Chapter 1
Introduction

The concept of time is so pervasive that it seems to be difficult for us to live independently of its influence, since clock is always ticking. The pervasiveness of the concept of time makes people invent tools to measure its passage, i.e. a clock or a watch, which is to be regarded as a fundamental parameter in which we fit ourselves into the real world. Since time is one of the vital parameters which affect and even control our thoughts, the concept of time is even considered to exist physically among us and considered to be experienced and perceived directly. Such an object as considered to be referred to as time, however, does not exist in the real world. We are only to learn that time passes via changes of things and events. For instance, if cyclic shifts of days and nights did not exist, who could recognize whether or not the day passes by? Likewise, time, we cannot see it, touch it, and therefore we cannot hold it. This fact is well reflected in the philosophical view of time: “[T]he peculiarity of time is that it is intangible; we cannot hold it. We ourselves are in time moving with it. When we say it is 10:30, it is no longer 10:30; time has moved on and we are along with it” (Keshavmurti 1991: 47).

Intriguingly, even though it is hard to directly identify time in a physical sense, the concept of time is universally infused into languages
due to its pervasiveness in our cognition. It has been discussed that time concepts are understood in terms of spatial concepts over languages by many scholars (Clark 1973, Traugott 1975, Lakoff and Johnson 1980 and 1999; inter alia). Time is an abstract concept that we cannot directly perceive, but it is also a pervasive concept which we cannot live without. In this sense, time does not seem to be characterized in a simple and uniform way. Instead, the paradoxical character of time has been explicited by establishing a few patterns of mapping. Among the inferential patterns, it is Lakoff and Johnson’s (1980) accounts that shed light on the systematicity and coherence of time in linguistic expressions. For instance, the self-evident fact that an event of Thanksgiving is impending can be construed as follows:

(1) a. We’re getting close to Thanksgiving.
    b. Thanksgiving is coming.

According to Lakoff and Johnson (1980 and 1999), the inferential patterns which are found in (1a) and (1b) are named as the Moving Observer (Moving Ego) metaphor and the Moving Time metaphor, respectively. They are thought as forming a coherent and systematic structure of time metaphor, which is supported by not a few other linguists (Moore 2000 and 2006, Núñez and Sweetser 2006, Radden 2003, inter alia) and their
accounts seem to be plausible enough.

With the inferential patterns in the literature, however, we cannot explain a few temporal expressions as shown in (2) in a fine-grained sense.

(2) a. China is sprinting toward the splendid tomorrow.
   b. They are running against time to finish the assignment.
   c. Time flies when we’re having fun.

First, sentence (2a) would belong to the Moving Observer metaphor, according to the previous account for temporal mapping. The construal of the sentence, however, is different from that of (1a) which is regarded as belonging to the same category. That is, even though both (1a) and (2a) indicate that the observer is moving toward the landmark of event in the landscape, (2a) includes the intentional action of the observer in the mapping, which invokes spontaneity in the construal whereas (1a) might not include it and the observer is approaching the goal regardless of his/her will. This gap should be bridged and reflected in the accounts to better explain the mapping. Second, sentence (2b) seems to be erroneous, since it belongs to neither of the two mappings, but to another case where both the observer and time are moving simultaneously: this can be framed as a race (Yu 1998 and Fauconnier 1997). This cannot be fully explained by previous approaches of the conceptual metaphor. Last, subjective time
experience has not been focused in literature, except by a few linguists (Radden 2003 and Evans 2004). To better understand the overall picture of temporal mapping, the subjective time experience should be dealt with. In this vein, the previous accounts for temporal mapping are in need of modification.

The aim of this thesis is to provide a more plausible picture of temporal mapping, and to argue that the conceptual blending theory is the key to accounting for other sub-mappings of time, and to solving various puzzles existing in temporal mapping. This thesis argues that the apparently separate mappings which appear to be out of the explanatory range of the previous approaches can be accounted for in a uniform manner by means of the conceptual blending theory (Fauconnier 1994 and 1997, and Fauconnier and Turner 2002, inter alia).

In Chapter 2, some of the previous work on temporal mapping among numerous literature is explored, and three problematic issues in the accounts are to be raised. The fundamental assumption that the thesis takes is that there exists a notion of moving time track on timeline. In other words, a moving time track exists, which is observed in the mapping, besides the time of landscape. The plausibility of the existence of the moving time track can be secured only if the time concepts in the mapping are separated in a fine-grained sense. In order to show the non-unitary time concepts in the mapping, we need to modify the fundamental
assumption that the previous approaches take: time concepts participating in the mapping are unitary. In Chapter 3, the thesis strengthens the argument that time concepts are non-unitary and shows that the different concepts of time interact in linguistic expressions. To better explicate the non-unitary concepts of time, this thesis explores and compares some of the concepts of time, such as an event, a moving track, and landscape sense of time. In Chapter 4, this thesis explicates that temporal puzzles raised by setting up those separate time concepts are to be solved by means of conceptual blending theory. Based on the fundamental picture where the observer on the moving time track approaches an event in landscape sense of time, this thesis argues that we can account for the sub-mappings of time in a uniform way. In addition, even the apparently erroneous case where both time and the observer are moving simultaneously, the case of subjective time experience, will also be explicated by utilizing conceptual blending in temporal mapping.
Chapter 2
Previous Approaches on Temporal Mapping

Time has been regarded as a basic concept of the universe, and even as one of the fundamental concepts without which we cannot discuss existence of matter; it thus has been one of the frequently studied subjects. It is still, however, far from clearly being understood. In order to better understand the concept of time and to propose an enhanced account, previous approaches on temporal and spatial concepts should be examined first. In this chapter, the previous approaches are overviewed and the enigmatic issues implied by them are indicated. This process will be a cornerstone to reach our proposal on the plausibility of employment of conceptual blending in temporal mapping.

Previous approaches on the subject of time in philosophy, science, and physics as well as linguistics are so voluminous that they cannot be exhaustively enumerated in this limited space. Thus, in this chapter, the approaches targeted are narrowed down to those conducted in terms of the linguistic point of view.

2.1 Overview

Temporal expressions are construed in terms of spatial concepts,
such as motion. In other words, we understand the concept of time in terms of the concept of space, via the conceptual metaphor. Let us look into examples of time metaphor:

(3)  a. Christmas is coming.
    b. We’re coming up on Christmas.
    c. We are ahead of time.
    d. The exam is still far away.
    e. Christmas follows Thanksgiving.

All these sentences are related to temporal concepts. In (3a), the event conventionally called Christmas is construed as a moving entity which moves toward the speaker. In (3b), the interlocutors are construed to move toward Christmas, which is apparently static. In (3c), both the interlocutors and time are construed to move, since the phrase ahead of is used mostly in describing situation where both of the participants are on move (Núñez and Sweetser (2006: 408) and Ruiz de Mendoza (1998: 264)). In (3d), even though the speaker does not appear overtly in the sentence, the speaker’s viewpoint is anchored at the present, and the distance between the speaker and the event the exam is quite long at the moment. In other words, time and the ego (the speaker) are construed to

1 Details will be discussed in section 2.4.2.
stand still at the very moment. In (3e), there is no anchored viewpoint of
the ego. Instead, only the sequence of the two events, *Christmas* and
*Thanksgiving*, matters in the sentence. Given voluminous temporal
expressions like those in (3), is there any systematic and coherent system
to account for the existence of organized metaphorical mapping in them?
In this chapter, I will examine previous approaches which have worked on
establishing metaphor systems in the mappings.

2.2 Moving Time and Moving Observer Metaphors

Many scholars (Traugott 1975, Lakoff and Johnson 1980 and 1999,
Lakoff 1993, Moore 2000 and 2006, Núñez and Sweetser 2006; inter alias)
provide the convincing explication for temporal mapping by means of the
conceptual metaphor. A threshold assumption that they take is that time is
not conceptualized on its own terms, but rather is conceptualized
metaphorically and metonymically: “[T]ime is defined by metonymical
abstraction of properties of events which are successively iterated and is
measured by comparison of events to other events” (Lakoff and Johnson
1999: 137). Events themselves are never free from space and time and
consequently, our understanding of time is far from being independent of
spatial concepts. Rather, the temporal concept which is found in linguistic
expressions of movement cannot be construed without the spatial concepts.
According to them, time metaphor is largely consisted of two mappings; one is the Moving Time metaphor where the observer is stationary and time is moving, and the other is the Moving Observer where the observer is moving and time is stationary.

2.2.1 The Moving Time Metaphor

The Moving Time metaphor where the observer is stationary and time is moving toward him/her includes the following mappings (Lakoff and Johnson 1999: 142):

![Figure 2.1. Schematic Picture of the Moving Time Metaphor](image)
The mappings include the following metaphorical linguistic expressions (Lakoff and Johnson 1999: 143):

(4)   a. The time will come when there are no more typewriters.
      b. The time for action has arrived.
      c. The deadline is approaching.
      d. Thanksgiving is coming up on us.

In these examples, the subjects are either denoting time or event as the time, the deadline, and thanksgiving in (4a-d). In the sentences above, we can learn that the observers are anchored from the employment of deictic
expressions such as *come, arrive, approach,* and *coming up.* The basic assumption that this model conveys is that the static observer faces time moving toward him/her and this seems to go well with our general intuition. This assumption is shared by scholars other than Lakoff and Johnson (1980 and 1999) such as Alverson (1994), Núñez and Sweetser (2006), and Moore (2000 and 2006). Furthermore, Alverson (1994) and Núñez and Sweetser (2006), and Moore (2000 and 2006) prove that it is not an exaggeration to claim that temporal mapping is a cross-linguistic phenomenon by documenting examples from various languages, such as Aymara, Japanese, Mandarin Chinese, Sesotho, etc.

