

CHAPTER 3:

The Role of Tense-Aspect in Discourse Management

3.0 Introduction

Tense-aspect plays an important discourse management role in the construction and organization of mental spaces (and meaning) built in the ongoing process of discourse interpretation. The purpose of this chapter is to lay out in a systematic way the components of the model of tense-aspect proposed here and to give an overview of how tense-aspect functions, in conjunction with a set of Discourse Organization Principles, to constrain the mental space configurations built during the interpretation of ongoing discourse. This chapter lays the theoretical foundation for the detailed analysis of language specific tense markers, of tense in embedded clauses, and of tense in discourse-narrative, treated in subsequent chapters.

In this chapter, I will propose a model which is an extension of the approach and ideas of Fauconnier (1985, 1986a, 1986b, 1990, 1991, to appear) and Dinsmore (1991). The model, which is the basis for the account of tense presented in this dissertation, consists of:

- the mental space format (space partitioning, cognitive links between elements in different spaces, etc...) and the general mental space principles of *access*, *optimization*, *spreading*, and *matching*, as proposed in Fauconnier (1985) and updated in more recent work.

- a set of conceptual, discourse primitives: {BASE, FOCUS, EVENT, and V-POINT}, which are distributed over the hierarchical configuration of spaces built as the discourse interpretation process unfolds.
- a set of Discourse Organization Principles which operate on these conceptual primitives, determining the types of space configurations which are possible.
- a distinction between the FACT and PREDICTION status assigned to spaces. A FACT/PREDICTION Principle which is invoked whenever two V-POINTS are engaged will be proposed in chapter 6.
- a characterization of the tense-aspect categories {PRESENT, PAST, FUTURE, PERFECT, PROGRESSIVE, IMPERFECTIVE, PERFECTIVE}. These categories are cross-linguistic, putatively universal discourse construction notions which operate at the cognitive construction level.

This chapter lays out the model of tense-aspect, developed during the research process and gives an overview of how the model functions. The model is presented in its final form, which has the maximum explanatory value. Chapters 4 through 7 will show in detail how this model functions to account for tense data in simple sentences, in complex clauses, in pragmatic context, and in discourse-narrative.

The tense-aspect categories {PRESENT, PAST, FUTURE, PERFECT, PROGRESSIVE, IMPERFECTIVE, PERFECTIVE} will be characterized in terms of the constraints they impose on the actual space configurations which are built during the

discourse interpretation process. Each category is universal type of discourse link between spaces. A link or a combination of links may map onto a language specific tense marker. These tense-aspect categories or links function to constrain the organization and distribution of {BASE, FOCUS, EVENT, V-POINT} over a set of spaces, to assign local temporal relationships between spaces, and to partition information in time, in status as FACT or PREDICTION, and in status as FOCUS or non-FOCUS.²⁶

The view of language taken here is one where all sentences have a context. The context for tense-aspect may be in written narrative, in spoken discourse, or a single sentence stripped to its minimal context, numbered and placed on the page of a linguistics paper. In discourse-narrative, as well as in the simple sentence, the interpretation of language cues the space construction process. The cognitive construction process and the constraints which tense-aspect links (and the grammatical categories which encode those links) impose on that process are the same regardless of whether the context is a discourse one or the minimal context of a simple sentence. The only distinction between discourse and the simple sentence is perhaps the complexity and elaborateness of the actual space configuration constructed in the interpretation process.

The structure of this chapter is as follows: Section 3.1 provides characterizations of four theoretical discourse notions which will be central to the analysis of tense presented in this dissertation: {BASE, FOCUS, EVENT, V-POINT}. Section 3.2 proposes a set of Discourse Organization Principles which operate on the distribution and configuration of {BASE, FOCUS, EVENT, V-POINT} over a set of spaces. Section 3.3 shows in a highly schematic way how these Discourse Organization Principles may

²⁶ The value of the FACT/PREDICTION distinction will become apparent in the discussion of the Present and Future tenses in chapter 4, and in the discussion of the behavior of tense in embedded clauses of speech verbs in chapter 6.

operate over a set of spaces, constraining the kinds of space configurations which are possible. In section 3.4, characterizations of the universal tense-aspect categories {PAST, PRESENT, FUTURE, PROGRESSIVE, PERFECT, IMPERFECTIVE, PERFECTIVE} are given. These categories are characterized as universal discourse notions. Each category gives instructions about the construction of a local link between spaces and the organization and distribution of {BASE, FOCUS, EVENT, V-POINT}. These links may also set up local time connections, and assign a space a status as FACT or PREDICTION. Section 3.4 also provides a brief discussion of the general discourse functions of tense-aspect, and shows how these categories may link together to form a more complex *access path* to a target space. Section 3.5 shows how the instructions provided by tense-aspect categories function, in combination with the Principles of Discourse Organization, to constrain the underlying cognitive constructions built in the process of language interpretation. In particular, we will look at operations which involve {FOCUS, V-POINT, BASE, EVENT} in real discourse settings. Section 3.6 is concerned with the role which tense-aspect markers play in the *access* and *reaccess* of spaces. Section 3.7 gives a summary of the discourse-management functions of tense-aspect. Section 3.8 concludes the chapter.

3.1 BASE, FOCUS, EVENT, and V-POINT

We begin by characterizing four theoretical discourse primitives which are central to the discussion of tense throughout this dissertation: {BASE, FOCUS, EVENT, V-POINT}.

3.1.1

FOCUS: The concept of FOCUS space employed here was developed by Dinsmore (1991). Dinsmore generalizes Reichenbach's notion of reference time in terms of the more general semantic process of *contextualization*, the process of identifying the appropriate space for meaning construction. Reference time is defined as the temporal perspective taken on the event, the time mentioned in the context of the temporal FOCUS space.

The FOCUS space is the space where meaning is currently being constructed. It is the current, most active space; the space which an utterance is "about". The FOCUS space may be identified by a variety of cues, both grammatical and pragmatic. Dinsmore proposes a number of factors which may identify the FOCUS space:

- Grammatical cues such as tense, mood, and certain time adverbials, such as 'once upon a time', that restrict the set of FOCUS space candidates. For the purposes of this dissertation, any adverbial which gives a precise time specification, such as 'today', 'yesterday', '3 days ago', etc... will serve as FOCUS cues.
- The 'activation' of various spaces. For any given space, the activation level or degree of

activation may vary. The degree of activation of a particular space may be determined by a number of factors: by how recently the space has been used in the preceding discourse; by the amount of information processed in that space; by the degree of activation of closely related spaces; by the centrality of the space to the discourse, story, or conversational interchange; and by the unexpectedness of the information conveyed.

- The communicative function of the sentence in relation to various spaces. "The projection of a discourse sentence into a space is generally communicatively functional if the pragmatic preconditions for its successful interpretation are satisfied there, if it does not conflict with knowledge that is already given there and if it says something relevant about that space" (Dinsmore 1991:123).

It may be added here that various types of spaces differ with regards to their stability as FOCUS. For example, FOCUS spaces with a more complex access path will be less stable than FOCUS spaces with a simpler access path. FOCUS spaces which are less central to a story will be less stable than FOCUS spaces which are more central to a story.

EVENT: An EVENT space is the temporal space in which the event encoded in the verb takes place. The EVENT space is the space in which the full structure of the verb is constructed.

BASE: The BASE space is the initial or origin space in any hierarchical organization of spaces. The BASE space represents a temporal frame which contains the initial conceptualizing V-POINT, from which events or states are conceived, evaluated, measured, and/or construed. This initial V-POINT serves as the center of reference from

which deictic relations typically or canonically are calculated. A BASE space is always a PRESENT one by default; a PAST or FUTURE space cannot be BASE, since a PAST or FUTURE space must access some higher space in a hierarchy of spaces for the interpretation of tense.

V-POINT:²⁷ In its strongest version, V-POINT is the center of conceptualization and consciousness of the SELF to whom an utterance is attributed. In the strongest version, V-POINT is composed of the intersection of a bundle of deictic dimensions, although they may or may not be evident linguistically. These dimensions may include:²⁸

- a personal dimension
(I vs. you, encoder vs. other persons/objects);
- a temporal dimension;
- a spatial dimension;
- a realis/irrealis dimension;
- a dimension of emotional distance or empathy;
- a social dimension;
- a psychological or cognitive dimension.

This strong version of V-POINT corresponds to traditional notions of viewpoint or narrative point of view, and to Genette's notion of 'focalizer' (Genette 1980).

²⁷ I add to the characterization of V-POINT given in Sweetser and Fauconnier (to appear), where V-POINT is defined as the space from which other spaces can be accessed and structured or created.

²⁸ The idea that viewpoint or point of view is multi-dimensional is not new. Rauh 1983, Talmy 1983, Kamp and Rohrer 1983, and others have also proposed various dimensions for viewpoint or point of view.

In its weakest, most abstract version, V-POINT is composed of a single dimension, such as a spatial or temporal dimension, or a limited subset of dimensions. This weakest version of V-POINT corresponds to notions of ‘vantage point’ (Langacker), reference point (Reichenbach 1947), or to what Talmy (1983) refers to as ‘perspective point’, the point within a scene at which one conceptually places ones "mental eyes" to look out over the rest of the scene (Talmy 1983).²⁹ A version of V-POINT intermediate between the two extremes is possible, where a V-POINT possesses an incomplete, but not minimal set of deictic dimensions.

In its strongest version, a V-POINT corresponds to the V-POINT of a SELF, with a full set of deictic dimensions. In its weakest version, it corresponds to a more abstract V-POINT, with a single or very limited set of deictic dimensions. Intermediate between the strongest and weakest versions, a V-POINT will be more or less abstract depending on the number of deictic dimensions which are present. The canonical V-POINT, in any form, is that of the speaker. Alternate V-POINTS can be assumed for the purpose of calculating a particular relationship.³⁰ The dynamic process by which the V-POINT, in the stronger version, changes position within a space hierarchy corresponds to Genette's notion of 'focalization' (Genette 1980). The dynamic process by which V-POINT changes position in the weaker version, corresponds to what Vandeloise (1984) and Langacker refer to as 'mental transfer'. In either the strong, weak, or some intermediate version, V-POINT operates in the same manner, subject to the same set of general Discourse Principles and constraints.

²⁹ Talmy considers perspective point to be part of a secondary imaging system.

³⁰ A shift in strong V-POINT involves a shift in the whole bundle of deictic dimensions, a shift in weaker V-POINT involves a single dimension or a subset of dimensions.

3.1.2

These theoretical primitives, {BASE, FOCUS, EVENT, and V-POINT}, are cognitive construction notions; they operate at the level of cognitive construction which is independent both of language and of the real world. These theoretical primitives also correspond to informal intuitions or notions which we have about discourse. For example, we know that in the production and interpretation of discourse, we need to represent possible situations and actions within some domain, hence the need for a notion such as EVENT. We also know that given the constraints imposed by our attention and memory system, we cannot look at, describe, or recreate everything at once, but must focus our attention on a particular part of the scene, thus, the notion FOCUS. It is part of our basic cognitive capacity that we are able to view things mentally from different angles, thus the notion V-POINT. Although we may view things from different positions, we need a more permanent anchor, thus the notion BASE. However, although these primitives may correspond to informal notions which we have about discourse, the motivation for these theoretical primitives is not based on the relationship to informal notions, but rather on the explanatory value which these primitives have in the account of tense-aspect proposed here.

Having provided a characterization of {BASE, FOCUS, EVENT, V-POINT} we turn now to a discussion of the Discourse Organization Principles which govern the distribution of these primitives over a set of spaces and the dynamic change which these primitives may undergo.

3.2 Discourse Organization Principles and the Distribution of BASE, FOCUS, EVENT, and V-POINT

At any given point in the discourse interpretation process, there is a space which serves as BASE, a space which is in FOCUS, a space which is V-POINT, and a space which is EVENT. The BASE, FOCUS, V-POINT, and EVENT may share the same space or they may be distributed over a set of hierarchically related spaces in various ways. The FOCUS may be BASE or it may be separate. The EVENT space may be FOCUS or it may be separate. The V-POINT may be BASE or FOCUS or it may be separate.

As discourse unfolds, the organization and dynamic distribution and redistribution of {BASE, FOCUS, EVENT, V-POINT} over a configuration of hierarchically related spaces is constrained by: grammatical information, such as tense-aspect; lexical information; pragmatic and contextual information; and by a set of Discourse Organization Principles. However, it is important to note that although the operations by which {BASE, FOCUS, EVENT, V-POINT} dynamically change may be cued by tense-aspect markers and other linguistic information, these conceptual structures are independent of language and therefore their presence may be linguistically underdetermined. Although the {BASE, FOCUS, EVENT, V-POINT} are always conceptually present in discourse, they are not always grammatically or lexically marked.

In this section, a set of Discourse Organization Principles will be proposed. These principles restrict the organization, distribution, and dynamic redistribution of {BASE, FOCUS, EVENT, V-POINT} over a set of spaces during the discourse

interpretation process.³¹ The following Discourse Principles are proposed:

(3.1) *Principles of Discourse Organization:*

I. General Principles:

- 1) At any given moment in the discourse interpretation process, there may be only one FOCUS space. The output of a single clause may have only one FOCUS space.
- 2) There may be only one BASE in each hierarchical configuration of spaces, although more than one configuration and thus more than one BASE may be accessed for a single utterance.
- 3) The BASE is the initial V-POINT.

II. Operational Principles:

- 4) If FOCUS is BASE, V-POINT is also BASE.
- 5) A new space is built from BASE or FOCUS.
- 6) BASE may shift to any V-POINT, or to any previous BASE.
- 7) FOCUS can shift to an EVENT space, to a BASE space, to a previous FOCUS space, or to a new space.
- 8) V-POINT can shift to FOCUS or to BASE.
- 9) EVENT can be FOCUS or it can shift to FOCUS or to a new space which is a daughter of V-POINT.

³¹ The principles presented here were developed based on work on tense-aspect in discourse-narrative, as a part of the research process which led up to this dissertation.

Given that all other constraints are met, the status quo may also be maintained. BASE can remain BASE, FOCUS can remain FOCUS, EVENT can remain EVENT, and V-POINT can remain V-POINT.

These discourse organization principles are applied to time spaces, geographical spaces, counterfactuals, and other types of spaces. These principles govern the distribution and dynamic change which the conceptual primitives {BASE, FOCUS, V-POINT, EVENT} can undergo, determining the kinds of space configurations which are possible.

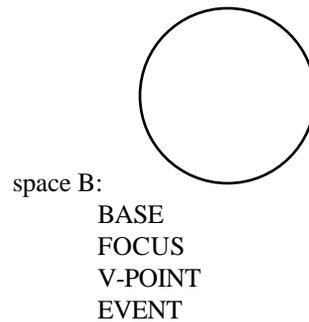
The kinds of dynamic changes which {BASE, FOCUS, V-POINT, EVENT} may undergo, as laid out in these principles, can be seen throughout the dissertation. The following section, section 3.3, will illustrate in a schematic way how particular space configurations are allowed by these constraints and how the distribution of {BASE, FOCUS, EVENT, V-POINT} may change dynamically. Readers adverse to abstract, schematic representations may skim through section 3.3. The kinds of dynamic changes which {BASE, FOCUS, EVENT, V-POINT} may undergo will be illustrated with actual discourse data in section 3.5, after we have given a characterization of the tense-aspect discourse construction notions {PRESENT, PAST, FUTURE, PERFECT, PROGRESSIVE, IMPERFECTIVE, PERFECTIVE} in section 3.4.

