," *Linguistics and Philosophy* 2, 43-99.
- Smith, Carlota (1981a) "The Futurate Progressive: Not Simply Future + Progressive," *CLS* 17, 369-382.
- Smith, Carlota (1981b) "Semantic and Syntactic Constraints on Temporal Interpretation," *Syntax and Semantics* 14: *Tense and Aspect*, ed. by Philip Tedeschi and Annie Zaenen, 213-237, Academic Press, New York.
- Sperber, Dan and Deirdre Wilson (1986) *Relevance: Communication and Cognition*, Blackwell, Oxford.
- Sweetser, Eve E. (1988) "Grammaticalization and Semantic Bleaching," *BLS* 14, 389-405.
- Sweetser, Eve E. (1990) *From Etymology to Pragmatics: Metaphorical and Cultural Aspects of Semantic Structure*, Cambridge University Press, Cambridge.
- Tanaka, Kazuhiko (1991) "Eigo ni Okeru Jisei no Sho-o ni Tsuite," *Eibungaku Kenkyu* 67, 159-172.
- Taylor, John R. (1989) *Linguistic Categorization: Prototypes in Linguistic Theory*, Clarendon Press, Oxford.
- Taylor, John R. (1994) *Linguistic Categorization: Prototypes in Linguistic Theory*, 2nd ed., Clarendon Press, Oxford.
- Thomson, A.J. and A.V. Martinet (1986) *A Practical English Grammar*, Fourth Edition, Oxford University Press, Oxford.

- Traugott, Elizabeth Closs (1989) "On the Rise of Epistemic Meanings in English: An Example of Subjectification in Semantic Change," *Language* 65, 31-55.
- Tuggy, David (1993) "Ambiguity, Polysemy, and Vagueness," *Cognitive Linguistics* 4, 273-290.
- Vendler, Zeno (1967) *Linguistics in Philosophy*, Cornell University Press, Ithaca.
- Vikner, Sten (1985) "Reichenbach Revisited: One, Two, or Three Temporal Relations?" *Acta Linguistica Hafniensia* 19, 81-98.
- Wada, Naoaki (1994) "On the English Present Perfect: A Cognition-based Approach to the Categorization of Its Functions," *Tsukuba English Studies* 13, 179-215.
- Wada, Naoaki (1995a) "English Relative Past Tense: Simultaneous or Anterior?" *Tsukuba English Studies* 14, 195-219.
- Wada, Naoaki (1995b) "On the English Pluperfect: Does It Really Represent the Pre-preterite Tense?" *English Linguistics* 12, 96-124.
- Wada, Naoaki (1996) "Does Doc Brown know Which Expression Takes Us Back to the Future: *Be Going To* or *Will*?" *English Linguistics* 13, 169-198.
- Wada, Naoaki (1998a) "Toward a New Compositional Tense Theory," *Tsukuba English Studies* 17, 107-145.
- Wada, Naoaki (1998b) "On the Mechanism of Interpreting English Tenses in Indirect Speech Complement Clauses," *English Linguistics* 15, 167-194.
- Wasow, Thomas and Thomas Roeper (1972) "On the Subject of Gerunds," *Foundations of Language* 8, 44-61.
- Wekker, Charles (1976) *The Expression of Future Time in Contemporary British English*, North-Holland, Amsterdam.
- Wekker, Charles (1980) "Temporal Subordination in English," *Linguistics in the Netherlands 1977-1979*, ed. by Wim Zonneveld and Fred Weerman, 96-103, Foris, Dordrecht.

- Wierzbicka, Anna (1975) "Why "Kill" Does Not Mean "Cause to Die": The Semantics of Action Sentences," *Foundations of Language* 13, 491-528.
- Wierzbicka, Anna (1988) *The Semantics of Grammar*, John Benjamins Publishing Company, Amsterdam.
- Wierzbicka, Anna (1993) "Why Do We Say *in April, on Thursday, at 10 o'clock?*: In Search of an Explanation," *Studies in Language* 17, 437-454.
- Yasui, Minoru, Rei Akiyama, and Masaru Nakamura (1976) *Keiyoshi*, Kenkyusha, Tokyo.

### **SOURCES OF DATA**

- Gardner, C.S. (1985) *Back to the Future*, Corgi, London.
- Gardner, C.S. (1990) *Back to the Future III*, Berkley, New York.
- Kleinbaum, N.H. (1989) *Dead Poets Society*, Bantam, New York and Tronto.
- McConnell, J. (1996) *English and Many Cultures*, Seibido, Tokyo.
- Puzo, M. (1969) *The Godfather*, Mandarin, London.
- Sheldon, S. (1983) *Master of the Game*, Pan, London.
- Webb, C. (1963) *The Graduate*, Penguin, New York.

### **DICTIONARIES**

- COBUILD 2nd ed. = Collins COBUILD English Language Dictionary 2nd edition, Collins, London, 1995.
- GENIUS 2nd ed. = Taishukan's GENIUS English-Japanese Dictionary 2nd edition, Taishukan, Tokyo, 1994.
- Progressive 2nd ed. = Shogakukan's Progressive English-Japanese Dictionary 2nd edition, Shogakukan, Tokyo, 1987.
- Progressive 3rd ed. = Shogakukan's Progressive English-Japanese Dictionary 3rd

edition, Shogakukan, Tokyo, 1998.