### 2.2.2 The Moving Observer Metaphor

The Moving Observer metaphor (or the Time is Landscape metaphor), where the observer is the figure with regard to the static time of landscape, i.e. the ground, includes the following mappings (Lakoff and Johnson 1999: 146): ²

² Talmy (2000: 184) defines the general conceptualization of the figure and the ground in language: “[T]he Figure is a moving or conceptually movable entity whose site, path, or orientation is conceived as a variable the particular value of which is the relevant issue. The Ground is a reference entity, one that has a stationary setting relative to a reference frame, with respect to which the figure’s site, path, or orientation is characterized.” In this sense, the dichotomy of figure/ground relation plays a vital role to help our cognition. Since cognition of movement in the temporal mapping is of relativity, it is natural that the observer who does move plays a role of the figure rather than that of the ground in the Moving Observer metaphor (Lakoff and Johnson 1999).
Figure 2.3. Schematic Picture of the Moving Observer Metaphor

![Diagram](image)

Figure 2.4. Inferential Correspondences of the Moving Observer Metaphor

The mappings include the following metaphorical linguistic expressions (Lakoff and Johnson 1999: 146):

- The Location Of The Observer
- The Space In Front Of The Observer
- The Space Behind The Observer
- Locations On Observer’s Path Of Motion
- The Motion Of The Observer
- The Distance Moved By The Observer
- The Present
- The Future
- The Past
- Times
- The “Passage” Of Time
- The Amount Of Time “Passed”
In (5a-c), the subjects that move are human rather than time such as we and he. This sub-mapping has the assumption that the observer moves toward the goal he/she faces, namely orienting the observer’s face toward the goal. The interesting fact is that the temporal event could be construed as a process which has duration, as shown in (5d). The notion of process as well as that of event is explained by the Moving Observer metaphor. This sub-mapping of the time metaphor is also considered to be common in various languages (Alverson 1994, Núñez and Sweetser 2006, Moore 2000 and 2006, inter alia).

2.3 Sequencing of Time Metaphor

Even though Traugott (1975) and Lakoff and Johnson (1980 and 1999) mention a metaphorical system covering the sequencing of events which are not observer-anchored, for instance, *in the following/preceding weeks*, *tomorrow follows today* and so forth, the sequencing of events is not focused and not relevantly reflected into the accounts. The sequencing
of events is dealt with enough attention by Núñez and Sweetser (2006) and Moore (2006), being reflected into the systems of temporal mapping. The characteristic of the sequencing of events metaphor is that there is no requirement of a canonical observer anchored in its source domain (Núñez and Sweetser 2006: 407). The inferential implication is shown as follows:

![Figure 2.5. The Sequence of Events Metaphor](image)

The following linguistic forms can be accounted for by the Sequence of Events Metaphor (Núñez and Sweetser 2006: 408):
(6) a. Christmas follows Thanksgiving.
   
b. Greenwich Mean Time is lagging behind the scientific standard time.
   
c. It is now 20 minutes ahead of 1 p.m.

As seen above, the metaphorical expressions do not include the ego, but are solely related with the sequence of temporal events.

Núñez and Sweetser (2006) and Moore (2000 and 2006) recapitulate the temporal mappings in general and group them into the Ego-Reference Point Metaphor (Ego RP metaphor). The two sub-mappings of the time metaphor accounted for in Lakoff and Johnson (1980 and 1999), namely, the Moving Time metaphor and the Moving Ego metaphor, belong to the Ego-RP metaphor, since the ego’s viewpoint is anchored in them. On the other hand, the expressions where the ego is not anchored are classified into the Time-Reference Point Metaphor (henceforth, Time RP metaphor). And they mention that “[I]n order to better grasp temporal mappings, we must consider a more accurate taxonomy of spatial metaphorical mappings of time and the mappings that focus on reference points rather than on the identity of moving entities” (Núñez and Sweetser 2006: 402). Consequently, the system of temporal mappings can be represented as in

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\[\text{In Moore (2006), Ego RP metaphor is termed as \textit{Ego-based metaphor} whereas Time RP metaphor as \textit{Relative Position on a Path metaphor}.}\]
Likewise, Núñez and Sweetser (2006) provide an organized and systematic account of temporal mappings covering the Ego RP metaphor (Moving Ego and Moving Time) and the Time RP metaphor. Other than the patterns discussed above, it is noteworthy that the case where both participants, time and observer, are static is accounted for in the paper: “[N]ot all spatial language for time is dynamic: *There’s no time to do my homework because the class meetings are too close together* simply treats times as locations” (2006: 406). And they pay attention to the sentences such as *The summer is still far away; The end of the world is near;* and *Election day is here* (2006: 409). The case where the two participants are
static seems to be overlooked in Lakoff and Johnson (1980 and 1999). For instance, the sentence *I can’t face the future* is analyzed as an example of the Moving Time metaphor (Lakoff and Johnson 1999: 143). The sentence, however, could also be regarded as one in the case where both of the participants are static. The sentence itself solely describes a situation where two entities which have front-back orientation see each other’s front or face, but does not necessarily include movement,\(^4\) which means that the sentence might not be an example of the Moving Time metaphor. This pattern is not reflected into Figure 2.6, however, because this pattern can be implicated by the dynamic Ego-RP metaphor via our inferences.

With all, it is noteworthy that this pattern of ‘still picture’ is also captured in terms of *basic static structure* by Núñez and Sweetser (2006:409), which is implicated by the two dynamic patterns in the Ego-RP metaphor.\(^5\)

### 2.4 Problems Raised

The approaches that are examined so far seem, to some extent, to

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\(^4\) If the sentence is construed to convey the meaning of movement, it would be due to activation of our inference. While interpreting the sentence, *the future* is construed as an object which has front-back orientation because of the word *face*. The presence of the object’s front-back orientation itself, however, does not necessarily entail that the object is moving. The presence of the orientation can be a necessary condition for the presence of movement but not a sufficient condition.

\(^5\) Núñez and Sweetser (2006: 409) mention that the static Ego RP model is shared inferential structure present in both Moving Time and Moving Ego metaphors.
shed light on the systematic structure of temporal mappings. The accounts, however, leave a few things to be reconsidered. A fine-grained analysis on linguistic expressions reveals that there may be some counter-intuitive entailments in the accounts. In this section, apparently problematic issues are discussed. The issues are on the unitary concept of time in temporal mapping, on the directionality of time with regard to observer, and on subjective time experience.

2.4.1 Time as Non-Unitary Concept

In the approaches previously discussed, it is commonly assumed that an event metonymically represents time and that we do not need to distinguish the two concepts, (namely event and time) in the mapping. There seems to be cases where the distinction is in need, however:

(7) Nowadays, we are running against time to finish the assignment.

In the sentence, there are at least three items which denote temporal concept, that is, nowadays, time, and an event of finishing the assignment. If we were to assume that time, in general, always flows, and that these three time elements belong to a single domain, they should move together along a single timeline and one would not approach the other in a
metaphorical sense. Furthermore, when we construe (7), we should invoke a race frame where multiple participants, namely *we* and *time*, are competing against each other to reach a certain landmarker, namely the event of *finishing the assignment*, which is marked in the landscape, namely the generic sense of time, *nowadays*. Thus, we can hypothesize that the three temporal concepts in (7) are separate, even though they appear to be entangled with each other in a unitary concept.

Most approaches including Lakoff and Johnson (1999) and Núñez and Sweetser (2006) assume that the event and the landscape sense of time are not to be distinguished. Technically speaking, they are not in focus in their accounts because of the metonymic linkage between an event and time. In the example sentence, however, can the event, which usually represents general sense of time by means of metonymy, and the landscape sense of time be understood as the same? Lakoff and Johnson (1999) as well as Alverson (1994) assume that the number of participants in temporal mappings is definitely two, namely observer and time. Can this also be applied to the above sentence, where more than one sense of time is accounted for? As attested in (7), an element which plays a role of landscape time, namely generic sense of time, and an event sense of time should be distinguished to better evoke the picture of the sentence.

Other scholars directly or indirectly indicate this point. Traugott (1975) argues that there should be a distinction among the three concepts
of time, which are physical time, calendrical time, and linguistic time.\(^6\) Alverson (1994) also found that there are five basic universal categories of temporal expression and experience that are metaphorically characterized. They are: (a) “Time is a partible entity,” (b) “Time is its effects,” (c) “Time is a medium in motion,” (d) “Time is a course,” and (e) “Time is its ascertainment/measurement.” Evans (2004) also argues that time is far from being a unitary concept. Rather, he claims, concepts of time should be classified into 8 categories, including the concept of time as duration. To enhance the plausibility of the categorization, he redefines the 8 senses of time by analyzing lexical concepts of time in terms of meaning, concept elaboration, and grammatical aspect. They can be enumerated as follows: (a) duration sense (*Time flies when you’re having fun*), (b) moment sense (*The time for a decision is approaching*), (c) instance sense (*The horse managed to clear the jump 5 times in a row*), (d) event sense (*The young woman’s time approached*), (e) matrix sense (*Time flows on forever*), (f) agentive sense (*Time is the great physician*), (g) measurement-system sense (*Don’t forget to move the clocks forward with the start of Summer Time*), and (h) commodity sense (*We don’t have enough time*).

In Chapter 3, this thesis argues that among the various senses of time classified by various scholars, we need some of the major concepts of

\(^6\) Time concepts in detail are to be discussed in chapter 3.
time, which are event, moving track time and landscape (generic) time.

2.4.2 Directionality of Time

In the previous approaches, it is commonly assumed that the directionalities of time and the observer are reverse and that a case where both of time and ego move simultaneously does not exist: Núñez (1999) mentioned that the sentence We and Christmas are approaching each other is not empirically observed in natural language and that it is due to characterizing in the source domains of both variants the impossibility of simultaneous motion of observer and objects. To intensify the account, Núñez and Sweetser (2006) added that it is rare for both of the participants to play roles of the figure, and that either one of them, at least, should play a role of the ground. Alverson (1994) also indicates that English does not have any linguistic expression which belongs to the case where both the speaker and time move together. Alverson exemplifies that we cannot say, 'The future and I are headed toward each other.'

Some examples, however, might be construed differently if they are considered independently of what the previous approaches generalize. That is, there are some cases which show that one of the two participants in the mapping, namely time and the observer, do not necessarily come in front of the other. Even though such cases are apparently erroneous in the
previous studies on time, the directionality of the protagonist in the mapping is not fixed in expressions when we focus on the construal of the expressions. For example, the sentence *I can’t face the future*, which is argued to be an example of the Moving Time Metaphor in Lakoff and Johnson (1999: 143), does not necessarily entail the reverse directionalities of the participants. Even though the event and the observer do not face each other, it is still true that the observer faces the event if the observer’s front heads for it. In addition, in the *TIME IS A RIVER* metaphor (Lakoff and Johnson 1999: 158-159), directionality of time seems to be from the observer’s front to his/her back, as construed in the sentence *Time flows by us quickly*. Either direction can be construed with the sentence, however, the schematic picture of the mapping can be illustrated as follows:

![Diagram](image)

Figure 2.7. Relative Directionality of Time in the TIME IS A RIVER metaphor

In the figure above, there might be no need to constrain the directionality from the observer’s front to the back, unless the expressions are
considered to belong to the generalized inferential patterns of previous temporal mappings. This is expressed by expressions such as *Time is flowing by rapidly*, *Let it go naturally*, etc. If the hypothesis that the directionality of time is not necessarily fixed is correct, there should be cases where both time and the observer are moving in the same direction.