3.3 Distribution and Redistribution of BASE, FOCUS, V-POINT, and EVENT

In the simplest configuration, the BASE, FOCUS, EVENT, and V-POINT belong to the same space, as in Figure 3.1.

FIGURE 3.1

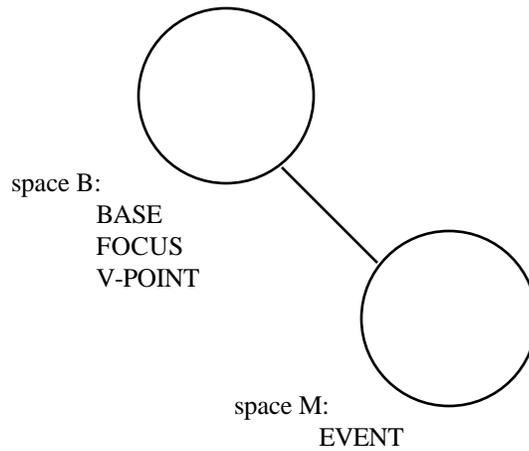
BASE as V-POINT, FOCUS, and EVENT



Principle 5 allows a new space to be built from BASE or FOCUS. Hence, from a space configuration as in Figure 3.1, a new space, space M, may be set up as a daughter of space B. EVENT alone may shift to this new daughter space M, as allowed by Principle 9, since space M is daughter of V-POINT. The output of this dynamic change is shown in Figure 3.2.

FIGURE 3.2

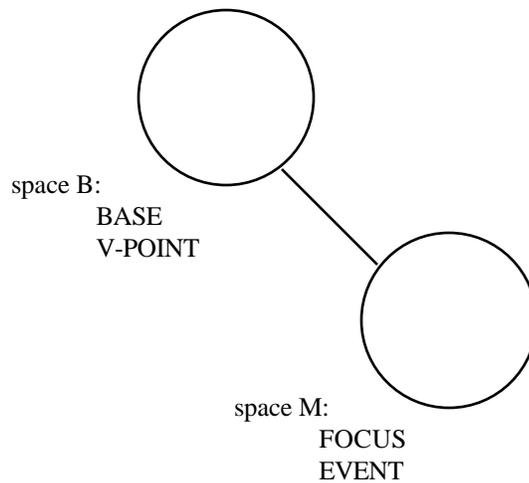
EVENT as daughter of V-POINT



From a space configuration as in Figure 3.2, Principle 7 allows FOCUS to shift to an EVENT space. Hence, FOCUS may shift from space B in Figure 3.2 to the new EVENT space M. The output of this dynamic change is shown in Figure 3.3.

FIGURE 3.3

FOCUS shifts to EVENT

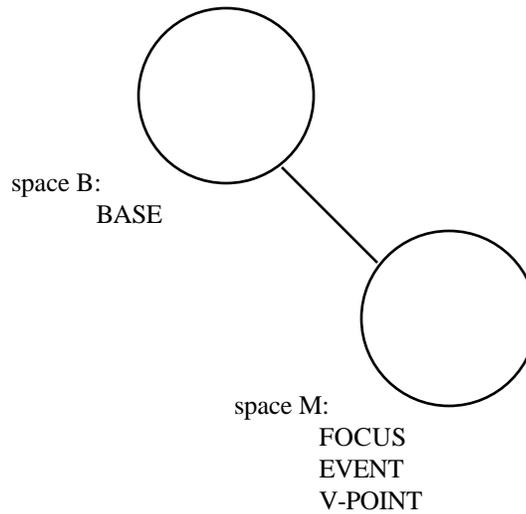


From the space configuration in Figure 3.3, V-POINT may shift to the FOCUS

space, as allowed by Principle 8. The output of this dynamic operation is shown in Figure 3.4.

FIGURE 3.4

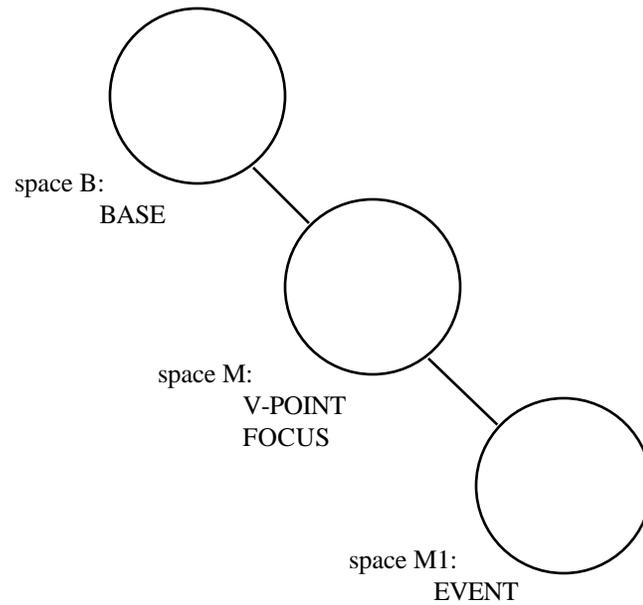
V-POINT shifts to FOCUS



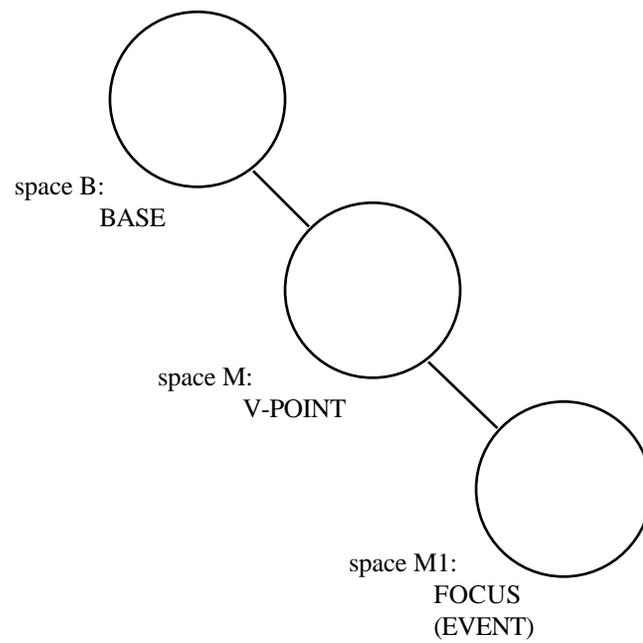
Principle 5 allows a new space to be built from BASE or FOCUS. Hence, from the space configuration in Figure 3.4, a daughter space, space M1, may be created from FOCUS space M. Space M1 may be EVENT, since EVENT may shift to a space which is daughter of V-POINT, as allowed by Principle 9. FOCUS may also shift to space M1, since FOCUS may shift to any new space, as allowed by Principle 7. These possibilities are shown in Figures 3.5 and 3.6 respectively.

FIGURE 3.5

EVENT shifts to daughter of V-POINT

**FIGURE 3.6**

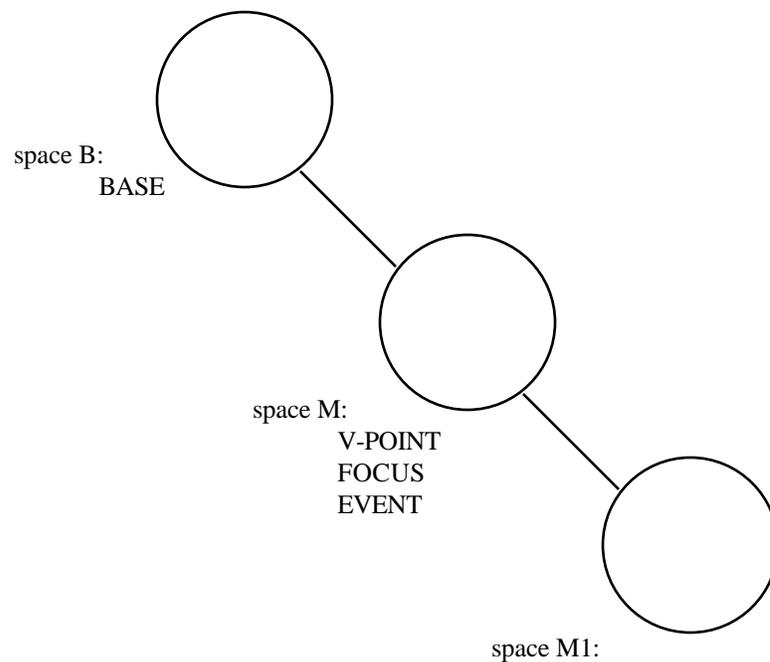
FOCUS shifts to new space



Since EVENT can be FOCUS or daughter of V-POINT (Principle 9), FOCUS in Figure 3.6 implies EVENT. Principle 9 specifies that where an EVENT space is created, the parent space must be V-POINT, as in Figure 3.6. Since an EVENT space's parent must be V-POINT (Principle 9), a configuration where EVENT's parent is FOCUS but not V-POINT is not possible.

From Figure 3.5, Principle 9 allows EVENT to shift back to FOCUS space M. From Figure 3.6, Principle 7 allows FOCUS and therefore EVENT to shift back to the previous FOCUS space, space M. The output of both operations is diagrammed in Figure 3.7.

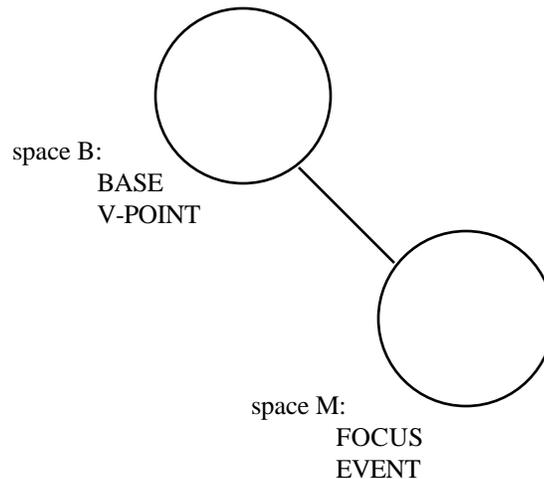
FIGURE 3.7 EVENT shifts to FOCUS or FOCUS shifts to previous FOCUS



From the space configuration in Figure 3.7, Principle 8 allows V-POINT to shift back to BASE. The output of this operation is shown in Figure 3.8.

FIGURE 3.8

V-POINT shifts to BASE

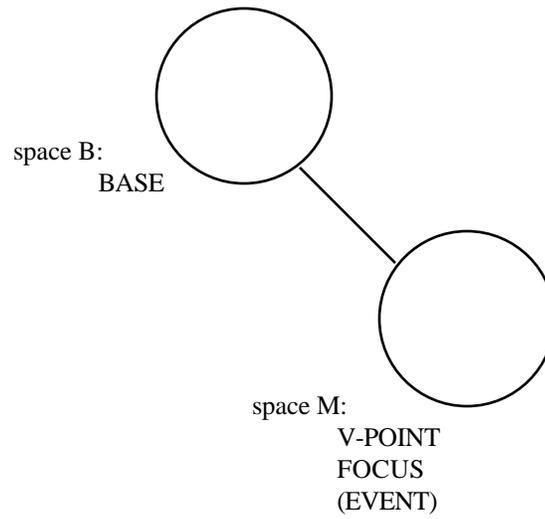


From the space configuration represented in Figure 3.8, FOCUS may shift back to BASE, as allowed by Principle 7. If FOCUS shifts to BASE, V-POINT must also shift to BASE, as constrained by Principle 4. The resulting configuration is one where BASE, FOCUS, EVENT, and V-POINT belong to the same space. The output of these operations is the simple space configuration which we started with, as represented in Figure 3.1.

According to Principle 6, any V-POINT is eligible to become BASE. Thus, a space configuration such as:

FIGURE 3.9

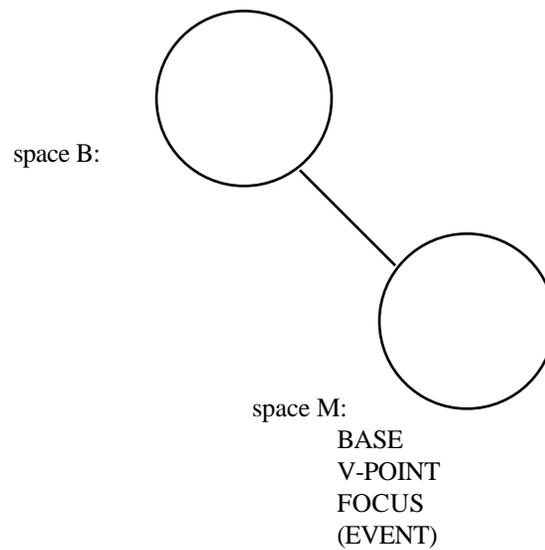
FOCUS is V-POINT



may be updated as in Figure 3.10.

FIGURE 3.10

BASE shifts to V-POINT



The space which was V-POINT in Figure 3.9 becomes BASE in Figure 3.10. In

this case, the space which was BASE in Figure 3.9 loses its status as a BASE, as shown in Figure 3.10. However, as a previous BASE, space B is eligible to become BASE again (Principle 6).³²

This section has given a very schematic illustration of how the general Discourse Organization Principles {BASE, FOCUS, EVENT, V-POINT} may be distributed over a set of spaces and how that distribution may dynamically change. In addition to the constraints imposed by the Discourse Organization Principles proposed above, tense-aspect also provides important cues to and constraints on the location and configuration of {BASE, FOCUS, V-POINT, EVENT}. In the following section, section 3.4, I will propose characterization of a set of tense-aspect categories {PRESENT, PAST, FUTURE, PERFECT, PROGRESSIVE, IMPERFECTIVE, PERFECTIVE}. The tense-aspect categories characterized are universal discourse construction notions, which operate at the level of cognitive construction. Among other things, each tense-aspect category gives a set of instructions for the arrangement of {BASE, FOCUS, EVENT, V-POINT}. After a presentation of the tense-aspect categories in section 3.4, section 3.5 will show how these tense-aspect categories function to set up and signal shifts in {BASE, FOCUS, EVENT, V-POINT} using real discourse data.

³² Although a previous BASE is eligible to become BASE, BASE shifts are not random. The BASE tends to return only to some recently activated BASE, where the V-POINT is still retrievable from memory. A random shift in BASE would violate other pragmatic principles of coherence, relevance, and communication function. The issue of BASE shifts, in particular the different types of BASE spaces which may be set up in discourse-narrative, is the subject of chapter 7.

