TIME PASSING IS MOTION[*]

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In this paper, we focus on a specific instantiation of the conceptual metaphor TIME IS SPACE, which is argued by Yu (1998) to be a universal metaphor on the basis of data from Mandarin and English. We examine the instantiation TIME PASSING IS MOTION. We point out that the source domains of MOTION and SPACE must be clearly differentiated. Once these two domains are differentiated, the inconsistencies in what is traditionally called the TIME IS MOTION metaphor disappear for both English and Chinese. We also demonstrate that where TIME IS A MOVING POINT OVER A LANDSCAPE, the ego is attached to this point and must be plural when the verb is an achievement verb of movement, but may be singular when the verb is an activity verb of movement. Lastly, we conclude that when TIME IS A MOVING ENTITY the orientation of the ego is a conceptual subsidiary that can be parameterized by different languages, as well as by language change and variation.

Key words: time, conceptual metaphor, linguistic metaphor, ego

1. Introduction

The main point of the cognitive linguistic paradigm is that we use our bodily based, concrete experiences to interpret and encode non-bodily based, abstract phenomena (Lakoff and Johnson 1980). When we do so, we are using conceptual metaphors. Conceptual metaphors are often so embedded in our language and ways of thinking about the world, that we do not consciously realize we are structuring the world in a particular way. For example, when speaking of the concept of time, people often refer to the concept of money, as in the following English and Chinese examples:

(1)   a.   He spent a lot of time in meetings.
      b.   She invested a lot of time in her students.

(2) a. *Ta weile jiesheng shijian, zhu yici fan jiu chi qi tian.*
         s/he because save   time   cook once rice then eat seven days
         'In order to save time, s/he cooked once a week and ate (the same thing)
         for seven days.'
     b. *Ta   wei   haizi   fuchu   shijian   tai   shao.*
         s/he for   children pay-out time   too   little
         'S/he spends too little time with his/her children.'

Money is a physical object, which allows humans to obtain other concrete objects that they desire. Money can be saved, spent, invested, etc., In addition, examples (1)-(2) also demonstrate that English and Chinese speakers can structure and understand the concept of time in terms of money. When time is structured in this way, the emphasis is on the preciousness of time.[1] Moreover, because the TIME IS MONEY metaphor maps similar concepts in Chinese and English, it can be said to be a cross-linguistically valid conceptual metaphor.

In what follows, we examine a conceptual metaphor that is argued by Yu (1998) to be not only a cross-linguistically valid metaphor, but a universal metaphor on the basis of data from Mandarin and English; namely, the TIME IS SPACE metaphor. We focus on a specific aspect of the TIME IS SPACE metaphor, namely the TIME IS MOTION THROUGH SPACE metaphor in English and then we present our analysis for the Mandarin Chinese data. We then compare previous analyses of the metaphor with our own, as well as contrast our analysis for Chinese with the English data.

Our analysis leads to the following theoretically significant generalizations: First, the source domains of MOTION and SPACE must be clearly differentiated. Once these two domains are differentiated, the inconsistencies in the TIME IS MOTION metaphor disappear. Second, within the domain of motion, there are two subcases that map to the target domain of time. In the first case, where TIME IS A MOVING ENTITY, we argue that the ego involved is facing the past, and not the future in Mandarin as Yu (1998) suggests. In the second case, we argue against the moving ego account adopted in previous studies of metaphoric mapping (e.g., Lakoff 1993, 1994, Lakoff and Johnson 1999, and Yu 1998). Instead we argue that the mapping is anchored as a point moving over a landscape. The ego only moves as a consequence of being necessarily attached to this moving reference point. This attached ego analysis offers a logical account of the following generalization that we discovered: that the ego must be plural when the event is an accomplishment, but may be singular when the event is an activity. We conclude that one universal metaphor of time has moving time as its primary conceptualization,

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[1] See Ahrens (2001) for a discussion on how to analyze the significance and emphasis of the source domain for the interpretation of the target domain.

but that the orientation of the ego is a conceptual subsidiary of this metaphor that can be parameterized by different languages, as well as by language change and variation.

2. TIME IS MOTION metaphor in English

Lakoff (1993, 1994) AND Lakoff and Johnson (1999) argue that there are two conceptualizations of time in English within the metaphor TIME PASSING IS MOTION. First, there is the TIME PASSING IS A MOVING OBJECT metaphor. Examples of this metaphor are given in (3):

(3) a. The time will come when you will see the error of your ways.
     b. Christmas will be here before you know it.
     c. I can't wait until the New Year comes.

In this metaphor, time moves towards the ego, the person who is the point of reference in relation to the event, as schematized in Figure 1:[2]

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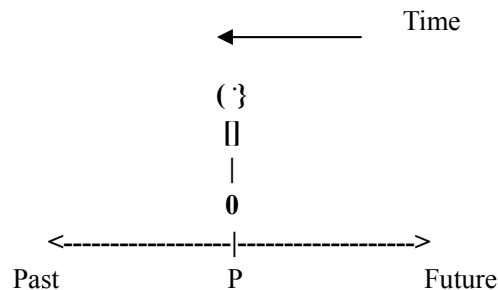
Figure 1: Time passing is motion of an object

There is another metaphor in English, the TIME PASSING IS MOTION OVER A LANDSCAPE metaphor, as shown in (4):

(4) a. As we go forward into the new millennium, let us not forget our past travails.
     b. We're approaching the end of the fiscal year.
     c. Sara always rushes headfirst into a new year, without stopping first to make any new year's resolutions.