Furthermore, Yu (1998) indicates that the case in question does exist. A few examples from Yu (1998: 125-126) can be excerpted as follows:

(8) a. We’re racing against time to finish the assignment.
   b. We’re trying to beat the clock.
   c. We are ahead of time.

If the examples are generalized, participants of the temporal mapping are time 1, time 2, and the subject. In (8a), the observer *we* and time 1, *time* are getting close to time 2 (event) of *finishing the assignment*, according to Yu (1998). In (8b), the subject *we* is racing with time 1, which is represented by the clock to a certain implicit common goal. These examples include potentially two moving participants in the mappings, where all the participants move in the same direction.⁷ This way of

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⁷ Some of these examples are analyzed by means of Fauconnier’s blending theory (1994, 1997), but problems in accounting for the sentences solely with conceptual metaphor are to be focused in this section. The accounts with blending, which is a key issue of this thesis, are to be discussed in Chapter 4.

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construing is possible, since the concept of time here is the one that does not stop and that is always ticking along with the physical existence of matter in the world. For instance, we are aging at all times. At every second, who we are now is not who we actually are, which means that we are influenced by the passage of time. Therefore, time does not stop. In (8c), Núñez and Sweetser (2006: 408) and Ruiz de Mendoza (1998: 264) mention that in most of cases, the expression *ahead of* is likely to refer to spatial relations between entities in motion. This could support the idea that there could be the case where both of the participants, time and observer, move simultaneously. In Chapter 4, this thesis argues that this pattern is to be accounted for by means of Mental Space Theory (Fauconnier 1994 and 1997, and Fauconnier and Turner 2002, inter alia), and especially that the conceptual blending theory is deeply intertwined with the solution.

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8 The basic idea embedded in the pattern is a philosophical idea that since time is always ticking and we are in time moving with it, there is no such a time that does not move (Keshavmurthi 1991).

9 Ruiz de Mendoza (1998: 264) mentions that *ahead of* implies movement of at least one of the actors in the sentence (e.g. we are likely to say *New York is ahead of us* only when we are moving toward the goal *New York*) and that it conveys an idea of movement of the actors involved in a same direction (in contrast to *in front of*). But he also mentions that *ahead of* possibly describes the relative positions of two sets of entities along a path in a front-back orientation, as in *There were three people ahead of me in the queue*. Even though it is hard to clarify the distribution of the phrase, it seems to me that when the phrase invokes a race frame under a relevant configuration, it necessarily induces our inference to construe that both actors are moving. In this vein, this thesis presumes that (8c) contains movement of both actors in the sentence. The distribution of the phrase, nevertheless, calls for further research with quantitative methodology in the future.
2.4.3 Subjective Time Experience

Previous studies on time seem to overlook intriguing linguistic phenomena regarding subjective time experience. Subjective time experience can be exemplified by expressions such as *Time drags when you’re bored*, *Time zooms by when you’re having fun* and the like. The reason why these sentences are intriguing is that it is hard to explain the concepts of time inside them only with conceptual metaphor. That is, we have assumed that temporal mapping is constituted with the source domain of spatial concepts and the target domain of temporal concepts and that we understand the target domain in terms of the source. It is, however, impossible to understand the subjective time experience solely by means of spatial concepts. That is, the source domain cannot but contain the velocity of the moving object as well as the motion of the objects, and the velocity entails involvement of time.10

The issue of the subjective time construal is raised by Evans (2004) and some other cognitive scientists (Ornstein 1997[1969] and Flaherty 1999). Against the assumption of Lakoff and Johnson (1980 and 1999)11

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10 This issue that the concept of time is hard to be removed from the source domain is also raised analogously by Grady (1997) and Moore (2006). Especially Moore (2006) argues that for this reason, the concept of domain employed in temporal mapping should be redefined as that of frame (Fillmore 1985).

11 The fundamental assumption that Lakoff and Johnson (1999) take is that time can be defined in terms of metonymical abstraction of properties of successively cyclic events which are to be measured by comparison of some events to other events (1999:
which is shared by most other cognitive linguists, Evans (2004) argues that neurological activities in the brain, innate “timing mechanisms,” give rise to perceptual moments and it is in charge of our perception (2004: 2), providing one of the findings from neuroscience showing that time experience is to be construed in a subjective way. His accounts seem to intimate that humans can perceive the existence of time without human mind to recognize, i.e. without metaphor. Ornstein (1997[1969]) and Flaherty (1999) also mention the subjectivity of time perception. Especially, Flaherty defines it as “protracted duration,” which constitutes the experience that temporality is proceeding more “slowly” than usual (1999: 96). Also “temporal compression” is mentioned to be experienced when the density of conscious information processing is low (1999: 112-113). The notions can be experienced in our mundane lives: “[F]or instance, experiences which give rise to a higher density of information processing and hence in which time appears to pass more slowly (protracted duration) include suffering and intense emotions, violence and danger, waiting and boredom, concentration and meditation, and shock and novelty” (Evans 2004: 4).

As Núñez and Sweetser (2006) argue, his accounts, however, are not characterized by a clear mapping from space to time (2006: 408). Rather, he defines time as a sequence of events and solely describes the usage of
the linguistic item *time* in general. Nevertheless, his intriguing topic of subjective time experience needs to be accounted for. In Chapter 4, this thesis argues that the subjective time experiencing can be accounted for by means of the conceptual blending theory.

### 2.5 Chapter Summary

In this chapter, I have explained the inferential patterns of temporal mapping which have been discussed in literature. The systematic and organized accounts for the temporal mapping in literature have been shown and discussed. Three points have been argued against problematic issues that the previous accounts leave us. First, I denied the assumption that the concept of time in temporal mapping is unitary. Second, based on the distinction of time’s roles in temporal mapping, this chapter has argued that the directionality of time might not be necessarily fixed, and has referred to a possibility that there exists a case where both time and ego move in the same direction. Third, as Evans (2004) raises, more attention should be paid to the issue of whether subjective time experiencing can be explained by the conceptual metaphor theory. The following chapters argue that the various concepts of time should be distinguished and that based on the distinction, we can provide a uniform explication for the Ego RP metaphor, i.e. the Moving Time metaphor and
the Moving Observer metaphor as well as the Time RP metaphor. In addition, we can explicate the case where both of the participants seem to move simultaneously and the case of subjective time experiencing by means of conceptual blending theory.
Chapter 3
Concepts of Time in Temporal Mapping

As mentioned in the previous chapter, time concepts employed in temporal mapping do not seem to be unitary (Evans 2004). For instance, in the sentence *In the meantime, the deadline is coming*, linguistic elements such as *the meantime* and *the deadline* are not to be construed as a unitary concept of time. That is, *the meantime* would function as a landscape in the mapping and *the deadline* as an event. Most of the previous approaches, however, seem to simplify the concepts of time employed in the source domain of the mapping, arguing that a certain event eventually stands for the time via metonymy. In other words, concepts of time employed in the TIME IS A MOVING OBJECT and TIME IS LANDSCAPE metaphors are not different. It is true that notions of event and time are so tightly interwoven that neither one of them would be construed without understanding the other. But it is also true that they are used and construed individually in linguistic expressions. In this chapter, I will argue that we need to investigate first whether or not there is any logical chasm in the inferential patterns of its source domain in order to better understand the temporal mapping. Then, I will argue that we need to analyze the time concept in a fine-grained sense in order to better account for the structure of the source domain in the time metaphoric expressions.
3.1 Logical Gap in the Inferential Patterns

The source domain of the Moving Ego metaphor can be illustrated as follows. There are a moving observer (ego) and fixed objects (events) in landscape. The objects are in front of the observer, and the observer moves toward the objects:

Linguistic expressions, which reflect this inferential schema can be exemplified as: *We’re coming up on Christmas*, *We’ve reached June already*, *We are approaching Christmas*, and so forth. The underlying assumption is that the observer in the source domain physically steps forward using his or her legs in order to reach the goal. The physical movement entails that the mover has a will to use his or her legs in order to reach the goal, and even that the mover could halt. The examples of the Moving Ego Metaphorical expressions, however, do not necessarily entail that the observer, *we*, physically uses his or her legs. We can say, “We’re
getting close to the station,” even when we are not physically using our legs, i.e. when we are on the moving vehicle, for instance. Furthermore, if the sentence entails that the observer should have the intention to use his or her legs, it would not match correctly with the target domain, since time flows regardless of our intention. This could be proved with ease: if we say *We are walking to Christmas* or *We are crawling to Christmas*, the utterance would be unacceptable. In short, we can use an expression without specifying the way of movement even in case of moving toward a goal by locating ourselves on a moving track. In this vein, we can possibly hypothesize that it is not the observer, but a moving track of time that physically moves toward the goal and that the observer is simply put on the track as shown in Figure 3.2:

![Figure 3.2. Observer on the Moving Time Track](image)

The following examples can support the hypothesized model, because the linguistic element *get on* in the examples can denote that the observer is
getting on the moving time track which moves forward to the future event.

(9)  a. We’re getting close to Christmas.
     b. He’s getting on for seventy.
     c. It’s getting on for (to) eleven.
     d. It was getting on in the afternoon.

(9a) indicates that the subject we is located on the moving track, and that the track itself approaches the event of Christmas. (9b) denotes that the subject is located on the moving time track, and that it moves toward the future event of being seventy. Even though the identity of the referents in (9c) and (9d) denoted by it, is in need of an explication, the sentences can implicate that the observer’s viewpoint is anchored on the moving time track and moving forward to the event of being eleven o’clock and to a certain point in the afternoon, respectively. Likewise, some linguistic expressions containing temporal mapping convey the schematic structure in Figure 3.2.

On the other hand, among expressions of the Moving Observer metaphor, some expressions necessarily assume that the physical action of the observer is included in the mapping as accounted for in previous accounts. The expressions which reflect the physical action of the observer are as follows (Yu 1998: 118-120):
(10) a. With vigorous steps, China is striding toward the twenty-first century.
b. With big strides, they are running toward the splendid tomorrow.
c. They are sprinting toward the new century.
d. The Republic has walked over an extraordinary journey of forty-five years.

In these expressions, the observer takes the actions of *striding, running, sprinting, walking* etc. These expressions are, however, different from those provided as counter-examples above against the model in previous approaches such as *We’re getting on close to Christmas*. The difference seems to be related with whether the volition of the subject is included in the expressions or not. When we say (9b), time goes regardless of our intention to control time whereas when we say, “We’re running toward the splendid future,” we will construe that we would make efforts to move ourselves forward more actively. When the observer uses his/her legs on the moving track in the on-going direction, we come to feel that we approach landmarks more quickly, i.e. we move faster. In this vein, the intentionality embedded in the expressions helps us invoke a scene where we go forward more actively to achieve a certain goal. The Moving Observer metaphor in the previous approaches, however, does not seem to
explain the examples and does not specify whether the observer has the intentionality of physical action or not.