3.4 Tense-Aspect Discourse Links

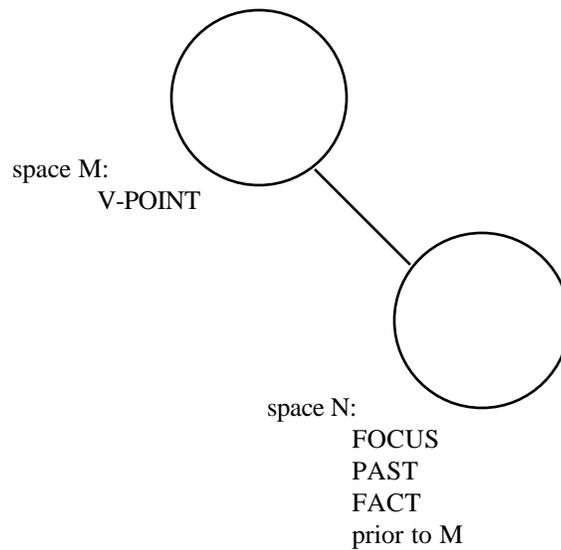
In this section, I propose characterizations for a set of putatively universal tense-aspect categories {PRESENT, PAST, FUTURE, PERFECT, PROGRESSIVE, IMPERFECTIVE, PERFECTIVE}. These tense-aspect categories are characterized as discourse construction notions, each being a certain universal type of local link between spaces. The characterizations given here will provide a basis for the discussion of tense-aspect in the remainder of this dissertation. The written characterizations of the tense-aspect discourse categories are partial instructions for the cognitive construction process. Each characterization is presented with a figure which illustrates the local link which results from interpretation of the given category where it occurs in a well-formed context. The figures are not static representation of semantic form; but rather, they represent the output of the dynamic interpretation process as a result of the instructions given by the particular link or category. The categories {PRESENT, PAST, FUTURE, PERFECT, PROGRESSIVE} only set up and assign properties to the daughter space N and to the link between daughter space N and its parent V-POINT. In a well-formed context, the parent space will already be provided. The categories {IMPERFECTIVE, PERFECTIVE} only assign a relation between V-POINT and FOCUS. In a well-formed context, the FOCUS space will already be provided.

(3.2) **PAST** identifies or cues construction of some PAST space N. It indicates that:

- i) N is in FOCUS
- ii) N's parent is V-POINT
- iii) N's time is prior to V-POINT (parent)
- iv) events or properties represented in N are FACT from
V-POINT (parent)

FIGURE 3.11

PAST

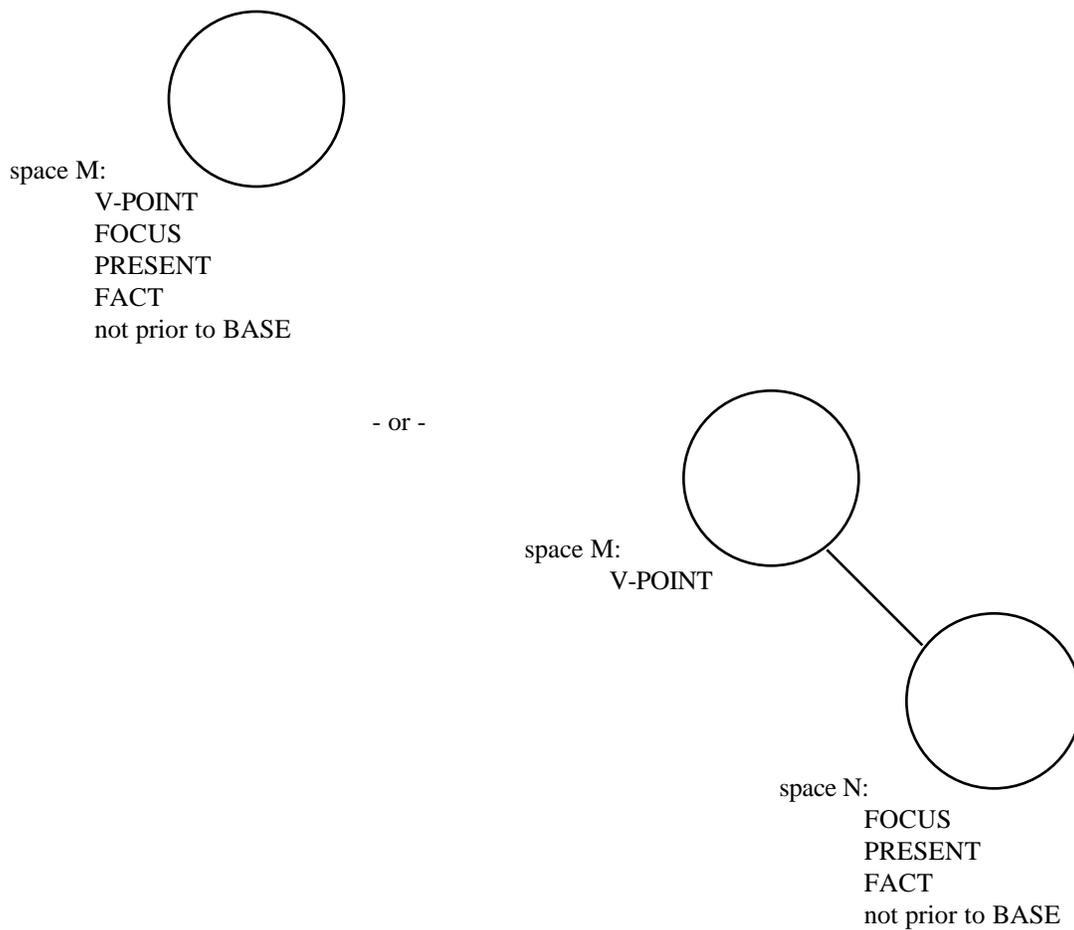


(3.3) **PRESENT** identifies or cues construction of some **PRESENT** space N.
It indicates that:

- i) N is in **FOCUS**
- ii) N or N's parent is **V-POINT**
- iii) the time frame represented in N is *not* prior to **V-POINT/BASE**
- iv) events or properties represented in N are **FACT**.

FIGURE 3.12

PRESENT

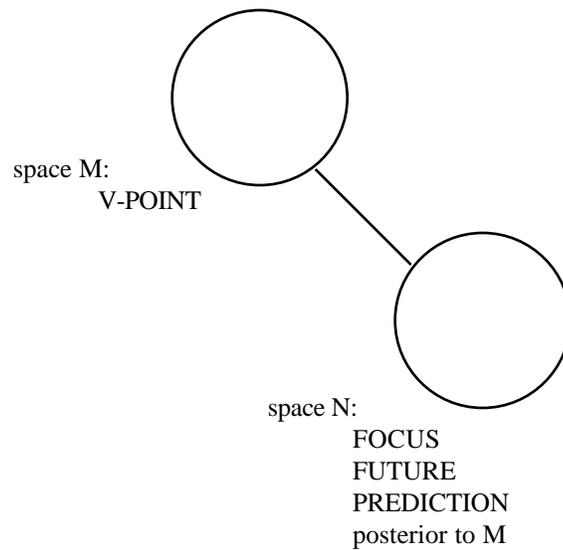


(3.4) **FUTURE** identifies or cues construction of some **FUTURE** space N. It indicates that:

- i) N is in **FOCUS**
- ii) N's parent is **V-POINT**
- iii) the time frame represented in N is posterior to **V-POINT**
- iv) events or properties represented in N are **PREDICTION**
from **V-POINT**

FIGURE 3.13

FUTURE

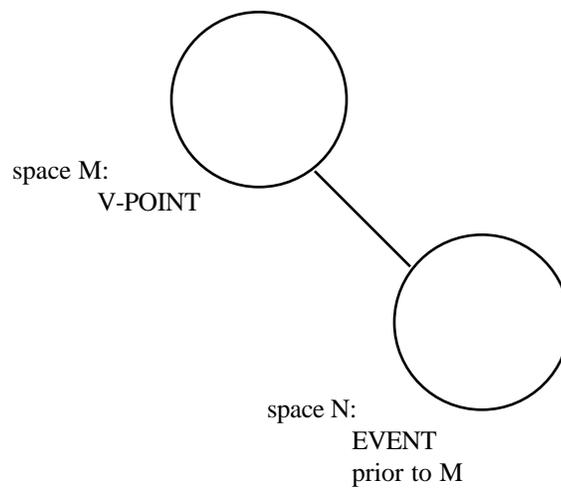


(3.5) **PERFECT** identifies or cues construction of an EVENT space N.
It indicates that:

- i) N is not in FOCUS
- ii) N's parent is V-POINT
- iii) N's time is prior to that of V-POINT ³³

FIGURE 3.14

PERFECT



³³ N's time is prior to V-POINT, but not necessarily prior to the whole temporal frame of the parent V-POINT space.

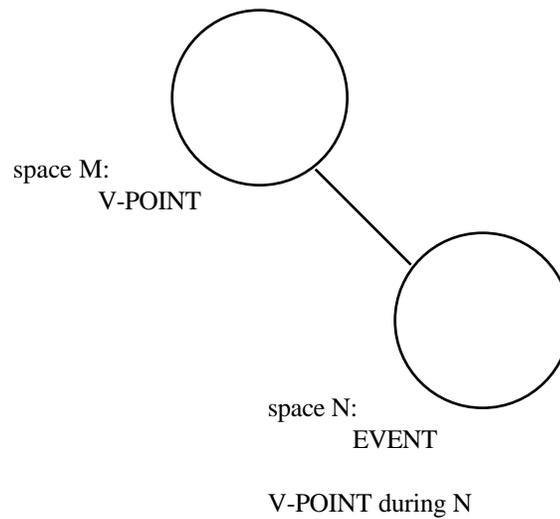
(3.6) **PROGRESSIVE** identifies or cues construction of an **EVENT** space N.
It indicates that:³⁴

- i) N is not in **FOCUS**
- ii) N's parent is **V-POINT**
- iii) the time period represented in N includes **V-POINT**.

V-POINT is during N.

FIGURE 3.15

PROGRESSIVE



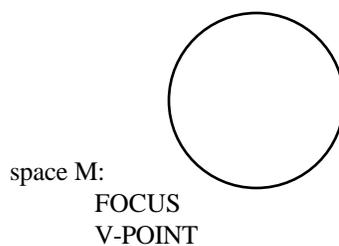
³⁴ This characterization of the **PROGRESSIVE** is based on the ideas of Dinsmore (1991) and Lansing (to appear).

(3.7) The **IMPERFECTIVE** identifies a FOCUS space N and indicates that:

i) N is V-POINT

FIGURE 3.16

IMPERFECTIVE

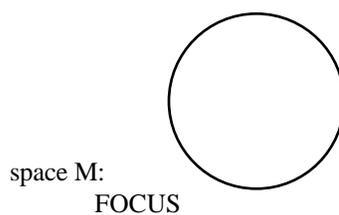


(3.8) The **PERFECTIVE** identifies a FOCUS space N and indicates that:

i) N is not V-POINT

FIGURE 3.17

PERFECTIVE



In the discourse interpretation process, these tense-aspect categories (or discourse links) and the markers which encode them, impose a set of constraints on the cognitive construction process. Each tense-aspect category issues a certain set of instructions to the

language decoder about the space configuration to be built, instructions which may include the assignment of local time connections between spaces, the assignment of a FOCUS or non-FOCUS status, the assignment of a FACT or PREDICTION status, as well as instructions concerning the arrangement of {BASE, FOCUS, EVENT, V-POINT} over a set of spaces.

The tense-aspect categories characterized here are not representations of semantic form, nor are they intended as language specific grammatical categories. But rather, they are characterizations of conceptual discourse links, which operate at the cognitive construction level, and which in the strongest possible claim, are universal.³⁵ Each tense-aspect category is a universal type of local link between spaces, a local relationship which may be established between spaces as part of the underlying cognitive structure. These discourse links are conceptual notions which are separate from language, but which may be encoded by the grammatical conventions of individual languages.

In this dissertation, the convention (CAPS), i.e. PRESENT, PAST, PERFECT, etc..., will be used to indicate the discourse notions which operate at the cognitive construction level. The convention (Caps), i.e. Simple Present, Past Perfect, Present Progressive, Imparfait, Plus-que-Parfait, etc..., will be used to indicate language specific tense markers, which may encode the universal discourse categories or other cognitive conceptual material. Non-language specific grammatical markers will occur with the word “tense”. The convention (no caps), i.e. future, present, past, is used for “real world” time concepts.

³⁵ The cross-linguistic work on tense of Bybee and Dahl (1989) shows that 70-80% of the grammatical morphemes marking tense-aspect belong to one of six types: past, future, perfect, progressive, imperfective, and perfective. The present is unmarked in the majority of cases. The categories adopted here correspond roughly to the universal tense categories proposed by Bybee and Dahl (1989).

In a given language, a particular link or set of links may map onto a particular marker or set of markers, although mapping is not directly one to one.³⁶ The coding for the PAST in English, for example, is the Simple Past. The Simple Past in (3.9) codes the category PAST and the set of instructions for the construction of the discourse link indicated by this category.

(3.9) Margaret ate an ice cream

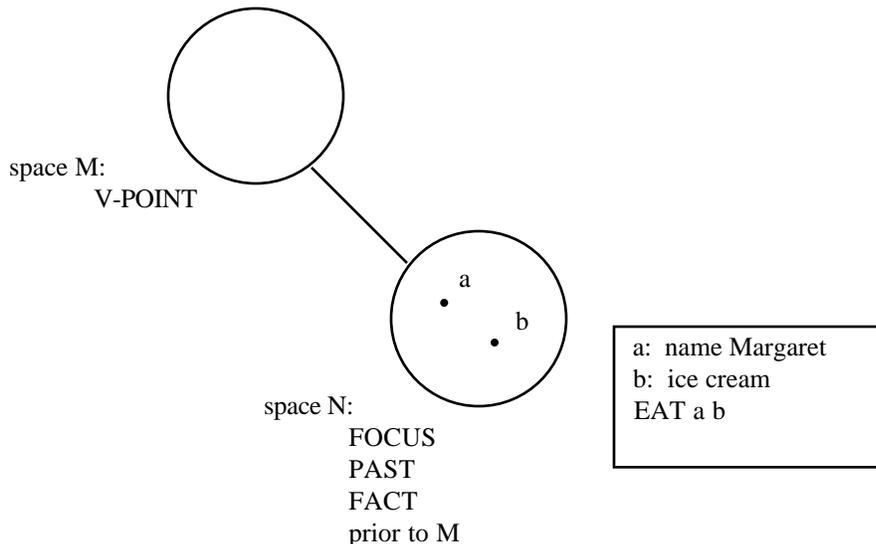
The Simple Past in (3.9) maps onto the category PAST, which imposes a certain set of constraints on the space construction process.³⁷ The output of (3.9) is represented in Figure 3.18.

³⁶ A single tense-aspect discourse link may map onto more than one language specific marker. A particular language specific marker may also encode more than one type of link. A particular language specific marker may encode a universal link and other more language specific discourse semantic notions or cognitive conceptual material. In any given language, some or all of these universal links may not be marked by tense at all, although the space configuration may be set up by other grammatical, lexical, or pragmatic means.

³⁷ The constraints imposed by the tense link PAST were represented in Figure 3.11.

FIGURE 3.18

'Margaret ate an ice cream'



The PAST either identifies a space N which is already tagged PAST or cues construction of a PAST space N, whose parent space is V-POINT. Space N is put in FOCUS and assigned a status as a FACT space. A local time relation is established between space N and its parent, i.e. space N is prior to its parent. Space N is structured by the information encoded in sentence (3.9). In this de-contextualized sentence, parent space M would be the BASE of speaker reality, by default.

The tense categories {PAST, PRESENT, FUTURE} either identify a space which is already tagged {PAST, PRESENT, or FUTURE} or tag a new space N as {PAST, PRESENT, or FUTURE}, putting N in FOCUS and assigning space N certain relational properties vis-a-vis other spaces. In particular, the tense categories {PAST, PRESENT, FUTURE} assign a local time connection between FOCUS space N and V-POINT or V-POINT/BASE. For example, the PAST in (3.9) assigns a local time connection between space M and space N; space N is prior to space M, as shown in Figure 3.18. Tense

categories also assign FOCUS space N a FACT/PREDICTION status. Tense categories may be divided into two groups. The PAST and PRESENT are FACT markers; they assign FOCUS space N a FACT status in relation to V-POINT. The FUTURE is a PREDICTION marker; it assigns FOCUS space N a PREDICTION status in relation to V-POINT.³⁸

The discourse links {PAST, PRESENT, and FUTURE} may also combine with each other in various ways. For example, PAST may combine with PAST to produce a PAST of PAST (as in one possible reading of the English Pluperfect), or PAST may combine with FUTURE to produce a PAST FUTURE (FUTURE of the PAST) or a FUTURE PAST (PAST of the FUTURE). A chain of links may map onto and be encoded by the grammatical markers of a language. The Future of the Past, as in (3.10) for example, codes the combined categories PAST FUTURE.³⁹

(3.10) Margaret would eat all of the ice cream before dinner.

The PAST FUTURE (FUTURE of the PAST) imposes a sequential set of constraints and gives a sequential set of instructions for the cognitive construction process. First, the

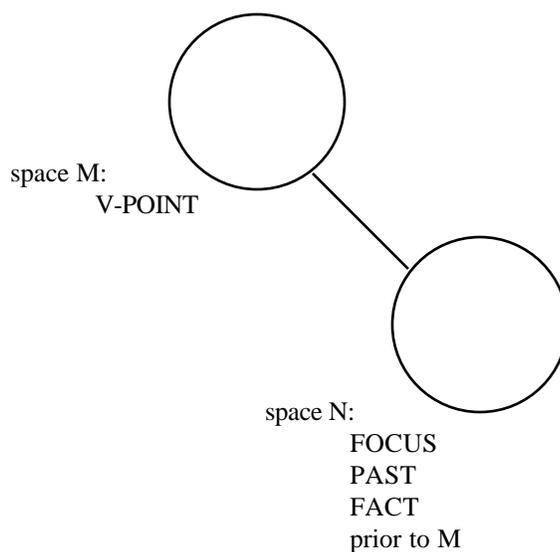
³⁸ The PRESENT, PAST, and FUTURE, and the markers which encode these categories in French and English, will be discussed in detail in chapter 4. We will also explore the full utility of the FACT/PREDICTION distinction in the discussion of individual tense markers in chapter 4 and in the discussion of indirect speech in chapter 6. As we will see in these chapters, the FACT/PREDICTION distinction, the prior/non-prior distinction, and the characterization of tense in terms of V-POINT rather than in terms of some notion of speech time will allow us to account quite painlessly for much of the seemingly odd behavior of Past, Present, and Future tenses, at the clause level and in the embedded clauses of speech verbs.

³⁹ In this case, the morphological form reflects the combination of links, but this is not necessarily the case in all instances.

PAST imposes a set of constraints, which results in the space configuration represented in Figure 3.19.

FIGURE 3.19

PAST

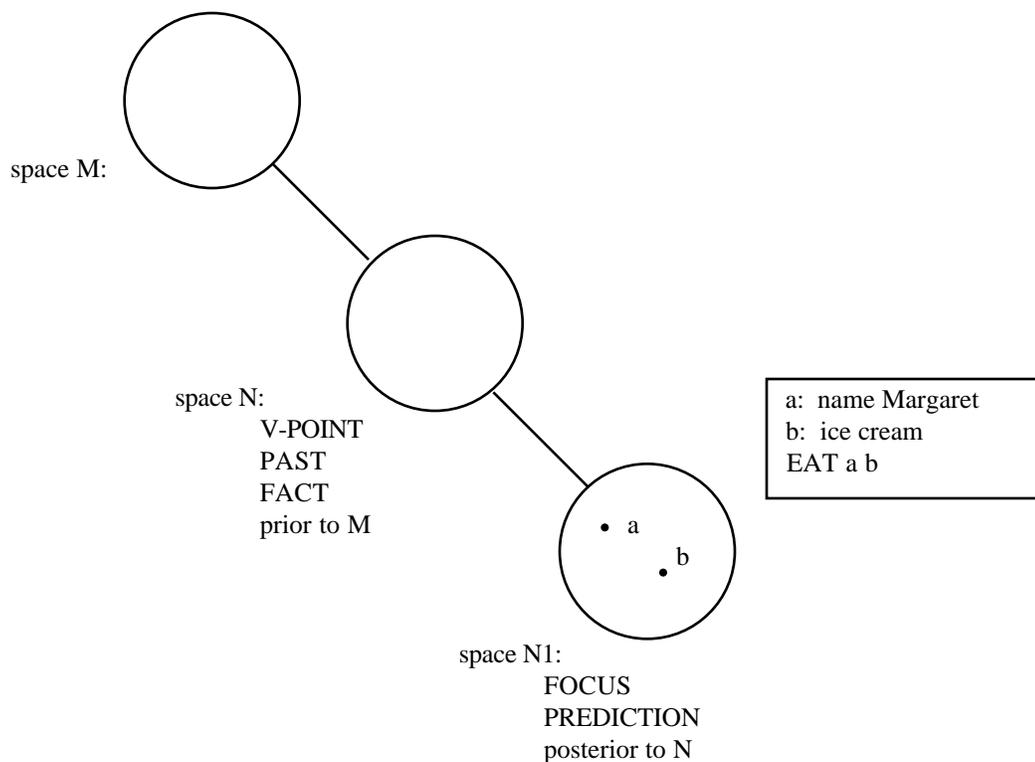


For this de-contextualized sentence, the parent space M would be speaker reality and BASE by default. The FUTURE, building on from space N, imposes an additional set of constraints on the space construction process, resulting in the space configuration represented in Figure 3.20.

FIGURE 3.20

PAST FUTURE

'Margaret would eat all of the ice cream'



Building on from FOCUS space N, the FUTURE identifies or cues construction of some FUTURE space, represented here as space N1. As a result of the constraints imposed by the FUTURE, V-POINT shifts from space M to FOCUS space N. (Discourse Principle 8 allows V-POINT to shift to FOCUS). Parent space N becomes V-POINT and FOCUS shifts to daughter space N1. (Discourse Principle 7 allows FOCUS to shift to a new space). Space N1 is assigned a PREDICTION status in relation to the parent V-POINT⁴⁰ and a local temporal relation of posteriority is established between space N1 and the parent V-POINT. Space N1 is structured by the frame ‘__eat__’ and the

⁴⁰ Note that the FACT/PREDICTION status assigned a space in relation to parent V-POINT may be different from the FACT/PREDICTION status a space has in relation to BASE.

information in sentence (3.10).⁴¹ Again, for this de-contextualized sentence, the initial parent space M would be the BASE of speaker reality by default.

The aspectual categories {PERFECT, PROGRESSIVE, IMPERFECTIVE, PERFECTIVE} may also combine with tense categories in various ways. Aspectual categories give important information about the arrangement of V-POINT and FOCUS, but aspectual categories are distinct from tense categories in that they do not put a space in FOCUS. For example, the IMPERFECTIVE may combine with PAST to form a PAST IMPERFECTIVE. In this case, the IMPERFECTIVE functions to signal a V-POINT within the FOCUS space set up by the category PAST. The PERFECT may combine with tense to form a PRESENT, PAST, or FUTURE PERFECT. For example, the set of combined links PAST PERFECT is coded by the English Present Perfect as in (3.11).

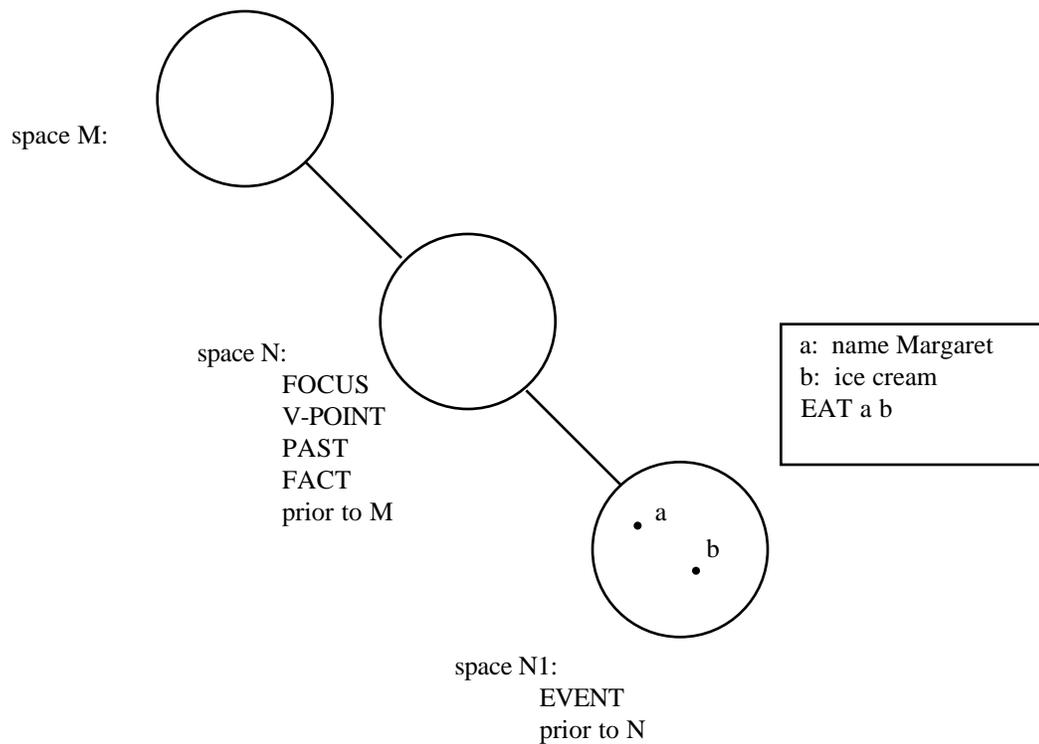
(3.11) Margaret had eaten the ice cream before dinner.

The PAST cues the construction of a space configuration as in that represented in Figure 3.19 above. Building on from the configuration cued by the PAST, the PERFECT imposes an additional set of constraints. The resulting space configuration is diagrammed in Figure 3.21.

⁴¹ Optimization and spreading will also structure the spaces to be maximally similar, so entities may also be set up in parent spaces as a result of optimization processes.

FIGURE 3.21

'Margaret had eaten the ice cream'



Building from space M in Figure 3.19, the PERFECT identifies or cues construction of an EVENT space, which is NOT in FOCUS. V-POINT shifts from space M to space N. (Discourse Principle 8 allows V-POINT to shift to FOCUS). The PERFECT also assigns a local time connection between space N and space N1. The EVENT space N1 is prior to the parent space, which is V-POINT. Information encoded in (3.11) structures the EVENT space N1, as shown in Figure 3.21.⁴² For this de-contextualized sentence, the initial parent space M would be the BASE of speaker reality by default.

Where the local tense-aspect links are combined, the FOCUS space set up by the

⁴² The state which results from the event 'EAT' may be inherited into space N.

first link in the sequence serves as the V-POINT for anchoring the second link. The characterizations of tense-aspect given here predict that only certain orderings will be possible. The PRESENT, PAST, or FUTURE, for example, must precede the PERFECT, since the tense link provides the FOCUS space which serves as parent and V-POINT to the EVENT space set up by the PERFECT.⁴³ Tense-aspect and tense-tense link combinations and the markers which encode combined links will be discussed in detail in chapter 4.

Links or sets of links form an *access path* to a *target* space. That access path is always anchored to V-POINT/BASE or some other V-POINT. When a space is targeted, the whole path is traced; this in turn is mapped onto the grammatical conventions of the language. A language specific tense-aspect marker or set of markers reflects the entire access path followed to access a particular space. In the case of a simple tense category, a simple link, a space is accessed directly from V-POINT or V-POINT/BASE. The access path is a local one between spaces. In the case of a combined tense-aspect form, a chain of links, the target space is accessed from V-POINT or V-POINT/BASE via one or more other spaces. The parent of the target space must become V-POINT.

⁴³ The set of markers which encode a chain of links, a particular access path, may occur in any order.

3.5 Distribution and Redistribution of {BASE, FOCUS, EVENT, V-POINT}

We are now in a position to show how the instructions provided by tense-aspect categories, as characterized in section 3.4, combine with the Discourse Principles proposed in section 3.2, to constrain step by step the output generated in the processing and interpretation of a given discourse. In this section, we will show the kinds of operations, the kinds of distribution and redistribution, which {FOCUS, BASE, V-POINT, EVENT} can undergo during the discourse interpretation process.

3.5.1 Operations which involve FOCUS

In the interpretation of discourse, FOCUS space may remain FOCUS, FOCUS may shift to an EVENT space, to the BASE, to a previous FOCUS space, or a new FOCUS space may be created (Discourse Principle 7). These operations can be illustrated in the discussion of example (3.12) below.

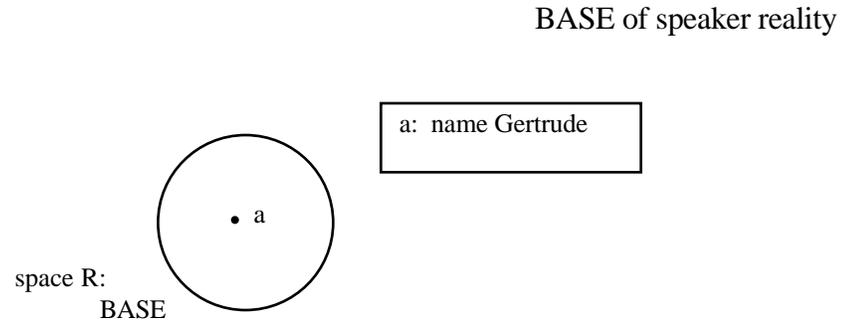
Imagine that we are engaged in a conversation about a friend Gertrude in which the following utterance is made.

(3.12) Gertrude is very happy. She has finally finished the painting for the exhibition.

She finished it last week. It's her best painting ever.

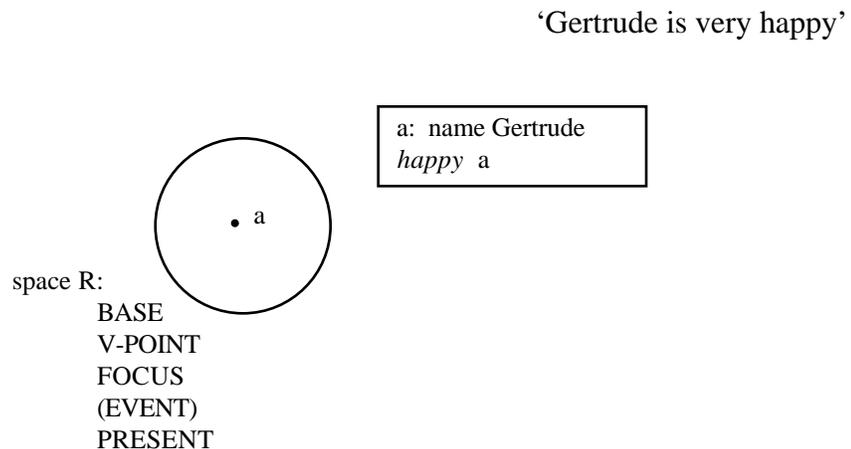
We may assume that Gertrude names a background element in BASE space, R. Given that Gertrude is part of our background knowledge, we begin with the space configuration in Figure 3.22.