Since nothing is as clear as crystal about the structure of its source domain, except for the decreasing distance between the observer and the event, possibility of different structure of the source domain from the previous view is wide open. If concepts of time in the hypothesized model are not to be unitary and if we can assume that the hypothesized time concept as a moving track exists, we can better account for the structure of the source domain. First, with the moving time track, we can reflect the incessant and unidirectional characteristics of time flow into the mapping, which goes well along with our intuition of time. Second, as told in (9) and (10), we can explicate more plausibly the two sub-mappings of the Moving Observer metaphor depending on whether or not the observer’s volition is included. Third, with the concept of the moving track, we can provide a uniform explication for the overall temporal mapping.\footnote{The uniform explication for temporal mapping with the moving time track will be discussed in Chapter 4 in detail.} In this vein, I hypothesize that the concepts of time are to be enumerated into at least three notions: time as event, time as the moving track, and time as the landscape in linguistic expressions.

Now, we need to consider the identities of the moving time track on which the observer seems to be located, of an event toward which the
observer moves, and of landscape time. In section 3.2, the major hypothesized concepts of time, namely, a the moving track, as landscape (generic) time and as an event, will be investigated, and their puzzled interactions will be mentioned in brief.

3.2 Participants in Temporal Mapping

In general, time is an infinite continuum inferred from constituted events via metonymy (Lakoff and John 1999: 137). Since the concept of time is to be experienced only in terms of another concept due to its abstractness, the semantic range that the temporal concept covers contains various concepts. Identifying these concepts has been conducted by various linguists and philosophers. One of these efforts is Traugott’s classification of time concepts (1975: 207): physical time, chronological time, and linguistic time. Even though the classification sheds light on

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13 In a philosophical tradition, the distinction of time has been explored and the major way of distinction is to classify it into physical time and psychological time. Physical time is public time, the time that clocks are designed to measure. Psychological time is private time and is best understood as being aware of physical time (cited in Dowden (not dated)).

14 The three concepts of time in Traugott (1975) are defined in brief. “[P]hysical time is the time which we experience, and which is conceived as flowing in an irreversible direction. It has as its correlative our variable awareness of duration. Chronological time designates fixed (calendrical) periods of time, such as seconds, weeks or years, and specifies how they are ordered. Insofar as chronological time is calendrical, it is atemporal since these units ‘taken in themselves do not participate in the nature of time and are devoid of temporality’. Linguistic time, being not time itself but the expression of our experience of time, is an independent system only partially relating
the projection of time concept to our mind via linguistic time, the element of the classification needs detailed investigation. Especially, physical time should be classified in detail to better understand the temporal mapping, that is, time as a landscape (generic) sense, as a moving track, and as an event. In the following sub-section, the landscape and the moving track senses of time are explicated first.

3.2.1 Generic Sense of Time and the Moving Time Track

Time, strictly speaking, does not exist in a physical sense. But somehow, we experience the fact that we are never free from time’s influence, and automatically infer that time never stops ‘flowing.’ The ‘somehow’ is suggested to be due to the projection of our mind, according to various philosophers including Kant (1951[1790]). That is, the concept of time is an abstract notion that we can perceive only in a psychological and mental way. The abstract notion is, however, yielded by our concrete experience of events in our physical world. In short, we construe time with regard to change in things or events: if something changes, we can infer that there is a hypothetical directionality inferred from the transformation from what it was to what it will be.\(^1\) The sequencing of

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\(^1\) This is related with CHANGES ARE MOTIONS, STATES ARE LOCATIONS metaphor in Lakoff and Johnson (1999).
the events is not likely to be reverse, and the irreversibility of the events is regarded as a one-directional process through an abstraction process via the mind. In this vein, time can be characterized as flowing incessantly.

On the other hand, time functions as the background, i.e. as a landscape where we can experience time. In other words, if there exists one concept of time we recognize to flow, there should be another concept of time where the flow of time takes place.\(^{16}\) This landscape sense or generic sense of time provides an experiential ground on which we can reason temporal concepts. The generic sense of time is a wider concept where we experience flowing time.

In this vein, the generic sense of time has two facets due to its dual interpretation of dynamic and static construal: it is static in a generic sense and, at the same time, dynamic. The two facets of the generic sense of time can be understood by an analogy of a river. Let us say that an expression exists, *The stream flows through the village.* The sentence could convey two interpretations, depending on the context. One reading is that the stream flows along a waterway which is vacuous (let us suppose that we establish a new waterway and let the water flow into it), i.e. it is construed as a dynamic flow of water. The other is that the stream lies in the place referred to by *through the village*, i.e. it is construed as a static existence of water flow. If time is construed to be able to *flow*, it would

\(^{16}\) This paradoxical character of time concept is mentioned in section 3.4.
also have two facets of dynamicity and stativity. The individual time constituent, which forms the generic sense of time is analogous to the individual water particle which forms the apparently infinite flow of stream.

Challenging our logical reasoning, the time ‘particles’ flow, and at the same time, form the infinite flow of time, just as water particles flow and form the infinite flow of the stream. Therefore, to better obtain more plausible pictures of the mapping, we should be able to explain the duality of the landscape or generic time. And if we intend to better explain the duality, we would need to establish another concept of time which can cover the moving time, which forms the static sense of time. It is the moving time track that always flows dynamically with forming infinite and static flow of time. In other words, the moving time track moves, and at the same time, forms the infinity of the time landscape. Even though the description of time as well as that of stream is paradoxical in a logical sense, it seems that this paradox can be tolerated in linguistic expressions and in our cognition, since we reflect the paradox into our linguistic expressions. These incompatible but mixed facets can leave us a possibility of the existence of a moving time track in our cognition of time.

In brief, the landscape or generic sense of time, which provides the hypothetical background where all the matters can exist, is projected onto our mind. Landscape time has two sides; dynamicity and stativity as
argued with the river analogy above. To better account for the picture of the mapping, we need another concept of time in the mapping which can cover the dynamic sense of time as it corresponds to the moving time track. The basic assumption that this thesis takes is that the moving time track goes in one direction, which goes well with our common sense that time goes in one direction and that it cannot stop.

Then, is it plausible to infer that all the matters that are incessantly affected by the passage of time are located on the moving time track? Apparently, the question is not easy to answer at this point. The reason for the difficulty is that there seems to be no physical, static, and explicit marker for time in our physical space. In a sense, people know that they are not moving physically and feel that they stand still without changing. In another sense, however, people also know that time flows at all times, which make them realize that they change, for instance, they are being aged. But if there is no marker for events, how can we perceive the passage of time? If there is no landmark for time to be recognized on the time line, how can we construe that the distance between the observer and the goal decreases? As a matter of fact, the landmark for time does exist in the form of event in linguistic expressions which is distinguishable from the two senses of time discussed.
3.2.2 Sense of Event

Dictionaries define time as a non-spatial continuum where events apparently occur in an irreversible way, i.e. succession from the past through the present to the future, not allowing the reverse direction of process (The American Heritage College Dictionary). As we can see in the definition of time, an event is construed as a thing that occurs and is marked on the landscape, which means that the concepts of time as a landscape and as an event should be fundamentally distinguished. In other words, the landmark for the passage of time should be construed independently in linguistic expressions. Let us exemplify a few expressions where the distinction between the landmark (i.e. event) and the landscape (i.e. time) is accounted for:

(11) a. She's just marking time in her father's shop until it's time to go to university.

b. If I don't leave right away, I won't get to work on time.

c. Once upon a time, everyone knew each other in this town and nobody bothered locking their doors.

d. He practiced every day for four or five hours at a time.

e. At one time this ranch had dozens of cowhands, but now it has fewer than ten.
f. The secret of success is being in the right place at the right time.

g. From time to time we heard a rumble of thunder.

These expressions include the metaphoric conceptualization where a certain event is marked on the hypothetical timeline. This can be observed by considering that most of the italicized phrases contain spatial prepositions which indicate marking points on the landscape time. In this sense, events are construed as markers, which are put on the hypothetical line of generic time.

When we conceptualize time, an event appears to be a part of time, representing time via metonymy, since the event cannot occur without involving time. However, it is noteworthy that the event is not a part of the moving time track, but a part of the landscape time in linguistic expressions. For instance, according to the hypothesized model of the moving time track, let us assume that time always moves. At a certain moment, when we say, “It’s 10 o’clock,” it is not exactly 10 o’clock in fact, since time is still ticking even during the utterance. But the recognized moment of 10 o’clock, i.e. the event of being 10 o’clock,

17 Here, the notion of event is to be more comprehensive than its usage in normal context. This sense of event is employed by more than a few linguists. For instance, Declerck (1994: 310) analyzed the sentence It was already five o’clock as having an event of it being five o’clock.
would be a goal for the observer to reach. The event as a goal stands fast in the landscape. \(^{18}\)

This could be extended to the Moving Time metaphor. In the expression *Christmas is approaching*, it is the event *Christmas* that metaphorically moves and the deictic center would be the static speaker in previous accounts. Based on the hypothesis that this thesis takes, however, the Moving Time metaphor can be accounted for by means of relative motion (Fauconnier 1997, Talmy 1996, Langacker 1987; inter alia). \(^{19}\) Let us assume that we are on a moving train and that we are passing by a tree. Even though it is we that physically move relative to the tree, it appears as if the tree is moving toward us. In this vein, the markers, i.e. events in linguistic expressions do not move along with time in both of the Moving Time metaphor and the Moving Observer metaphor and consequently, the event sense of time in both of the Moving Time metaphor and the Moving Observer metaphor is to be distinguished from the moving time track in expressions.

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\(^{18}\) Lakoff and Johnson (1999: 153) implicate that the sentence like *It's 10 o'clock* belongs to the Moving Observer Metaphor, commenting that “[e]vents viewed as being instantaneous or as single unextended entities are conceptualized via that part of the Moving Observer metaphor that conceptualizes time as being located at time locations, as in a sentence like *The execution occurred at 10:06 P.M.*”

\(^{19}\) Details of this issue is to be discussed in Chapter 4.
3.3 Directionality of Time in Temporal Mapping

According to the hypothesized Observer on the Moving Time Track model, it is assumed that we are getting on the moving track of time, which simultaneously forms an infinite time landscape, which moves toward the fixed event in the landscape sense of time. How can we define directionality of time in a linguistic sense? Directionality can be perceived relatively, depending on which one functions as the figure (Talmy 2000) between the observer or event. The default schema of temporal mapping is shown in Figure 3.3.