FIGURE 3.22



With the interpretation of the first sentence, 'Gertrude is very happy', the space configuration represented in Figure 3.22 is updated. The output is the space configuration diagrammed in Figure 3.23 below.

FIGURE 3.23

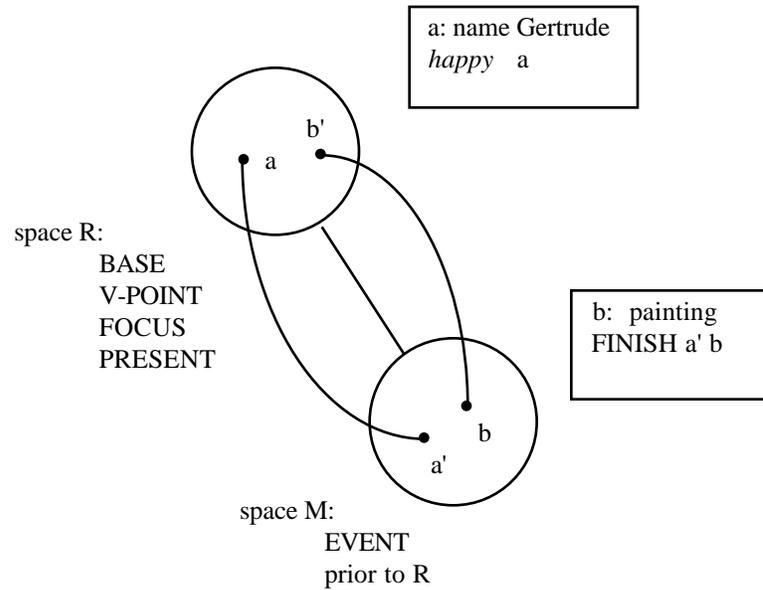


The PRESENT, encoded in English by the Simple Present, sets up or identifies a FOCUS space which is not prior to the BASE. In this case, BASE space R is put in FOCUS and the FOCUS space is V-POINT. Space R, speaker reality, is internally structured by the linguistic information which provides the frame '*happy x*'. The role *x* is filled by element **a**, named Gertrude.

With interpretation of the second sentence, 'she has finally finished the painting', the construction in Figure 3.23 is dynamically updated. The output of the second sentence is diagrammed in Figure 3.24.

FIGURE 3.24

'She has finally finished the painting'



The space construction built for sentence 2 must meet the constraints imposed by the PRESENT PERFECT (encoded by the Present Perfect). The constraints of the PRESENT are already met in the space configuration set up by the previous discourse, as in Figure 3.23. Hence, the PRESENT will identify space R. The PERFECT sets up or identifies an EVENT space M, which is prior to a parent V-POINT space. Space R is already available from the previous construction, Figure 3.23. In order for the constraints imposed by the PRESENT PERFECT to be met, only an additional EVENT space, daughter space M, must be constructed.

As a result of the PRESENT PERFECT construction, space M is structured internally by the expression ' __ finish __'. An entity **b**, the painting, is set up in time space M. Its counterpart, entity **b'**, is constructed in space R, since we can assume that the painting also exists as an entity in speaker reality. A cognitive link is established between the painting and its counterpart.⁴⁴ A counterpart of Gertrude, **a'**, is set up in space M and a cognitive link is established between Gertrude and her younger self. The resultant states and properties associated with the completion of the event ' __ finish __' may be inherited into space R. In this example the FOCUS remains FOCUS and the BASE remains BASE.

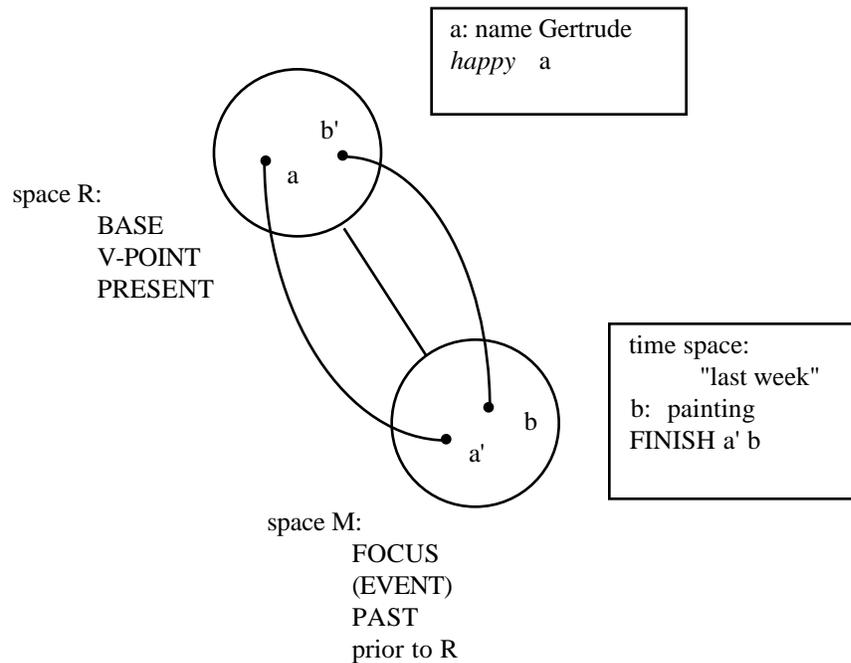
In the dynamic change from Figure 3.23 to 3.24, we see Discourse Principles 5 and 9 at work. Principle 5 allows a new space to be built from BASE or FOCUS. In this case a new space is built from space R, which is both BASE and FOCUS. Principle 9 allows EVENT to shift to a new space which is daughter of V-POINT, in this case space M.

With the interpretation of the third sentence, 'She finished it last week', the space configuration is again updated. The resulting space configuration is diagrammed in Figure 3.25.

⁴⁴ The link between the same entity in different time spaces is a common type of cognitive link.

FIGURE 3.25

'She finished it last week'

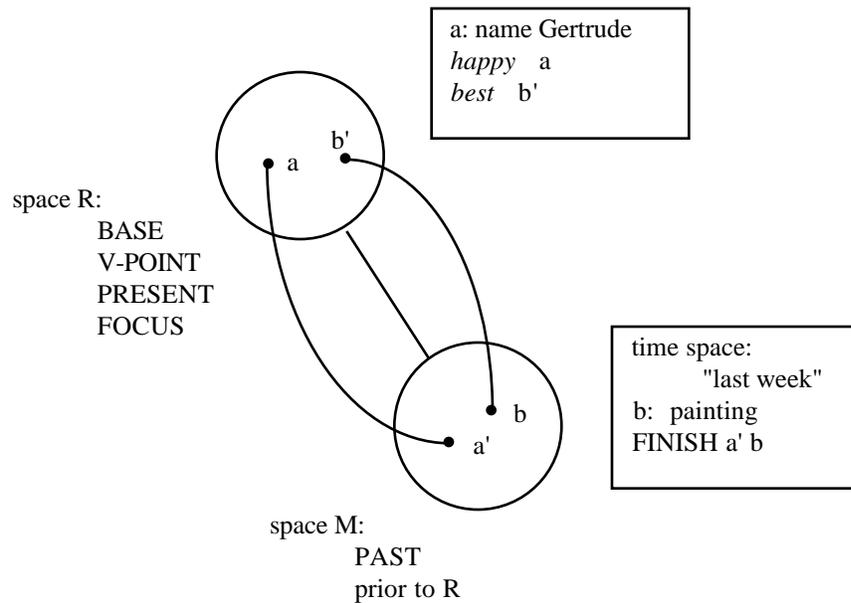


From the Simple Present in sentence 2, the tense shifts to the Simple Past, a PAST, in sentence 3. The PAST sets up or identifies a PAST FOCUS space, which is prior to V-POINT. In Figure 3.24, a V-POINT space, space R, is already available. A space which is prior to the V-POINT, space M, is also already available, however, this space is not in FOCUS. In sentence 3, the tense shift from PRESENT to PAST cues a shift in FOCUS space. FOCUS shifts from the PRESENT space R in Figure 3.24 to space M in Figure 3.25. EVENT space M is put in FOCUS and given a more exact temporal value by the expression 'last week'. From Figure 3.24 to 3.25, we see Discourse Principle 7, which allows FOCUS to shift to EVENT, at work.

With the interpretation of sentence 4, 'It's her best painting ever', the space configuration is again updated. The output is diagrammed in Figure 3.26.

FIGURE 3.26

'It's her best painting ever'



The PRESENT sets up or identifies a FOCUS space which is not prior to BASE. Space R already meets the requirements imposed by the PRESENT, thus, the tense shift to the PRESENT cues a shift in FOCUS back to BASE space R. Space M loses its status as FOCUS space and is no longer an activated part of the interpretation and construction process. From Figure 3.25 to 3.26 we see a number of Discourse Principles in action. Principle 7 allows FOCUS to shift to BASE. Principle 4 stipulates that if FOCUS is BASE, V-POINT is BASE. Principle 9 allows EVENT to be FOCUS.

In this section, we have seen that FOCUS may undergo a number of operations as allowed by Discourse Principle 7. FOCUS can remain FOCUS, it may shift to an EVENT space, to the BASE or to a previous FOCUS space. A new FOCUS space may also be created.

3.5.2 Operations which involve BASE

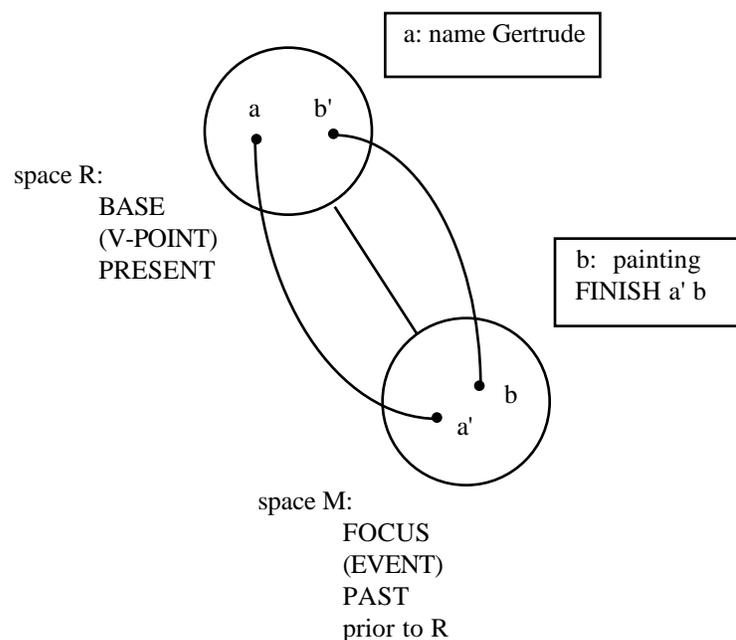
In the interpretation of discourse, BASE can remain BASE, BASE can shift to any V-POINT or to any previous BASE (Discourse Principle 6). We may illustrate the operations BASE may undergo by considering the following examples. Imagine that we are engaged in a similar conversation about Gertrude, where the following utterances occur.

(3.13) Gertrude finally finished the painting for the exhibition.

She said it was her best painting ever.

The output of the interpretation of the first sentence, 'Gertrude finally finished the painting for the exhibition', results in a space configuration diagrammed in Figure 3.27.

FIGURE 3.27 'Gertrude finally finished the painting for the exhibition'

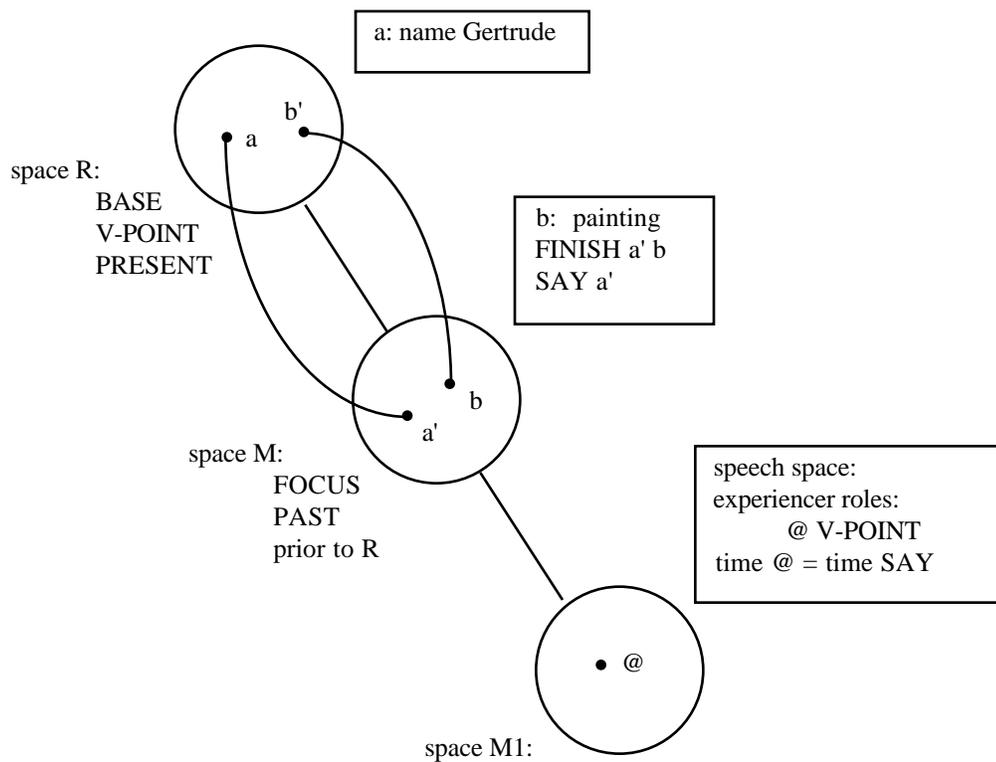


We may assume that Gertrude, since she is named, and the painting, since it is referred to by a definite article, are background entities in space R. The PAST sets up or identifies a PAST FOCUS space which is prior to its V-POINT parent. Since no PAST space is available from the previous discourse, and no space-builders are present, a PAST space must be constructed. In the absence of space-builders, tense cues construction of PAST space M. Space M is internally structured by the frame 'x finish y'. The roles of this frame *x* and *y* are filled by the elements **a'** and **b**, respectively.

The expression 'she said' in sentence 2 updates the space configuration in Figure 3.27 as shown in Figure 3.28.

FIGURE 3.28

'She said...'

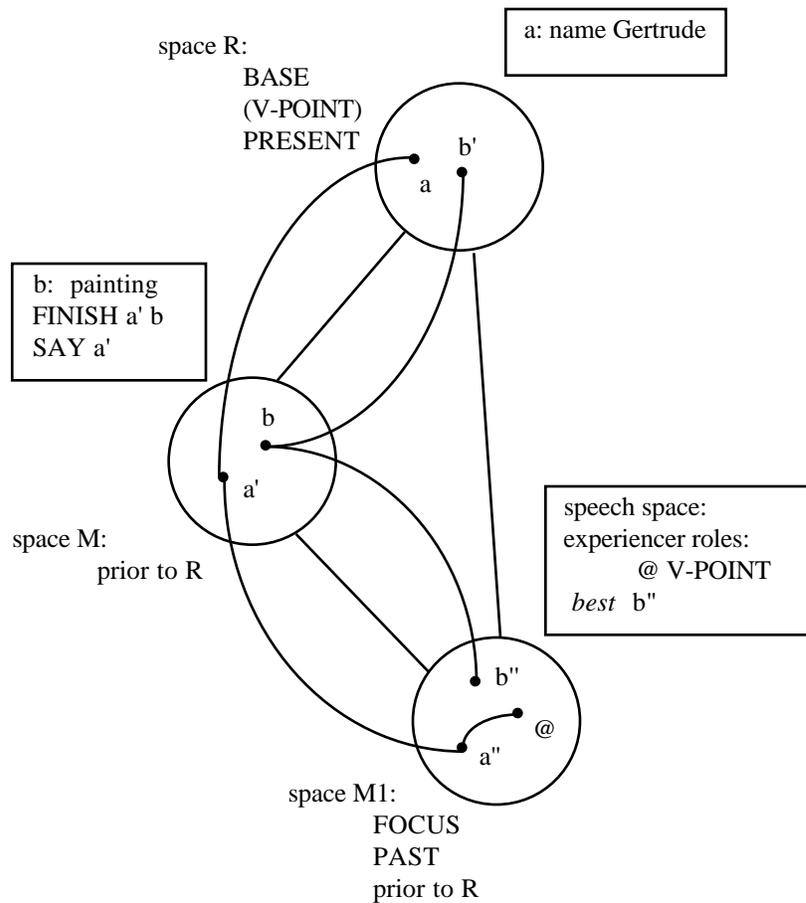


The PAST sets up or identifies a FOCUS space which is prior to V-POINT. Space M already fits these constraints; it is already available as a PAST space. The expression '___ say ___' adds additional structure to space M, (frame 'x say', with the role x filled by the value **a**), and sets up a new speech space, space M1. The speech space automatically carries an inherent V-POINT role associated with, i.e. linked to, an experiencer (Sells 1987). Speech spaces have a number of special properties which will be discussed in detail in chapter 6.

The interpretation of the subordinate clause of the speech verb 'it was her best painting ever' updates the space configuration in Figure 3.28 as shown in Figure 3.29.

FIGURE 3.29

'...it was her best painting ever'



With indirect speech, the BASE does not change. The FOCUS shifts to space M1. The speech space, space M1, is structured by the frame 'best __'. Space M1 is accessed directly from BASE.⁴⁵ The counterparts of **a**, Gertrude, and **b**, the painting, are set up as elements in space M1.

Now let us consider a similar example which involves direct speech.

⁴⁵ In chapter 6, we will see that speech space have special properties, including special access properties.

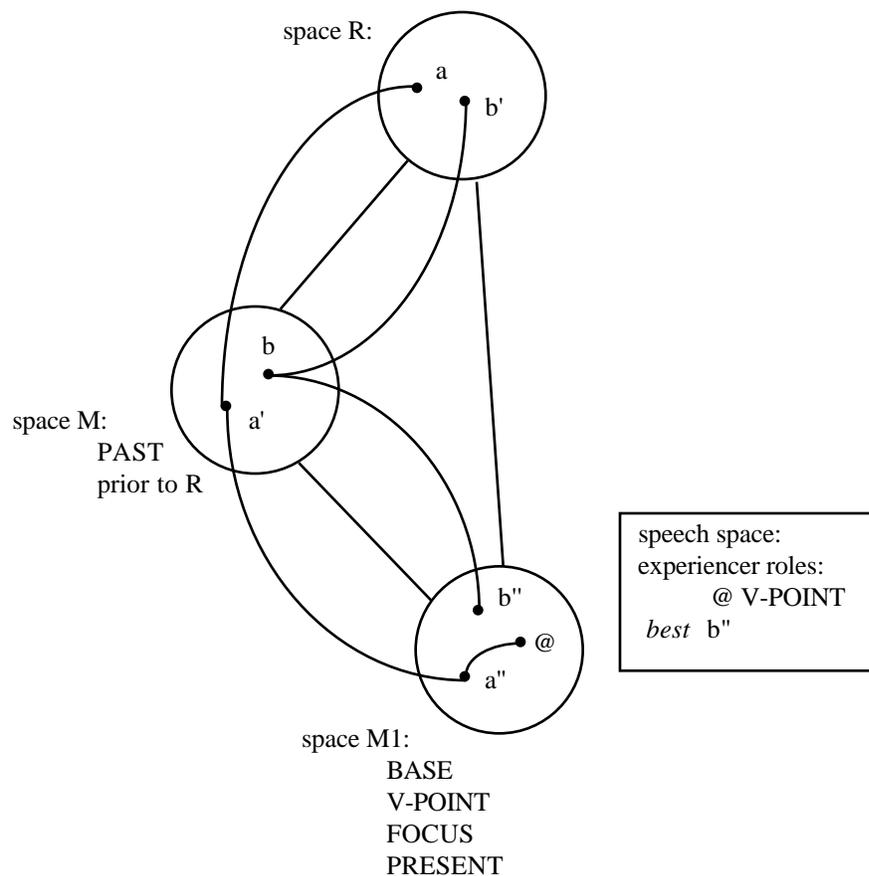
(3.14) Gertrude finally finished the painting for the exhibition.

She said: "It is my best painting ever".

If we replace the indirect quotation of (3.13) with a direct quotation (3.14), "It is my best painting ever", the space configuration in Figure 3.28 above is updated as in Figure 3.30 below.

FIGURE 3.30

“It is my best painting ever”



As a speech space, space M1 has a number of special properties. M1 automatically carries an inherent V-POINT role associated with an experiencer.⁴⁶ This V-POINT role makes space M1 available as a BASE, since according to Discourse Principle 6, BASE may shift to any V-POINT. While in the indirect quote, the BASE stays BASE, in the direct quote, the BASE shifts to the V-POINT of space M1, as shown in Figure 3.30. From Figure 3.29 to Figure 3.30, the BASE shifts to the V-POINT provided by the experiencer roles associated with the speech space.

Other types of BASE shifts are possible in addition to that involved in direct speech. BASE shifts will be the subject of chapter 7. In this section, we have seen that BASE can shift to V-POINT. BASE can also shift to any previous BASE.

3.5.3 Operations which involve V-POINT

In the interpretation of discourse, V-POINT can remain V-POINT or V-POINT can shift to FOCUS or to BASE (Discourse Principle 8). Example of these operations will be given below. BASE is the initial V-POINT (Discourse Principle 3). In the canonical case, the V-POINT is BASE and BASE always remains available as a V-POINT, since V-POINT can always shift to BASE.

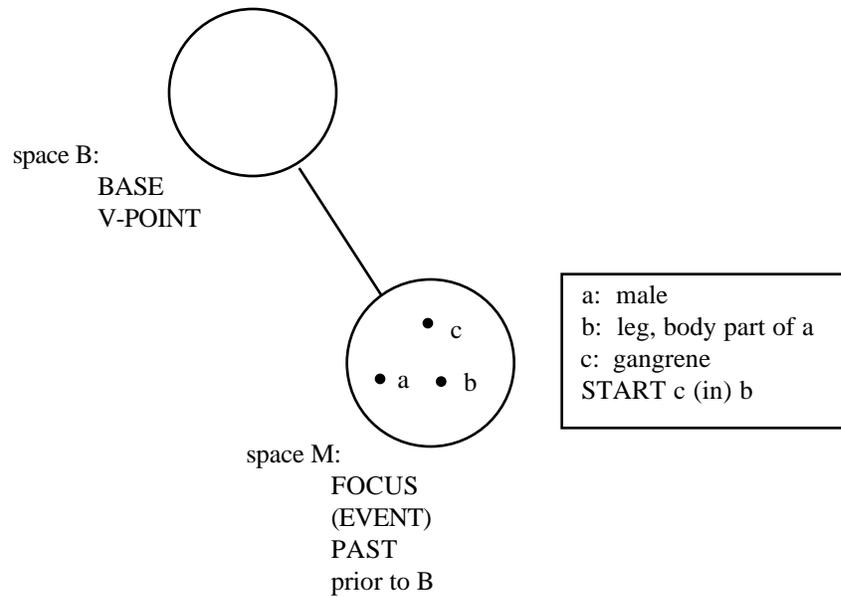
(3.15) Since the gangrene started in his right leg he had no pain and with the pain the horror had gone and all he felt now was a great tiredness and anger that this was the end of it. (Ernest Hemingway, *the Snows of Kilimanjaro*, p.5)

⁴⁶ See chapter 6 for a discussion of this.

Interpretation of the expression 'Since the gangrene started in his right leg he had no pain ...' results in a space configuration diagrammed schematically in 3.31.

FIGURE 3.31

'Since the gangrene started in his right leg
he had no pain'

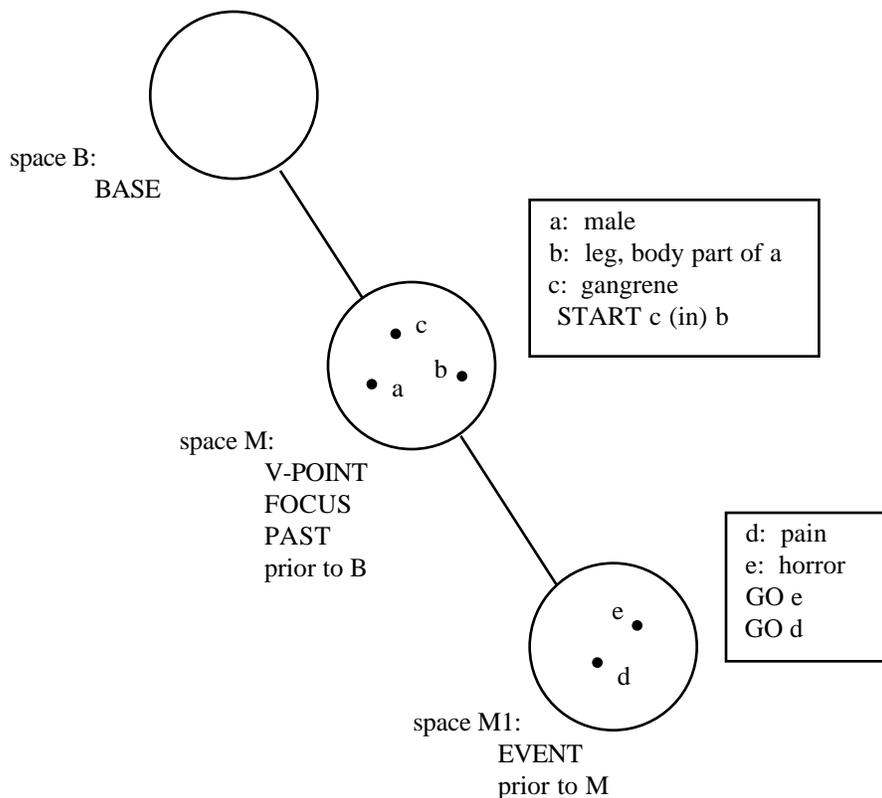


Given that this is a work of fiction, the BASE is not speaker reality, but rather is a BASE space set up for the 'implied external author'. See chapter 7 for a discussion of this. The PAST sets up or identifies a PAST FOCUS space from a parent V-POINT. The BASE space provides an initial V-POINT. A FOCUS space M, which is prior to the BASE, will be set up to meet the constraints imposed by the PAST. The expressions '___ start ___', and '___ have ___' internally structure FOCUS space M. 'Since' assigns a temporal boundary to the temporal frame represented in the time space and the situation expressed in '___ have ___'. Given that this example is from a piece of fiction, we may assume that 'he' refers to a male character, already a part of the reader's background knowledge about the story.

With the phrase '...and with the pain the horror had gone...' the configuration in Figure 3.31 is updated. The output is represented in Figure 3.32.

FIGURE 3.32

'...and with the pain the horror had gone...'



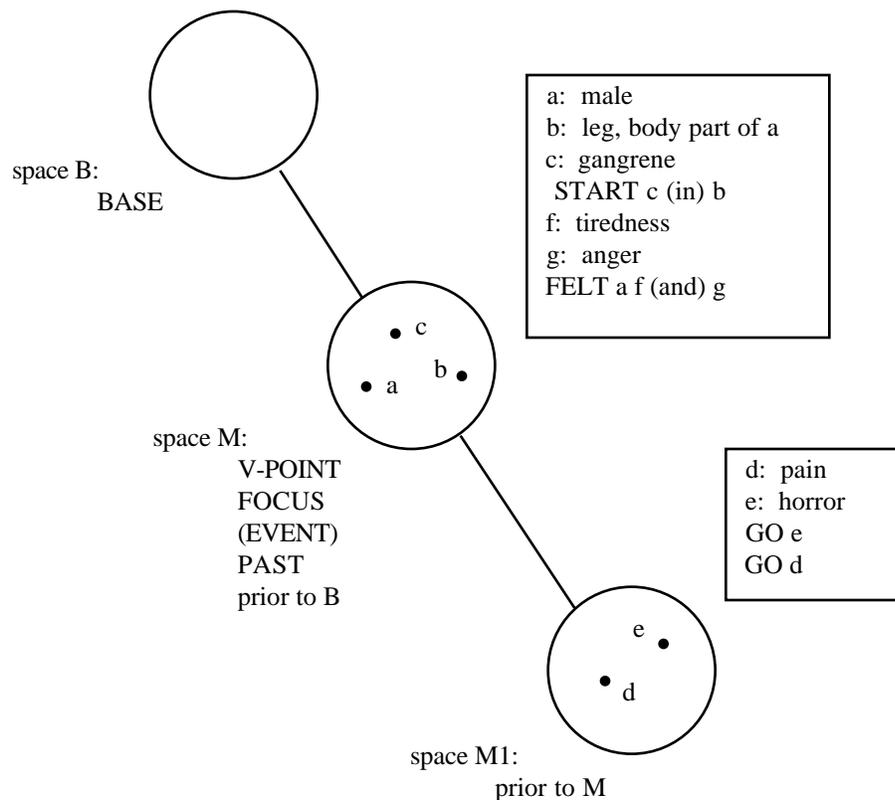
The PAST PERFECT imposes a sequence of constraints. First, the PAST sets up or identifies a PAST FOCUS space, which is prior to a parent V-POINT. A parent V-POINT and a PAST FOCUS space are already provided by space B and space M in the previous configuration Figure 3.31. Second, building on from FOCUS space M, the PERFECT sets up or identifies an EVENT space which is prior to V-POINT. In order to

meet this constraint, V-POINT must shift to the PAST FOCUS space M and an EVENT space which is prior to M must be constructed. Principle 8 allows V-POINT to shift to FOCUS. We can see this principle at work in the dynamic change from Figure 3.31 to Figure 3.32. The EVENT space is internally structured by the PERFECT expression 'with the pain the horror had gone'. The resultant states and properties associated with the completion of the events '___ go' in space M1 may be inherited into parent space M.

With the expression '... and all he felt now was a great tiredness and anger ...' the space configuration is updated. The output is represented in Figure 3.33.

FIGURE 3.33

'...and all he felt now was a great tiredness and anger...'