![Figure 3.3. The Directionality of Events](image)

If we think that the moving time track exists in our hypothetical space, it is not hard to account for the relative directionality of time. We assume that the direction of the figure’s movement decides the relative directionality of time. Under the configuration, since the observer on the
moving track functions as the figure whereas the event in the landscape as the ground, the observer is construed to move toward the event, i.e. the Moving Observer metaphor. Since the reference point is anchored to the observer (Ego RP metaphor), the observer’s front denotes the future and the observer’s back denotes the past. For instance, if we say, “We’re looking forward to the Christmas party,” the event, the Christmas party, is in front of the observer.

On the other hand, we can construe the relatively reverse directionality of time. Under the same configuration, let us assume that the event functions as the figure. Even though we are on the moving track toward a series of events E1, E2, and E3, we construe that the event, the figure, is moving. Since the relative directionality of time depends on the direction of the figure’s movement, we perceive that E1 is in front of E2 and that E2 is in front of E3. For instance, if we say, “Thanksgiving is coming earlier than Christmas,” Thanksgiving, the earlier event, is construed to be in front of Christmas, in the case that the event is construed to move (relative motion). In this sense, the event which represents time is metonymically construed as coming toward the observer, i.e. the relative directionality of time can be explained with regard to the

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20 It is noted that since the reference point is still anchored in the observer, the observer’s front denotes the future (cf. Christmas follows Thanksgiving vs. Thanksgiving is coming earlier than Christmas is).
In sum, the generic or landscape sense of time is an infinite continuum construed by our mind which accommodates every matter in the universe. In the landscape, other senses of time take place considering linguistic expressions of temporal mappings. Since we are never free from the passage of time and since time is construed to flow incessantly regardless of our intention, we can hypothesize that the observer is on the moving track of time. The sense of the moving time track, paradoxically, moves forward in one direction while forming an infinite continuum of landscape (generic) sense of time. The other concept is the sense of event. In linguistic expressions, the event is construed to stand still in landscape. The directionality of time in linguistic expressions can be construed in either direction with regard to which of the two; the observer or the event, functions as the figure.

As a default, this thesis argues that the directionality of time (the moving time track) is assumed to be parallel to that of the observer’s. If time were to flow in a metaphorical sense, from past through the present to the future, the direction of time could be the same as that of the observer, i.e. we are moving forward to the future, not backward to the past. However, the directionality of the hypothetical time line that is

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21 The issue of the relative directionalities of time in the mapping is to be discussed in detail in Chapter 4.
22 In most languages, future is mapped onto the front due to the relatedness with irrealis
yielded by markers of events is construed as either direction due to our mind’s conceptualization via relative motion of the fixed event. In this sense, we can learn that the moving time track should be included in the mapping, and that the time concepts discussed above, i.e. landscape, the moving track, and the event sense of time, should be distinguished from one another in linguistic expressions. I argue that if we distinguish the notions in temporal mapping, we can obtain a more plausible picture of the source domain in temporal mapping. The fact that Lakoff and Turner (1989: 46) stipulate two paths of purposive path and time path seems to be in the same vein in that they recognize the need of distinction of the notions of an event, a moving track, and landscape sense (generic) of time in linguistic expressions.

3.4 Temporal Puzzles

In a logical sense, the distinction among temporal notions discussed above leaves us with more than a few issues to consider. One of the riddles is whether an event can be separated from the generic sense of time, which is said to consist of a number of events via metonymy. Since time is traditionally defined to be an infinite continuum that is constitutedfacts, which is metaphorically evidenced by physiological reasons of visibility (Núñez and Sweetwer 2006: 437-441).
of an infinite number of events, if time moves, the events also have to move on the time track. Here, one of the temporal puzzles is raised. If time, including the events and observer is moving in the same direction, how can the relative distance between the observer and time (or event) decrease? Can the generic sense of time be separated from the observer, who belongs to the generic sense of time, and at the same time be located on the moving time track? Then, can they be construed as participants in a race frame pursuing a common goal? Can a single source domain contain all of the three time concepts which appear to be incompatible in the target domain? Otherwise, is the picture of the source domain, where an observer, a moving time track, and an event are on a single path in a spatial sense, some kind of mixed projection of each time concept’s frame into our mind?

The reason why Lakoff and Turner’s (1989: 45-46) accounts of the two paths are stipulated appears to stem from the same paradoxical problem:

There are two metaphoric paths here: a purposive path and a time path. They are oriented in the same direction: the direction from us to our goals is the same as the direction from the present to the future (since we are in the present and our goals are future). Moreover, there is something moving along each path—we toward our purposes and the
present time toward the future. Thus the two runners (us and the present time) are headed in the same direction along parallel paths. This makes it easy to conceive of the situation as a foot race between us and an opponent (the present time), who is running in the same direction as we are along a parallel path we win the race against time if we achieve the goal before the deadline, that is, before the present time reaches the time at which the goal must be accomplished.

The two paths are needed in order to resolve the puzzle that the observer is separated from time which is, paradoxically, supposed to contain the observer. They are needed because in a metaphorical sense, there are two protagonists who actively participate in the mapping. In this vein, it would be one of puzzles that should be accounted for, if the observer and time are to be separated in the mapping and if there can be two protagonists in the mapping.

Also, we cannot avoid another fundamental question: can time exist if no event occurs? The question has been considered by not a few scientists and philosophers including Newton, who thought that time concepts are more basic than events (Dowden not dated), but let us focus on Lakoff and Johnson’s (1999: 156-157) comment from a metaphysical point of view. The question might be misunderstood as whether “time is metaphysically, or at least cognitively, more basic than events, since
containers and locations must exist prior to anything being in those containers or at those locations.” The reason why the presumption of the pre-existence of time is incorrect is also read in their accounts that the logical ground of the pre-existence itself is metaphorical. “Once one takes a metaphor as being literal, the [second] error is to assume the correspondence theory of truth and therefore to regard the objective world as structured by the metaphor” (Lakoff and Johnson 1999: 156). The only thing we can get access to is that there are differentiated notions of time and that they are employed in linguistic expressions. Nevertheless, considering its surface value, it is true that another puzzle exists: the pre-existence of time, rather than an event, seems to be right in a sense, but it also seems that time cannot exist without its constituting events.

Another assumption that we hypothesize in the previous section also seems to be paradoxical: if the landscape time is infinite, can we say that the time track moves, which is assumed to form the infinity? In other words, can the time track move forward, and simultaneously form the infinite timeline in a logical sense? Or should the infinite time exist prior to the moving time track as we analogously compared it to the flowing stream?

With all these puzzles, however, the notions of time are amalgamated via our conceptualization, i.e. the conceptual metaphor and metonymy in linguistic expressions. The independent temporal concepts,
namely the moving track, landscape, and event time cannot be used simultaneously in the real world since they are not to be separated, but they can be used simultaneously in linguistic expressions. There are not a few linguistic expressions which naturally use the notions interactively as attested in the previous chapter. How can we bridge the paradoxical gap in linguistic expressions? The next chapter argues that the conceptual blending theory (Fauconnier 1994 and 1997, and Fauconnier and Turner 2002) is the key.

3.5 Chapter Summary

In this chapter, we have learned that the concept of time needs to be separated into a moving time track, generic time, and an event sense of time. The generic sense of time is an infinite continuum construed by our mind which accommodates every matter in the universe. In a linguistic sense, other senses of time take place in the generic sense of time, i.e. landscape. One of the senses is the moving time track, which paradoxically forms an infinite continuum of generic time, and we have also hypothesized that the observer is on the moving track of time in section 3.2. The other is the sense of event, which is construed to stand still in landscape. As a default, the direction of time (the moving time track) is assumed to be parallel to that of the observer because it is
hypothesized that the observer is located on the moving time track. The
directionality of time in linguistic expressions, however, can be construed
in either direction with regard to which of the participants, the observer
and the event, functions as the figure. In this vein, if we could distinguish
the concepts of time in temporal mapping in detail, we could obtain a
more sophisticated and plausible picture of the source domain in temporal
mapping. We have also investigated that the distinction, however, might
yield logical puzzles of temporal concepts even though it might enhance
our understanding of the structure of the mapping. The next chapter argues
that the puzzles which stem from the composition of domains, where each
of the time concepts is framed can be solved, via the conceptual blending
theory.
Chapter 4
Conceptual Blending in Temporal Puzzles

In the previous chapter, we learned that the time concept in temporal mapping is far from unitary. Rather, it can be classified into an event, a moving time track, and a landscape (generic) sense of time. I argue that we need to distinguish time concepts in linguistic expressions in order to bridge the underlying gap in the inferential patterns of the previous accounts. By setting up the concept of the moving time track, folk knowledge that time always flows regardless of the observer’s intention can be naturally reflected into the mapping. Furthermore, I mentioned that if it is true that the distinguished concepts exist in our cognition, we can account for the sub-mappings of temporal metaphor in a uniform manner. This chapter will focus on how the mappings can be explicated in a uniform way.

This chapter will argue that the conceptual blending theory (Fauconnier 1997, and Fauconnier and Turner 2002) plays a key role in explicating the temporal mapping in a uniform manner. The Mental Space theory, especially its conceptual blending operation, would be the most appropriate device to explain the temporal mapping with in that time cannot be perceived without projection of the concepts onto our mind. Since the correspondences of the distinguished time concepts in the source
domain are incompatible with each other in a spatial sense, it would be better to argue that the source domain would be an output of the blending operation which collects partially inherited elements from other input spaces of the individual time concepts. The presence of the conceptual blending operation in the mapping is evidenced by the fact that the independently projected participants, namely the event, the moving time track, and the landscape, are apparently collected and construed to interact with each other in linguistic expressions. To begin with, let us first look into what the conceptual blending operation is in detail to better grasp the argument.

4.1 Conceptual Blending Theory

Conceptual blending is a set of operations for combining cognitive models (Lakoff 1987) in a network of mental spaces (Fauconnier 1994), namely, partitions of speakers’ referential representations (Coulson and Fauconnier 1999). It can provide fine-grained accounts for our abstract concepts such as hypothetical space, irrealis phenomena, abstraction process, and so forth (Fauconnier 1997). Let us exemplify an instance from Fauconnier (1997) to better understand the fundamental mechanism.