With this phrase, meaning is no longer added to space M1, meaning is only added to FOCUS space M. Space M also becomes EVENT, the temporal space where the event encoded in the verb takes place. From Figure 3.32 to 3.33, we also see Discourse Principle 9 at work. Principle 9 allows EVENT to be FOCUS or shift to FOCUS. Note that the expression 'now', which links FOCUS and V-POINT, anchors to the V-POINT which has remained in space M.

In the above example, we saw that V-POINT could shift to FOCUS. Discourse Principle 8 also allows V-POINT to shift from FOCUS back to BASE. This may be illustrated in the following example.

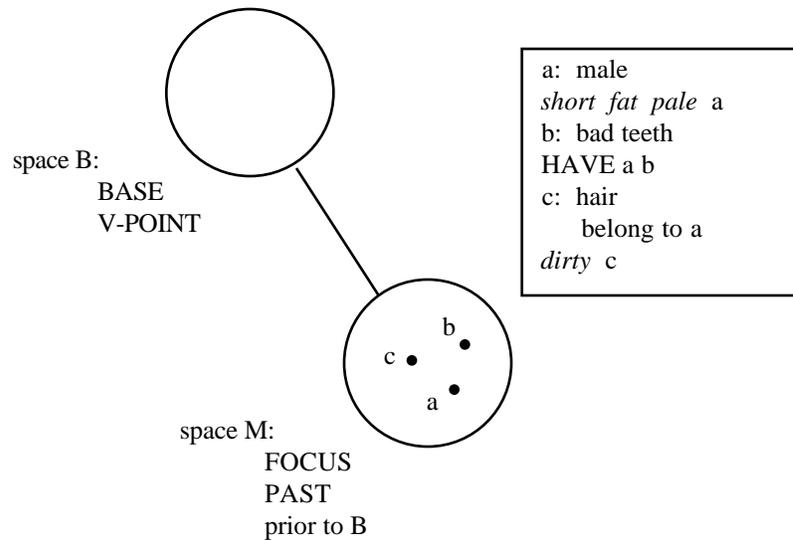
(3.16) He was short, fat, pale. He had bad teeth. His hair was dirty. Later, she would freeze this frame in her mind and study it. She would say he seemed frightened and defeated and trapped, "cagey" was the word she used to describe his eyes, how he measured and evaluated something in the air between them.

(Kate Braverman, Tall Tales from the Mekong Delta, from Kennison, Katrina, Best American Short Stories)

The interpretation of the first three sentences sets up a space configuration diagrammed in Figure 3.34 below.

FIGURE 3.34

'He was short, fat, pale. He had bad teeth.
His hair was dirty.'

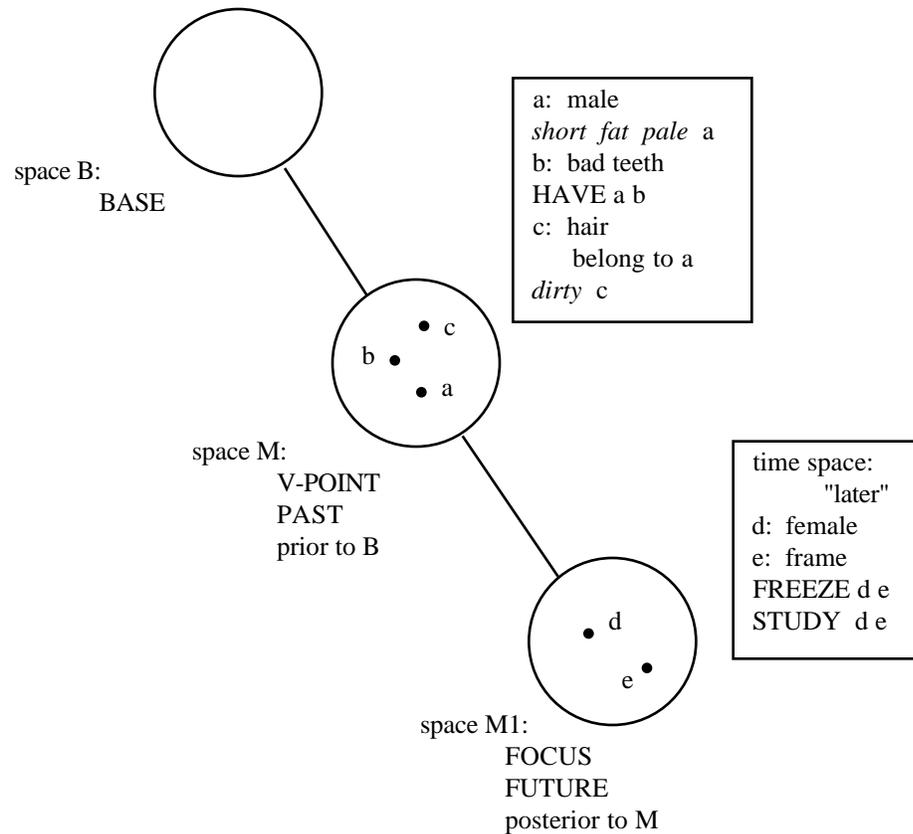


The PAST sets up or identifies a PAST FOCUS space, prior to some parent V-POINT space. Given that this is a work of fiction, a BASE space B will be set up for the 'implied external author'. See chapter 7 for a discussion of this. The BASE is the initial V-POINT (Discourse Principle 3). A FOCUS space M, which is prior to the BASE, will be set up to meet the constraints imposed by the PAST. FOCUS space M is structured by the expressions 'short, fat, pale __', '__ have __', and 'dirty __'. Given that this example is from a piece of fiction, we may assume that 'he' refers to a male character, already a part of the reader's background knowledge about the story.

With sentence 4, 'Later, she would freeze this frame in her mind and study it', the space configuration is updated. The output is represented in Figure 3.35.

FIGURE 3.35

'Later, she would freeze this frame
in her mind and study it'



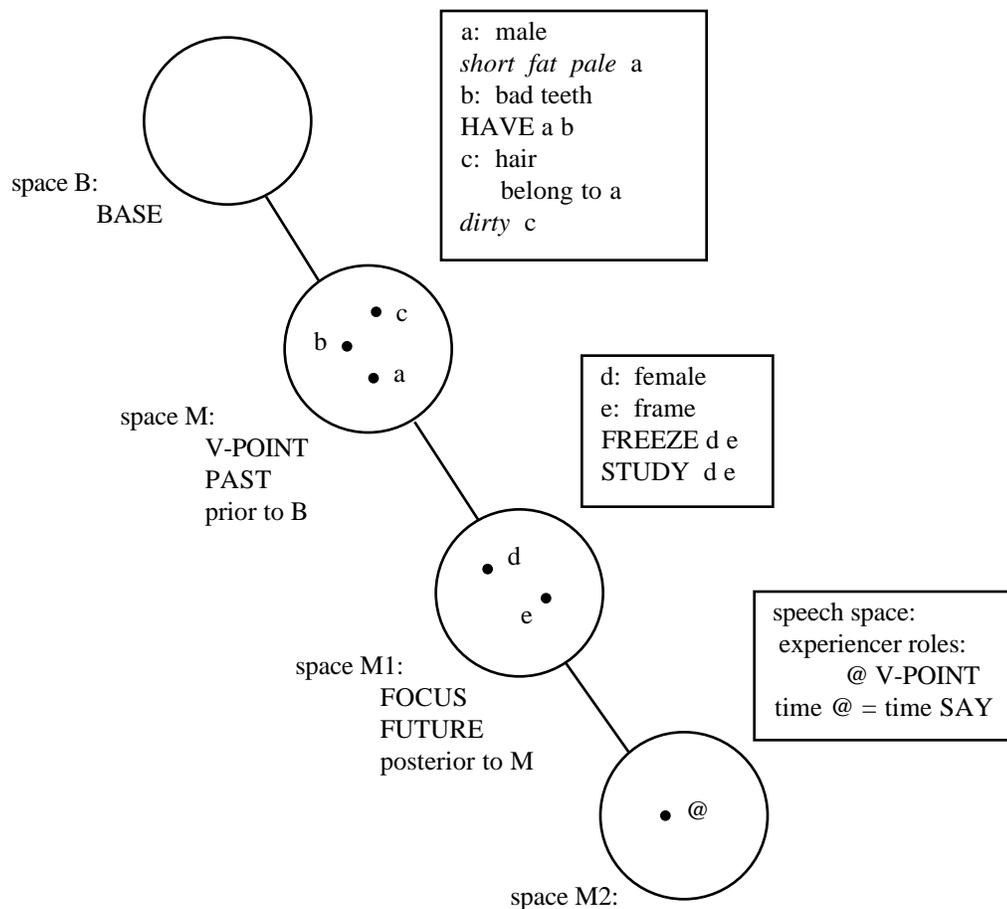
The space-builder 'later' sets up a new FOCUS space, space M1. 'Later' also cues a shift of the V-POINT from BASE space B to the PAST FOCUS space M, since space M1 is set up in relation to space M. The Future of Past marker 'would freeze' encodes the combined discourse links PAST FUTURE. The PAST sets up or identifies a PAST FOCUS space, which is prior to some parent V-POINT space. These constraints are already met in Figure 3.34, by space M which is PAST and space B which serves as V-POINT. Building on from space M in Figure 3.34, the FUTURE identifies or cues construction of a FOCUS space which is posterior to a parent V-POINT space. The space builder 'later' has already established a space configuration which meets these

constraints. The tense simply identifies FOCUS space M1, which is internally structured by the expressions '___ freeze ___' and '___ study ___'.

Next, the expression 'she would say' internally structures space M1 and cues the construction of a speech space, space M2, as in Figure 3.36.

FIGURE 3.36

'She would say...'



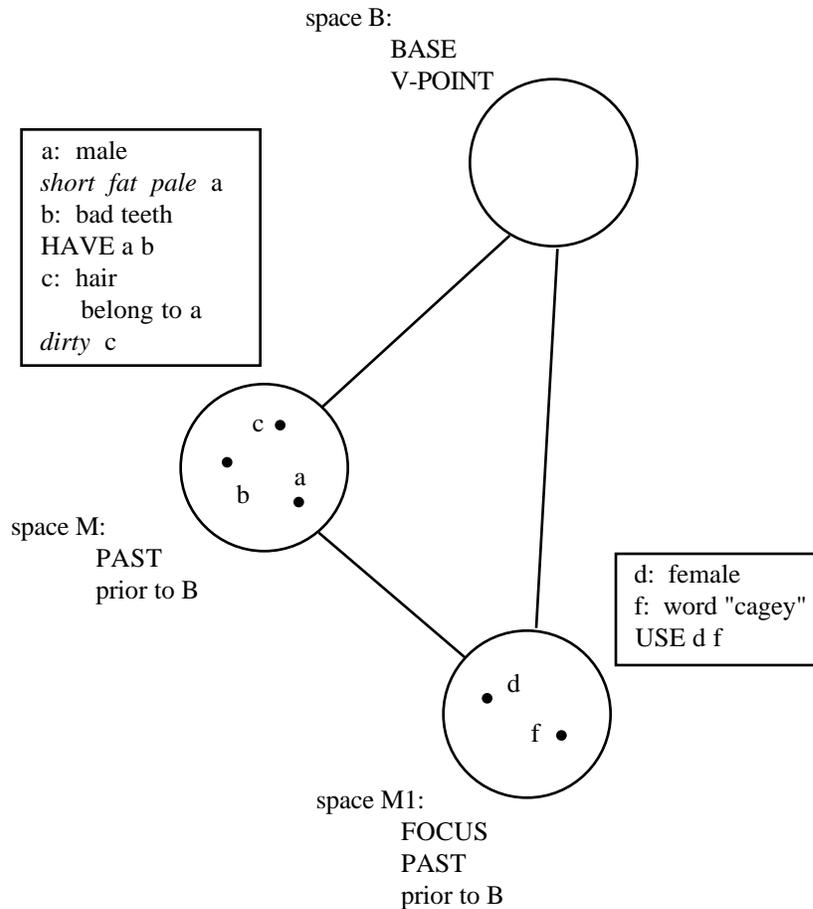
As a speech space, space M has inherent experiencer roles, including a V-POINT, labeled here as @. The V-POINT role is filled by the speaker of the reported speech event.

We will leave aside the interpretation of the contents of the speech event 'he seemed frightened and defeated and trapped', since it will complicate the discussion unnecessarily. Indirect speech examples, such as this one, will be discussed in detail in chapter 6.

After the reported speech, the next phrase in the discourse is '..."cagey" was the word she used to describe his eyes ...'. For the interpretation of the PAST expressions, 'was' and 'used', the V-POINT must shift back to BASE. At least two interpretations are available for this phrase. In one interpretation, the phrase refers to the time period represented in space M1, where the speech event 'SAY' takes place. This interpretation is represented in Figure 3.37 below.

FIGURE 3.37

'..."cagey" was the word she used
to describe his eyes...'



With the expression "'cagey" was the word she used', V-POINT must return to BASE. From Figure 3.36 to 3.37, we see V-POINT shift from FOCUS space M to BASE space B. Discourse Principle 8 allows V-POINT to shift to BASE. The PAST expressions 'was' and 'used' reflect an access path to the PAST space M1 directly from BASE. In the interpretation where "'cagey" was the word she used' structures space M1, space M1 is *reaccessed* directly from BASE via a different access path. The access path chosen is reflected in the coding of tense-aspect. This interpretation illustrates an important point, that spaces may be accessed and reaccessed via different access paths. We will return to a

brief discussion of access and reaccess in the following section.

A second possible interpretation is available where "'cagey" was the word she used' refers to some new FOCUS space. In this interpretation, the phrase refers to some time period other than that represented in space M1. For this interpretation, V-POINT must also shift back to BASE and some new FOCUS space must be set up.