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23 A mental space contains a partial representation of the entities and relations of a particular scenario as perceived, imagined, or remembered by a speaker (Coulson and Fauconnier 1999: 144). The details will be discussed in section 4.2.
of the operation and to investigate its details:

(12) *At this point, Great America II is 4.5 days ahead of Northern Light.* (Fauconnier 1997: 155)

The situation where the utterance is made is as follows: there was a clipper named *Northern Light* which was in use in 1853 and there was another boat named *Great America II* which was in use in 1993. The two clippers sail the same course, from Boston to San Francisco, in 1993 and in 1853, respectively. A few days before *Great America II* reached the destination, the observer could say like (12), comparing the relative time taken by the two clippers regardless of their different time configuration. This is the so-called “boat-race example,” where the two clippers at different times seem to co-exist during the same period in 1993, as participants of the sentence’s construal. This is an output of the blending operation. The input spaces\(^{24}\) which compose the blended space can be illustrated as shown in Figure 4.1:

\(^{24}\) To better grasp the notion of input spaces, Coulson and Fauconnier (1999) state that “[t]he primary purpose of language input is to help speakers integrate linguistic information with background and contextual knowledge in order to formulate an overall understanding of the discourse situation” (1999: 143).
The conceptual blending amalgamated the event of 1853 and that of 1993 into a single event. This construal involves a cross-space mapping which combines the two boats, the two time periods, the positions on the course, and so on. These elements from the input spaces are processed via abstraction as well as blending, since blending cannot be properly operated without mind’s abstraction process. The abstraction process is conducted via Generic space. In other words, the Generic space constructs abstract schematic structure of the mapping (see Figure 4.2 below). The unmarked characteristic of blending is that the projection and the inheritance from the input spaces are partial: other inferences not in focus fall out. For instance, the embarking dates in 1853 and 1993 are dropped, along with weather conditions, the purpose of the trip, and so on. But in the blend the boats are to be on a single path to be compared. The

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mapping can be illustrated as follows:

![Figure 4.2. Blend in the Boat-Race Mapping](image)

In this mapping, we can learn that the two boats, which exist at different times, co-exist on the same course on the same day in the Blended space. This can be framed as an obvious and cultural frame of *a race* (Fauconnier 1997: 156). The inferential patterns in the Blended space are solidly maintained with themselves to be linked to the input spaces, so that the inferences can be projected back into the input spaces, for instance, the speeds and positions of the two boats on their respective trips many years
In addition, conceptual blending could be an implementing tool for the weakness in the explanatory forces of the conceptual metaphor from its somewhat arbitrary nature of partial mapping (Lakoff and Johnson 1980) and for the emergent meaning of the metaphoric expressions in some cases. With blending operation, we can trace the elements from input spaces that are partially inherited, and how they are processed in a blended space, which could explicate the emergent structures. For instance, the sentence, *the surgeon is a butcher* cannot be fully explained by means of the binary domain system of the conceptual metaphor, since the sentence conveys an emergent meaning, namely incompetence, which does not belong to any domain of participant, neither *the surgeon* nor *a butcher*. To plausibly account for the emergent meaning, the third space is set up, i.e. blended space where partially mapped elements from input spaces are collected, composed and processed into the emergent meaning as shown in Figure 4.3 (Croft and Cruse 2004: 208):
Figure 4.3. Blending in *The surgeon is a butcher*

In Input space 1, the surgeon is an agent and the patient is an undergoer, which have referent X and Y, respectively. The instrument which the surgeon uses is a scalpel for surgery, and the place where he/she operates is an operating theatre. The goal of his/her action is to heal the patient by conducting surgery on the patient. On the other hand, in Input space 2, a butcher and a dead animal function as an agent and an undergoer, respectively. The butcher cuts the flesh of the dead animal in the butcher’s shop, using the knife. The goal of his/her action is to...
produce food. The semantic factor, which indicates incompetence is not included in Input space 1 nor in Input space 2. In the Blended space, however, the interpretation of incompetence is yielded by composing the partially inherited elements from the input spaces. In other words, the patient and the butcher are inherited from Input space 1 and 2 respectively, this pairing of the elements evokes the interpretation of incompetence. With blended space, we can explain the emergent structure evoked by the metaphorical sentence, which is not easily explained by binary domains of the conceptual metaphor theory. In brief, the conceptual blending theory provides an explication on how we construe metaphorical expressions in a certain way, and on how semantic elements from the expressions are selected and composed, which eventually yields an emergent structure.

In this sense, conceptual blending theory can be the appropriate device in accounting for temporal mapping, due to its partial inheritance from input spaces and its explication of the projection process onto the mind, since the distinguished time concepts in the mapping are projected onto a single domain as discussed in Chapter 3. Now let us look into how blending operates in construing temporal mapping. In the following sections, I will first explore how blending effects the source domain where the observer approaches on the moving time track. Then I will explicate the other sub-mappings which seem to have not been clearly accounted for in literature (Yu 1998, Alverson 1994, Lakoff and Turner 1989; inter alias),
namely, cases where both ego (observer) and time move and where we subjectively experience the passage of time.

4.2 Conceptual Blending in the Source Domain of Temporal Mapping

As discussed in the previous chapter, the Moving Observer metaphor in previous approaches is in need of being classified into two sub-cases: in one of the cases, the observer uses his/her legs with his/her own intention, and in the other, the observer does not. The fundamental assumption that underlies the two sub-cases, however, can be the same. That is, since everything in the physical world is never free from time, the observer himself or herself knows that his or her state changes incessantly. This means that no matter the observer’s intentionality is involved or not, the observer is located on the moving time track in the source domain. Here I argue that the source domain of the temporal mapping should be revised and its grounds explicated, especially in terms of the conceptual blending theory.

Conceptual blending (Fauconnier 1997, and Fauconnier and Turner 2002; inter alias) seems to be a simple projection process, but infinite semantic and pragmatic possibilities are to be created from it. The unmarked feature of the blending process is its partial inheritance from its
input spaces. In this vein, if it is adopted into temporal mapping, where individually construed participants co-occur and interact with each other, the blending operation would provide more appropriate accounts for the mapping. Now, let us look into how we can account for the interaction of participants in the mapping with conceptual blending.

The fundamental picture that I hypothesize as the source domain, where the observer is on the moving time track toward an event in the landscape of time, is to be an output of blending. As Fauconnier (1997: 181) indicates, we cannot configure the structure of temporal mapping only by means of binary domains of conceptual metaphor, since the source domain cannot get rid of time concept from itself. In other words, if time metaphor can be defined as a way of construing in which we can understand the time concept (the target domain) in terms of the spatial concept (the source domain), the source domain should not contain the time concept. This is deeply related with one of the puzzles of temporal mapping raised in Chapter 3, which is on the paradoxical relationship between event and time. These two concepts are hard to separate, but as argued in Chapter 3, linguistic expressions tolerate the paradox. In this vein, considering that the source domain of the mapping contains different concepts of time such as an event, a moving track, and landscape, and that time can be perceived only with our mind-projection, it would be more appropriate to say that the source domain of the mapping is actually an
output of our mind-projection, especially of blending, rather than saying that it is directly from our experience.

There are three input spaces that compose the source domain of the time metaphor as shown in Figure 4.4.

Figure 4.4. Input Spaces of the Source Domain in Temporal Mapping

In Input space 1, the observer stands still on the ground staring at his/her front. In Input space 2, the hypothesized concept of the moving time track moves forward incessantly on the event path. This paradoxical construal is possible in considering the analogous argument that the static construal of the stream in *The stream flows through the village* is possible regardless of its dynamicity. Input space 3 evokes the landscape of time containing a landmark of event. These are inputs which are inherited and projected into the Blended space, where the observer on the moving time track is moving

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26 Paradoxical issues on which of the two, event and time, presupposes the other are discussed in Chapter 3.
forward. The operations can be illustrated as follows:

As shown in Figure 4.5, there are three input spaces, (Input 1, Input 2, and Input 3) and the partially inherited elements of the input spaces compose an emergent structure in the Blended space. In the Blended space, the observer from Input space 1 is on the moving time track inherited from Input space 2, and it moves along the path which is emerged by the composition of the event path from Input space 2, and the time path from

Figure 4.5. Blended Space as a Source Domain in Temporal Mapping\textsuperscript{27}

\textsuperscript{27} Generic space of the mapping is not to be included, since the focus of the thesis is to show that how blending process structure the mapping in detail.
Input space 3. Based on this configuration, we can infer that the observer moves toward a specific goal regardless of his or her intention. As a default, this inference goes better with our intuition than the assumption of previous approaches, which state that the observer should physically use his or her legs in order to reach the goal. As mentioned in the previous chapter, we can learn it from the fact that sentences such as *We’re approaching Christmas* are used whereas the other sentences such as *We’re walking to Christmas* or *We’re crawling to Christmas* are not. In addition, we can infer that, as accounted for in the previous accounts, the distance between the observer and the event decreases as time goes by.

Once we establish the source domain of temporal mapping as what we can see in Figure 4.5, we can secure the solid ground on which we can account for both of the sub-mappings in the previous accounts in a uniform manner, namely the Moving Observer metaphor and the Moving Time metaphor. It is noteworthy that blended space can play the role of another input space (Fauconnier 1997 and Fauconnier and Turner 2002). First, if we assume that the Blended space in Figure 4.5 is a base for the overall mapping and if we add to the base another input space, namely orientation space, where the trajector moves toward the goal, we can account for the Moving Observer metaphor. In other words, if we construe the situation where the observer plays a role of the figure, we can construe that the observer is coming toward the event, i.e. Moving Observer time
mapping. The schematic picture of the mapping is as follows:

![Figure 4.6. Blending in the Moving Observer Metaphor](image)

In Input space 4, there is a hypothetical path along which a trajector (the figure) moves from the source to the goal. The trajector from Input space 4 and the observer from Blended space 1 are coalesced in Blended space 2. Consequently, the role of the trajector in Input space 4 is mapped onto the observer, which yields the construal of the moving observer with regard to the fixed event.

On the other hand, we have seen that there are some expressions
that require the observer’s intentional and physical action to be included in the mapping such as *We’re running toward the splendid tomorrow*. As mentioned in the previous chapter, these expressions should be distinguished due to their intentionality. If we have another input space which includes the observer’s intentional action, we can account for the case where the observer has an intention of physical action. Let us schematize the picture of the mapping which includes the new input space, namely an intention space (Input space 4):

![Blending in the Other Sub-Case of the Moving Observer Metaphor](image)

Figure 4.7. Blending in the Other Sub-Case of the Moving Observer Metaphor
In Input space 4 in Figure 4.7, the observer’s intention is represented as the physical action of *running*. The other input spaces are the same as those in Figure 4.5. In the Blended space, the observer makes an attempt to go along in order to reach the goal (E) by using his or her legs, which might make it quicker for him or her to reach the goal in the future. In other words, when the observer’s intention is involved in the mapping, velocity increases relatively as construed in the expression *We’re running toward the splendid tomorrow*. Then, the orientation space which contains relevant elements that tell us which one functions as a deictic center can be shown in Input space 5 in Figure 4.8:

![Diagram](image)

Figure 4.8. Blending in the Intentional Moving Observer Metaphor (1)
Partial inheritance from the constructed Blended space 1 and the orientation space, namely Input space 5, enables us to construe the expression as what Blended space 2 indicates. The intriguing fact is that the thick arrow in the box is accounted for in Blended space 2, which means that it is an emergent meaning. In other words, there is no meaning correspondence in any input space, but we construe the meaning of relatively increased velocity due to the intentionality in Blended space 2. Consequently, we can construe the expressions which convey meaning of intentionality as Figure 4.8.

This can be illustrated in a more schematic way of construal. Let us focus on the relative velocity participating in the mapping as shown in Figure 4.9:

![Figure 4.9. Blending in the Intentional Moving Observer Metaphor (2)](image-url)
In Figure 4.9, temporal mapping is illustrated on a single path, which denotes the time line (landscape), the observer, and the moving time track that are on the timeline. A certain actor’s movement is illustrated as an arrow in each space and its velocity is realized as the thickness of the arrow. In Input space 1, we stand still without any action of moving forward in a spatial sense. In other words, the observer (O) stands still. In Input space 2, the moving time track (Tr) is moving along the event path. This can be found in expressions such as, *It’s already 10 o’clock* etc. In Input space 3, the physical motion of the observer (Mph) on the time path motivates the increase in the relative velocity of the movement as represented by the thicker arrow in the Blended space. The velocity yielded by the observer’s intentional movement on the moving track enables the expression to be construed as the intentional Moving Observer metaphor.

The Moving Time metaphor can be construed by simply switching the participant’s role in the mapping. That is, in Figure 4.6, i.e. the schematization of Moving Observer metaphor, it is the observer that functions as the figure. On the other hand, in the Moving Time metaphor (*Christmas is coming*), it is the event that functions as the figure. In other words, the interlocutors construe that the deictic center is the observer in the mapping. In this case, even though it is the observer that moves, he or she construed that the event is in motion. In other words, depending on
which participant functions as the figure in our cognition, the actor of motion is relatively construed either as an event or the observer. The schematization of the Moving Time metaphor can be illustrated as follows:

![Figure 4.10. Blending in the Moving Time Metaphor](image)

Since a blended space can function as an input space for another blended space (Fauconnier 1997 and Fauconnier and Turner 2002), Blended space 1 functions as an input space for Blended space 2 and yields the construal of event-moving-toward-the-observer reading, being
blended with Input space 4, where the trajector moves from source to goal in Figure 4.10. In Blended space 2, the goal is amalgamated with the observer, which makes the observer the destination of the trajector (event). The partially inherited elements, such as the observer, the time path (or the event path) from Blended space 1, the trajectory, and the spatial sense of path from Input space 4, are blended, and finally yield the construal of the Moving Time metaphor. Likewise, we can explicate sub-systems of the Ego RP metaphor in a uniform way by means of conceptual blending.

On the other hand, the Time RP Metaphor can also be explained in a similar way. The metaphorical system can be exemplified with the sentences like *Christmas follows Thanksgiving*. This metaphorical system does not contain the observer or the ego in the mapping, and the reference point is anchored in one of the events with regard to another event, as shown in Figure 4.11:
The fundamental assumption helps us construe the relative motion of the fixed events (E1 and E2) in the landscape sense of time. In other words, the incessantly flowing time, i.e. the moving time track which is reflected in the mapping, helps us construe the relative motion of the events. In this case, reference point is anchored in one of the events. In this vein, the Time RP metaphorical system can be explicated with three input spaces. The time track moves incessantly in Input space 1 and the series of events are fixed in the landscape sense of time in Input space 2. In addition, the orientation space, namely Input space 3, is created which contains clues for deciding the directionality of the figure’s movement with. With these input spaces, we can construe that a chain of events fixed in the landscape...
move sequentially in a certain direction, due to the incessant flow of the moving time track in the other direction. One of the moving events plays a role of the figure, whereas the other plays a role of the ground. Once the direction of the figure’s movement is decided, we can construe that the earlier event is in front of the later event. It is noted that no matter whether the presence of the observer is included or not in the mapping, the directionality of time depends on the direction of the figure’s movement in the mapping. In this sense, by means of the conceptual blending theory, we can explicate the overall temporal mappings in a uniform manner.

4.3 Conceptual Blending in the Case Where Both Ego and Time are moving

Now let us look into another assumption that the previous approaches take in common. In those approaches, there is only one protagonist, namely only one participant that can play a role of the figure in expressions. For instance, in the Moving Time metaphor, the observer cannot be construed as moving in focus, since time plays a role of the figure to be focused. There seems to be, however, another case where the fundamental assumption fails. The following examples belong to the case (Yu 1998: 125-126):
In these examples, it is not only time, but also the observer that moves, being different from the Moving Observer and the Moving Time cases where only one of the two notions, time and the observer, can be in focus. What these sentences show does not seem to go well with the fundamental assumption that only one protagonist functions as a moving participant in the mapping. Blending operation, however, can provide coherent accounts for the double protagonists in motion employed in the expressions.

Let us take an example: *We are ahead of schedule.* This sentence has been mentioned by many linguists (Lakoff and Turner 1989, Yu 1998, and Fauconnier 1997). They recognize that the previous accounts for temporal mapping where one of the participants is static, and where time and the observer are put on a single path in the source domain are not enough to cover the case. As a matter of fact, considering that the participants are inherited from different input spaces, i.e. the hypothetically divided participants are finally coalesced in order to be compared with each other, we can infer that the case in question must contain blending operation.28

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28 Lakoff and Turner’s (1989) notion of two paths are stipulated to account for the case in this vein. Their notion of the two paths is discussed in section 3.4.
Fauconnier (1997: 179-180) also accounts for the doubly moving entities in such expressions by means of blending operation:

We construe that time flows. In a metaphysical sense, we cannot be ahead of time, since we belong to the deictically present time at all times. In our mental space, however, we can beat time, be ahead of time, and even halt time. This hypothetical freedom from time in mental spaces enables us to construe the temporal mapping as shown in Figure 4.12. In Input space 1, time flows in one direction, and the observer is anchored to time. In Input space 2, the observer's hypothetical freedom from time is reflected so that
the observer and time track are located on the two paths, namely time path and event path respectively (Fauconnier 1997 and Lakoff and Turner 1989). The reason why the two paths are established in Input space 2 is to indicate that the actual and the scheduled event do not necessarily have to be the same. The moving time track may not reach the end of the scheduled event (E2) before Ego reaches the end of the actual event (T2). In other words, the observer is located at T2 on the time path instead of the expected time point at T1 and the moving time track is located at E1 on the event path instead of the expected point at E2. In this sense, we can construe that the observer is located ahead of the time track on a single path in the Blended space through comparison between corresponding locations on the two paths.

It is noteworthy that the existence of a time track moving along the event path underlies the accounts made above. If the existence of the moving time track is coherent, we can account for the apparently erroneous case where both time and the observer are moving as well as other cases of the Moving Time metaphor and the Moving Observer metaphor in a uniform way. Finally, the schematic picture of the mapping where various inputs interact with each other can be illustrated in detail as follows, which includes our hypothesized model of the source domain with the moving time track:
Since predicates that specify the manner of the observer’s motion such as *run*, *race*, etc. are found in the expressions of the case, the relevant picture is compatible with another input space where the observer physically uses his or her legs (Input 4 in Figure 4.13). As mentioned earlier, the observer’s freedom from time in mental spaces enables the observer and time to be located on different paths; the event path is partially inherited from Input space 2 and the time path is inherited from Input space 3. The horizons in Input spaces 1 and 4 are spatial paths on which the observer stands still or runs. The paths in Blended space 1 and in Input space 4 are...
blended into a single path as shown in Blended space 2, where the running observer and the moving time track are moving in the same way. Likewise, we can account for the apparently erroneous case by means of blending operation based on the assumption that the moving time track participates in the mapping.

4.4 Conceptual Blending in Subjective Time Experience

With conceptual blending operation, we can also account for subjective time experience. Subjective time experience has been focused on by Evans (2004). This topic is intriguing in that the expressions of subjective time experience entail that the time concept exists physically enough to be construed subjectively, as if it were a concrete moving object in the real world. Some examples which include subjective time experience are shown in (14):

(14) a. Time flies when you’re having fun. (Evans 2004: 7)

While elaborating this section, I found that Fauconnier and Turner (forthcoming) had already analyzed the subjective time experience by means of conceptual blending theory in a similar fashion to this thesis. The idea which is included in this section is, however, independently conducted study of Fauconnier and Turner’s accounts. With all, I agree with Fauconnier and Turner’s guideline for the subjective construal of time in general. Technical explication in detail, however, is to be required for the better understanding. In this vein, what this section contains would not be in vain because I specify the subjective time experience mapping in a fine-grained manner. I will add their comments to my own explication in this section by footnotes, if they are needed.
b. Time drags when you’re bored. (Evans 2004: 7)
c. The time has sneaked/tiptoed by/past (Evans 2004: 8)
d. Those thirty minutes went by slowly for me, but the same thirty minutes went by quickly for him.

If we intend to explain these expressions by means of previous approaches of time metaphor, it will be hard to achieve a clear picture of the mapping. The reason is that the source domain of these expressions, which is not supposed to contain time concepts, cannot but include time concepts, since the concept of velocity is to be included in the source domain. In other words, the expressions entail that time exists physically in the source domain, and that physical time is understood as a moving entity with relative velocity, which contradicts the idea that time does not physically exist in the real world. When using those expressions, we presume not only that the flow of time exists in the source domain, but also that time can be subjectively construed to have relative velocity.\footnote{The difficulty of separation of time concept from the source domain is also pointed out by Fauconnier and Turner (forthcoming). They state that “[T]here is a paradox in the standard metaphor analysis of time as space in having a source domain of moving objects that includes speed, since speed already seems to require time” (forthcoming: 11).}

This issue does not seem to be explained by previous approaches, since temporal concept and spatial concept should be separated by different domains in order to be linked and construed. This intimates to us that
when construing the expressions, we project the conventional time concepts and our subjective experience of time as well as events to a blended space. In this section, I will argue that subjective time experience can be analyzed by means of the conceptual blending theory.