3.6 Tense-aspect, Space Access and Reaccess

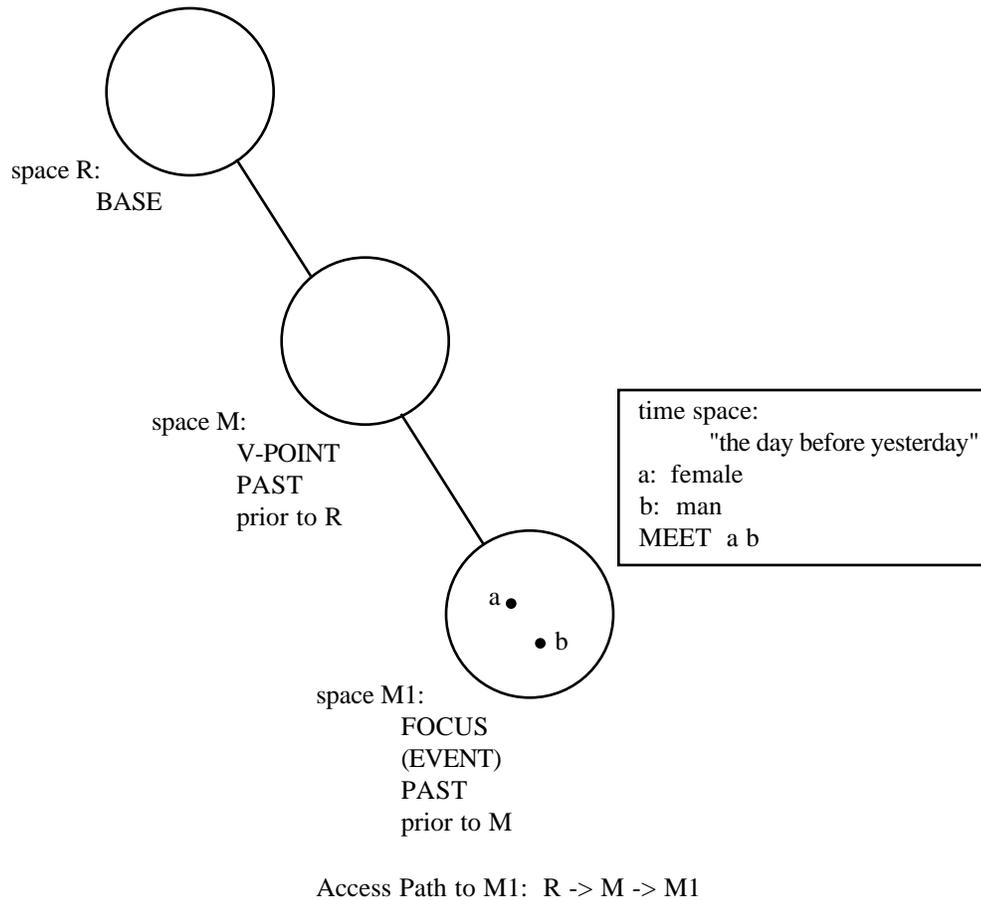
In this section, we return for a moment to the notions of space *access* and *reaccess*. Tense-aspect markers reflect the path followed to access a particular space. In the case of most combined tense-aspect categories, the access path involves a path from parent space, which is initially V-POINT, through one or more intermediate spaces, which become V-POINT, to the targeted space. For example:

(3.17) She had met a man at the party the day before yesterday.

The Past Perfect marks an access path from some space through an intermediate space, which becomes V-POINT, to a FOCUS space, as diagrammed in Figure 3.38 below.

FIGURE 3.38

‘She had met a man at the party the day before yesterday’



In this de-contextualized sentence, the BASE and anchor point for the access path indicated by the Pluperfect would be speaker reality, space R, by default. The Pluperfect is ambiguous; it may encode either a PAST PAST or a PAST PERFECT. See chapter 4 for a discussion of the Pluperfect. The Pluperfect in (3.17) is interpreted as a PAST of PAST, rather than a PAST PERFECT, because of the adverbial expression which puts space M1 in FOCUS. The information encoded in (3.17) structures space M1.

Subsequent sentences can add information to this FOCUS space M1, accessing space M1 via the same access path from space R to space M to M1. Imagine for example

that the discourse continues as in (3.18).

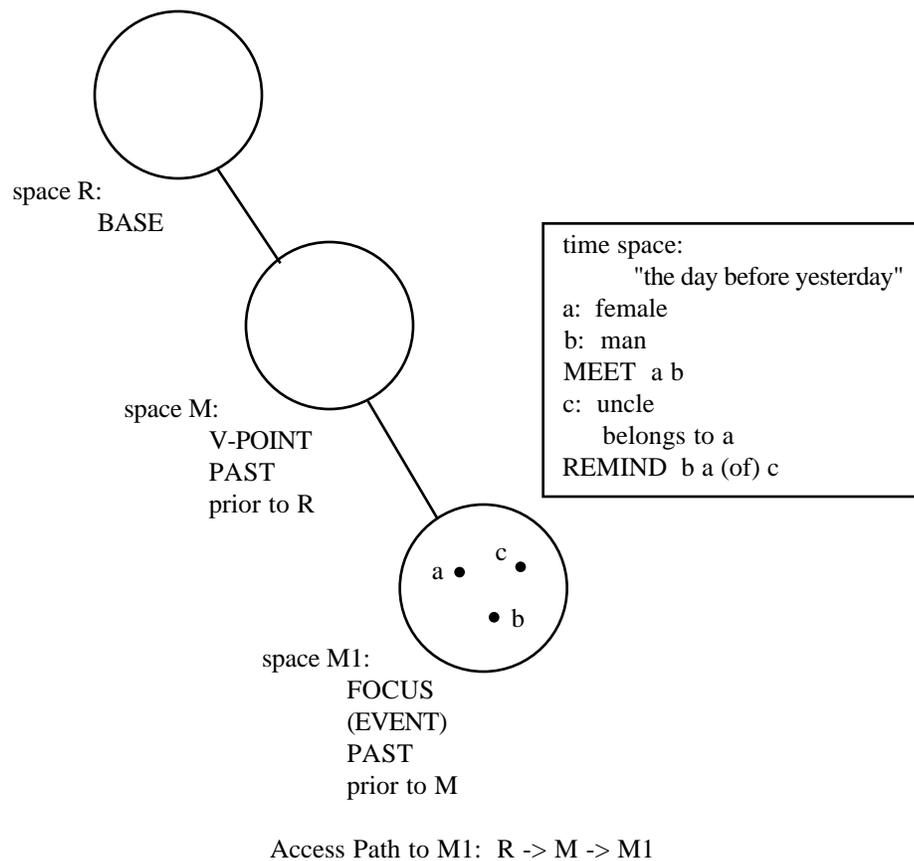
(3.18) a. She had met a man at the party the day before yesterday.

b. He had reminded her of her uncle.

As a result of (3.18b), additional information structures space M1. Figure 3.38 is updated as in Figure 3.39 below.

FIGURE 3.39

‘He had reminded her of her uncle’



The Pluperfect in (3.18b) indicates that space M1 is accessed via the same access path used for sentence (3.18a), from space R, the initial V-POINT, through space M, which

becomes V-POINT, to the target space M1.

Space M1 may also be *reaccessed* via a different path. Consider instead (3.19).

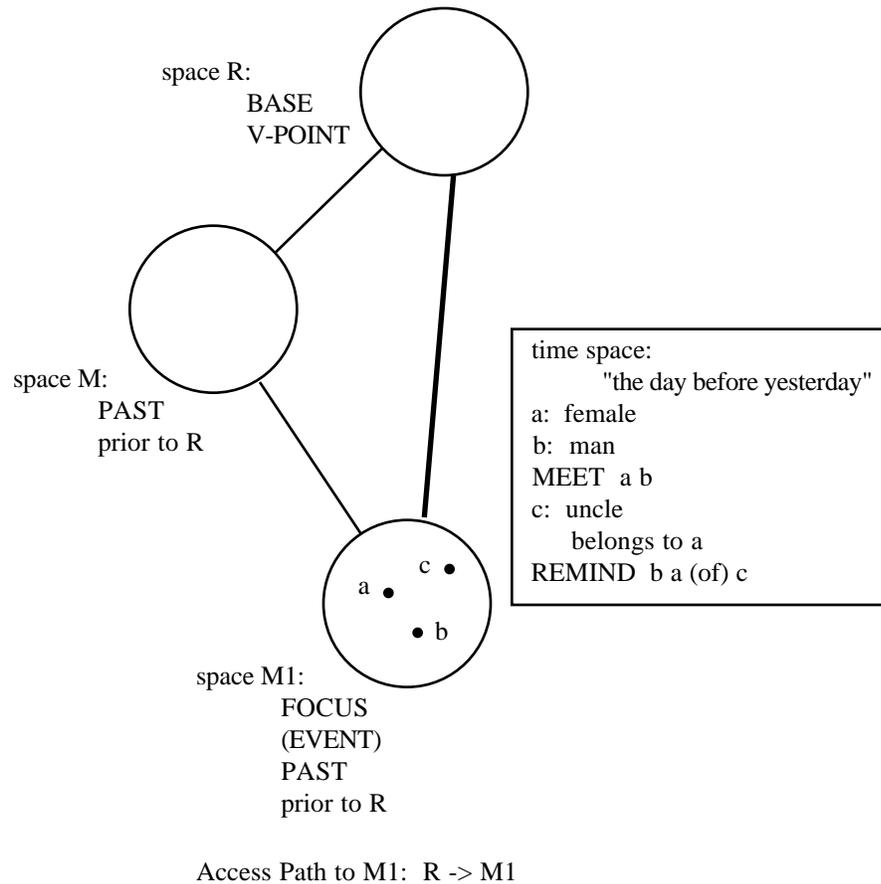
- (3.19) a. She had met a man at the party the day before yesterday.
b. He reminded her of her uncle.⁴⁷

The information in (3.19b) will still structure space M1. However, the access path indicated by the tense marking in (3.19b) is different than that in the previous example (3.18b). With (3.19b), the same information will structure space M1, however the access path to space M1 is one taken directly from space M. This access path is diagrammed in Figure 3.40 below.

⁴⁷ i.e. at that instant when she met him, she thought of her uncle.

FIGURE 3.40

'He reminded her of her uncle'



From Figure 3.38 to Figure 3.40, we see Discourse Principle 8 at work; V-POINT shifts from FOCUS space M back to BASE space R.

In this section, we have shown how tense-aspect markers mark the access path to a space and how a space may be accessed and reaccessed via different paths. We will return to the issue of space access in chapter 5, which looks at access in conditional constructions, and in chapter 6, which is concerned with tense and space access in embedded clauses of speech verbs. We will see that embedded clauses, in particular embedded clauses of speech verbs, may have special access properties.

3.7 The Discourse Management Function of Tense-Aspect

As we have seen in the previous examples, tense-aspect plays an important and rather complex role in the construction and organization of mental spaces (and meaning) built in the ongoing process of discourse interpretation.

The "bundle" of roles which tense-aspect plays in discourse management may be summarized as follows:

- Although tense is not a space-builder per se, tense may have a space-builder like role. Where no space-builders are present, tense is sufficient to cue the construction of a space.
- Tense plays an important role in the partitioning and distribution of information over a set of spaces, allowing meaning and information to be localized.
- Tense marks local time connections among spaces.
- Tense-aspect plays a critical role in signalling the arrangement of {BASE, FOCUS, EVENT, and V-POINT} and tracking the dynamic distribution and redistribution which these discourse primitives undergo during the discourse interpretation process. The role which particular tense-aspect categories play may be summarized as follows:
 - All tense categories play an important role in signalling shifts in FOCUS.

- The PAST and FUTURE determine the relationship between FOCUS and V-POINT.
 - The PRESENT determines the relationship between FOCUS and V-POINT/ BASE, and because of its strong tie to BASE, plays an important role in signalling shifts in BASE.
 - The aspectual categories PERFECT and PROGRESSIVE give information about the arrangement of V-POINT (FOCUS) and EVENT.
 - The aspectual categories IMPERFECTIVE and PERFECTIVE play an important role in signalling the relationship between V-POINT and FOCUS.
- The PERFECT and PROGRESSIVE identify or cue construction of an additional non-focus, EVENT space,⁴⁸ which allows the full structure of the event to be represented in a space separate from the FOCUS space. The PERFECT and PROGRESSIVE also assign a local time connection between V-POINT (FOCUS) and EVENT.
 - Tense-aspect markers (or the combination of these markers) reflect the access path chosen from V-POINT or V-POINT/BASE to a particular space.

We have already seen examples of tense-aspect performing most of these

⁴⁸ Present as well as past participials cue construction of an additional non-focus, EVENT space.

functions in the discussion of the examples presented in this chapter. We have seen: tense's role in cueing the construction of spaces; in the partitioning and distribution of information; in marking local time connections; in signalling shifts in BASE, FOCUS, EVENT, and V-POINT; and we have seen the role of the PERFECT in the construction of a non-FOCUS, EVENT space.

Other roles which tense plays which have not been highlighted in this chapter are:

- Tense plays a role in signalling space accessibility. A space's degree of accessibility affects inheritance and optimization strategies, and thus, the information flow between spaces. We will return to this issue in chapters 4 and 5.
- Tense markers assign FOCUS spaces a FACT/PREDICTION status.

Of the functions not highlighted in this chapter, we will see the importance of the FACT/PREDICTION distinction in the discussion of language specific tense markers in chapter 4 and in the discussion of indirect speech in chapter 6. We will return to the issue of space accessibility in the discussion of counterfactuals and politeness forms in chapter 4 and 5. By the end of this dissertation, we will have seen all of the "bundle" of functions and roles which tense-aspect play.

3.8 Summary and Conclusion

The purpose of this chapter has been to lay out the model of tense to be used for the remainder of this dissertation. Towards that end, this chapter has introduced: the

theoretical primitives {BASE, FOCUS, EVENT, V-POINT}; a set of foundational Discourse Organization Principles; a set of characterizations of the conceptual discourse links {PRESENT, PAST, FUTURE, PERFECT, PROGRESSIVE, IMPERFECTIVE, PERFECTIVE}. The model presented is the final model with the maximum explanatory value. This chapter has also given a summary of the important discourse management role played by tense-aspect and an overview of how the instructions provided by tense-aspect categories and the markers which encode them function, in conjunction with a set of Discourse Organization Principles, to constrain step by step the space configurations generated in the processing and interpretation of a given discourse.

In addition to the mental space format, the Access Principle (I.D. Principle), the properties of cognitive links, and the optimization and spreading mechanisms (Fauconnier 1985, 1986, 1990, 1991, to appear), (Sweetser and Fauconnier to appear), the system employed here for the analysis of tense-aspect is comprised of:

- the discourse primitives {BASE, FOCUS, EVENT, and V-POINT}, as defined in section 3.1.
- a set of Discourse Organization Principles, given in section 3.2, which govern the distribution and dynamic change which these conceptual discourse primitives may undergo in the discourse interpretation process, thus determining the types of mental space configurations which can be built.
- a mental space characterization of a set of tense-aspect categories {PAST, PRESENT, FUTURE, PERFECT, PROGRESSIVE, IMPERFECTIVE, PERFECTIVE}, each a universal type of discourse link between spaces. These

discourse links give information about the organization and distribution of {BASE, FOCUS, EVENT, V-POINT}. Certain categories may also assign local time relations, give information about space partitioning, and/or assign spaces a FACT/PREDICTION status.

In addition to these components of the model, a FACT/PREDICTION Principle which is invoked when two strong V-POINTS are engaged will be proposed in chapter 6.

The system proposed here has a number of advantages: First, the system can handle "non-contextual" sentence level data, as well as discourse data using the same set of theoretical notions and principles. This approach goes beyond sentence level linguistics to include contextual, textual, discourse-narrative data. The mental space account will allow us to look at narrative functions of tense in a way that is more precise and operationally defined than work such as Genette (1980), or Fleischman (1990).

Second, under this approach, narrative and non-narrative uses of tense, as well as sentence and discourse level phenomena, are accounted for in the same manner, using the same small set of principles, constructs, and notions. There is no need to separate contextual and non-contextual, narrative and non-narrative functions of tense. An account of the behavior of tense in the "non-contextual", simple sentence, traditionally the primary concern of linguists, falls out automatically. The "non-contextual", simple sentence is just a special case of minimal context.

Under the mental space view, there are NO sentences without a context. All sentences have a context, whether that context be a narrative one, a conversational one, or the barest of contexts as a sentence on the page of a linguistics paper. The interpretation

of every sentence, whatever its context, will cue a space construction. The complexity of the construction which is built will reflect the complexity of the context in which the sentence is embedded.

Having laid out the model, the remainder of the dissertation will be devoted to showing in detail how the model is used to account for a wide range of tense-aspect data in both single sentences and in discourse-narrative.