Let us first look into the meanings of the words which denote velocity of time which are used in the expressions (14a-d). The words can be classified largely into two semantic kinds, namely fast and slow. The definitions of the words tell us that their meaning is far from being absolute: fast means being accomplished in relatively little time and slow means taking more time than usual. In other words, when we say something moves fast or slow, there should be a default value with which we can compare it. In the temporal frame, the default is our expectation time, which also equals to normative and regular time. In other words, when we say the expressions in (14), another implicit participant takes part in the mapping in the form of expected time and expected event.

Now, let us analyze one of the subjective time experience sentences by means of blending:

(15) Time goes fast when we’re having fun.

This sentence describes the situation where the observer, we, spends more time than he/she expects without recognizing it. In other words, time
passes more quickly than the observer’s expectation. The schematic picture of the mapping can be shown in Figure 4.14:

![Figure 4.14. Blending in Time goes fast when we’re having fun.](image)

The fundamental assumption that underlies the overall mapping illustrated here is that all the motions, which take place in the spaces of Figure 4.14 take a certain identical unit of time (t; the upper left of the spaces in Figure 4.14). In Input space 1, the moving time track moves along the event path, thanks to the separation of time and the observer as discussed above. It is noted that the observer does not participate in the mapping. In the space, the source and goal of the moving time are marked on the path. The velocity of the moving time, in the form of the distance that the
trajector moves per unit time, is illustrated as an arrow in the space. In Input space 2, the normative time ($T_{nm}$) moves along the event path, whereas the subjective time ($T_{sj}$) moves along the event path in Input space 3. On the paths of Input space 2 and 3, the source and the goal are marked in the forms of N1/N2 and S1/S2 respectively. In the Blended space, partially inherited elements compose the emergent structure of the relatively rapid passage of time. Specifically, the longer arrow from Input space 3 which denotes the distance of subjective time’s passage and the default length of arrow from Input space 2 which denotes the distance of normative time’s passage are put on a single line to be compared with each other. N1 and S1 are the same as a starting point in Input spaces 2 and 3 respectively, but N2 and S2 are marked as different positions on the event path. The gap between the two positions yields subjective construal that time seems to pass more quickly than expected. The dotted arrow in the Blended space indicates the expected velocity of time, that is, a default velocity of time.

To the contrary, when time is subjectively construed to pass more slowly than normative time, as in *Time goes slow/drifts when we’re bored*, the schematic picture of the mapping in Figure 4.14 should be modified in order to represent the construal of a relatively short passage of time. Specifically, the structure of the Blended space is different from that in Figure 4.14 due to the different aspect of the partial inheritance from the
Input spaces. The picture of the mapping is illustrated as follows:

In this case, the subjective time (Ts\textsubscript{j}) is felt to pass more slowly than the normative time (T\textsubscript{nm}), which is illustrated as the shorter length of arrow in Input space 3. Thus, the arrow denoting the subjective time is shorter than that of the default expected (normative) time in this case. In the Blended space, we can evoke two arrows of different length in a single dimension; one is to be construed to be experienced directly (subjective time) and the other is hypothetically construed to exist. We can learn from the comparison of the two arrows that the subjective time moves less than the expected normative time.

Figure 4.15. Blending in *Time drags when we’re bored.*
4.5 Chapter Summary

In this chapter, we have investigated how the conceptual blending theory structures temporal mapping. First, based on the assumption that the moving time track exists in the source domain as intimated in the Chapter 3, this chapter has argued that the hypothesized model can provide a solid ground for further explication for the other inferential patterns of the mapping by showing how the conceptual blending theory structures the source domain. The fundamental picture of the mapping includes the time track which moves and carries the observer, and it can cover both sub-mappings of the previous approaches, namely the Moving Time metaphor and the Moving Observer metaphor, by means of relative motion which depends on which participant functions as the figure and the ground. Furthermore Time RP metaphor which does not include the observer in the mapping could also be explicated with a similar assumption by means of the conceptual blending theory. To extend the explanatory force of blending in temporal mapping, this study has shown that the apparently erroneous case where both of the participants are moving at the same time can be solved by blending. Furthermore, it has also explained that the subjective time experience, which has not been fully focused in the literature can also be accounted for by means of blending operation.
Chapter 5
Conclusion

In this thesis, ways of construing time by means of the conceptual metaphor were investigated, and problems in their inferential patterns were explicated. This study proposed as an alternative in solving the problems, claiming that we can better account for the temporal mapping with conceptual blending theory. The previous approaches on time construal assume that concepts of time which participate in temporal mapping are unitary, that directionality of time and ego are to be reverse, and that one of the two participants should be static with regard to the other. In Chapter 2, I argued that the ways in the previous approaches in accounting for temporal mapping should be revised because time concepts in the mapping are intuitively distinguishable; there are erroneous cases where both time and observer are moving in the same direction simultaneously; and examples of subjective time experience are not fully explained by the previous accounts on the conceptual metaphor theory. In Chapter 3, I argued that we should assume that time always moves basically; time is perceived to move in one direction incessantly and I reflected the idea into the structure of the source domain of temporal mapping as a form of moving time track on timeline. To support the assumption, the distinction of time concepts was discussed, focusing on
the independently activated concepts of time in the mapping as landscape, event, and a moving track. In explicating the distinction of time concepts, I casted a doubt on the structure of the source domain, i.e. whether or not the observer uses his/her legs and argued that to better explain the cases we need to set-up the moving time track in the mapping. Also, I mentioned that puzzles are yielded by the distinction and the puzzles can be resolved by means of the conceptual blending theory in the chapter. In Chapter 4, I set up a fundamental picture of time mapping, where the observer on the moving time track is moving toward a fixed event, and argued that other apparently “erroneous” cases, as well as the traditionally explicated cases, are to be explicated in a uniform way, based on the fundamental picture. In addition, I argued that the subjective time experience can also be explained under the fundamental configuration, specifying the mapping in a fine-grained manner. In the explication, the blending operation was the key in providing a device with which the inferential patterns of the overall temporal mapping can be explained in a uniform way.

What this thesis contains is, however, by no means exhaustive for the overall temporal mapping systems. This thesis focused only on phenomena of the Ego Reference Point Metaphor and the Time Reference Point Metaphor (Núñez and Sweetser 2006), leaving other patterns of mapping unexplained such as vertical time mapping (e.g. *It is high time for you to sleep*). In addition, I hope the proposed assumption in this
thesis is made more convincing by collecting, generalizing, and comparing cross-linguistic data over various languages, most of which are believed to have similar inferential patterns of temporal mapping.
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[국문초록]
영어 시간 은유에 있어서의 개념적 혼성

Conceptual Blending in English Temporal Mappings

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시간은 우리의 사고 및 개념화 과정과 밀접하게 연관되어 있는 중요한 변인 중의 하나이기 때문에 예로부터 많은 언어학자와 철학자들이 끊임없이 연구해왔던 주제이다. 하지만 시간 개념에 대해서 명료한 정의를 내리기는 여전히 쉽지 않은 문제이다. 이 논문에서는 어떻게 시간 개념을 이해하고 개념화하는지를 Fauconnier의 혼성 이론을 통하여 더 명확하게, 그리고 일관성있게 설명하고자 한다.


(Moving Time metaphor)’이다 (예 (1)과 (2) 참고).

(1) We’re getting close to Thanksgiving.

(2) Thanksgiving is coming.

하지만 이러한 추론 패턴들은 설명되지 않는 경우가 존재한다(예 (3-4) 참조).

(3) China is sprinting toward the splendid tomorrow.

(4) They are running against time to finish the assignment.

우선, 예문 (3)은, 기존의 연구에 의하면 배경 속에 ‘사건’이라는 표지를 향하여 이동한다는 점에서 (1)처럼 ‘움직이는 관찰자’은 유에 포함되지만 예문 (1)과는 다른 양상을 보인다. (3)은 해석상에 있어서 의지적인 양상을 나타내는 관찰자의 의도적인 이동 행위를 포함하기 때문이다. 예문 (4)는 문장 안의 두 개의 참여자, 즉 관찰자와 시간 모두가 움직이는 경우를 보여줌으로써 기존의 방법이 보완되어야 함을 암시한다. 이는 기존의 어느 패턴에도 속하지 않기 때문이다.

(5) Time flies when we’re having fun.
마지막으로 예문 (5)는 대부분의 시간 사상에 대한 기존 연구에서 관심 밖에 있었던 주관적인 시간 경험을 나타내고 있다. 이런 맥락에서 기존의 시간 사상에 대한 설명은 보완되어야 한다.

본 논문의 목표는 이와 같은 예외적인 경우들까지도 일관적으로 설명할 수 있는 대안을 혼성이론에서 찾아볼 수 있음을 밝히는 것이다. 우선 2장에서는 기존의 연구를 소개하고 그에 수반되는 문제점을 제기한다. 즉, 시간 개념의 구분에 대해서는 조점을 두지 않고, 두 참여자, 즉 시간과 관찰자는 서로 마주보고 있는 것으로만 가정하며, 주관적인 시간 경험에 대해서는 제대로 다루지 않은 기존의 설명 방식은 수정되어야 함을 논의한다.

3장에서는 기존의 설명을 수정 보완하기 위해서는 시간 개념을 배경 시간, 사건 시간, 그리고 이동하는 트랙으로서의 시간으로 세분화하여야 함을 논의하고, 시간은 항상 한 방향으로 끊임없이 움직이는 것이 시간 사상에 있어서 기본 전체가 되어야 함을 논의한다. 시간은 항상 일방향으로 끊임없이 움직이는 생각이 전제된다면, 우리의 직관에도 부합되고, 설명력에 있어서도 기존의 연구에서는 개별적으로 다루어져 왔던 추론 패턴들을 일괄적으로 설명할 수 있기 때문이다. 이를 바탕으로 기존의 연구에서 취했던 근원 영역의 구조에 대한 청사진은 관찰자가 다리를 사용하지 않고도 이동하는 트랙 위에 타고 배경 속의 사건 표지로 이동하는 형상으로 수정되어야 함을 밝힌다. 아울러 시간 개념을 세분화함에 있어서 야기되는 문제점들을 제기하고, 이 문제점들은
혼성 이론으로 설명될 수 있음을 밝힌다.

4장에서는 앞에서 논의된 것들이 전제된다면, 기존의 연구에서는 일괄적으로 설명할 수 없었던 경우들, 두 참여자가 동시에 움직이는 경우와 주관적인 시간 경험을 포함되어 있는 경우까지도 설명할 수 있음을 논의한다. 결론적으로 시간 사상에 대한 이러한 일괄적인 설명은 혼성을 통해 가능한 것임을 밝힌다.