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[2] Upper-case 'P' indicates the present point in time.

In this metaphor, the time passing is understood as the ego itself moving over a stationary landscape, passing units of time along the way, as illustrated in Figure 2:
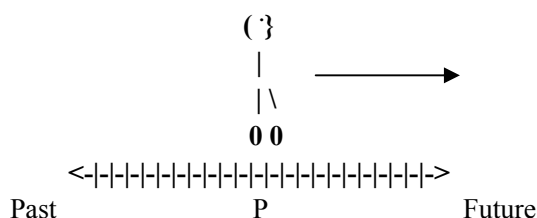
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Figure 2: Time passing is motion over a landscape

In both cases, the orientation of the ego is towards the future, as the examples in (5) show:

(5)   a.   We're looking forward to the arrival of Christmas.
       b.   We're looking forward to the end of the semester.

Yu (1998:92) argues that "the two special cases proposed by Lakoff (1990, 1993, 1994) for English ... account for the spatialization of time in Chinese." However, in what follows, we show that these two subcases of the TIME (PASSING) IS MOTION metaphor are not enough to account for the data in Mandarin Chinese.

Before we do so, however, we must first clarify the source domains in the English cases. According to Lakoff (1993) the conceptual metaphor of time has the following properties and inferences in English:[3]

The General Metaphor: TIME PASSING IS MOTION

Ontology: Time is understood in terms of things (that is, entities and locations) and motion.

Background condition: The present time is the same location as the canonical observer.[4]

Mapping: Times are things. The passing of time is motion. Future times are in front of the observer; past times are behind the observer. One thing is moving, the other is stationary; the stationary entity is the deictic center.

Entailment: Since motion is continuous and one-dimensional, the passage of time is continuous and one-dimensional.

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[3]   We have added the boldface.

[4]   Note that Lakoff's 'canonical observer' is what we are referring to as the 'ego'.

Special Case 1: TIME PASSING IS MOTION OF AN OBJECT
The observer is fixed; times are entities moving with respect to the observer.
Times are oriented with their fronts in the direction of motion.
Entailments: If time 2 follows time 1, then time 2 is in the future relative to
time 1. The time passing the observer is the present time. Time has a velocity
relative to the observer.

Special Case 2: TIME PASSING IS MOTION OVER A LANDSCAPE
Times are fixed locations; the observer is moving with respect to time.
Entailments: Time has extension, and can be measured. An extended time,
like a spatial area, may be conceived of as a bounded region.
(Lakoff 1993:216-218)

This analysis raises several issues. First, although we agree that the general metaphor is
TIME IS MOTION, the ontology contradicts the metaphor because it includes things
along with motion, as if they are separate cases, i.e., TIME IS AN ENTITY, and TIME
IS MOTION. It is possible that time is also understood as an entity,[5] but if so, that
would then be a different source domain from the cases discussed here where time is a
moving entity (i.e., example (3)).

Second, in the special cases, what is being moved is different.[6] In the first case,
time itself is moving. In the second case, the ego is moving; however, the source
domain 'motion over a landscape' does not entail or necessarily imply an ego. In fact, it
is ambiguous. This phrase could also mean that time is understood as motion *over a
landscape*, in contrast to the first case where time passing is motion, but not necessarily
over a landscape.

Clausner and Croft (1997) argue that metaphors that are not at correct level at
schematicity (i.e., too general or too narrow) will have gaps in their mappings. For
example, they point out that the metaphor IDEAS ARE BUILDINGS does not map
many concepts from the source domain to the target domain, such as plumbing and
wiring. They suggest that narrowing the source domain to THE STRUCTURAL
INTEGRITY OF THE BUILDING and having it map to the target domain of THE
CONVINCINGNESS OF THE ARGUMENT will have the desired effect of ruling out
concepts (such as plumbing) that cannot be mapped.

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[5] But see the discussion on schematicity below.
[6] Lakoff and Johnson (1980) and Lakoff (1994) have pointed out that the mappings between the
two cases are inconsistent. However, as Ahrens (1995) points out, inconsistencies in the
metaphor system should be reanalyzed to see if the source domain has not been correctly
specified.

Narrowing the source domain in the second special case to a moving ego limits the scope of possible mappings to the ego itself and excludes the possibility of rain, or other objects moving over the landscape. Shinohara (1999) notes this fact in his discussion of which motion verbs may be used in the TIME IS MOTION metaphor, suggesting that only time or the 'observer' (what we are referring to here as the ego) can move. This is, in fact, what we are suggesting as well. In the first subcase, time (understood as an object) is moving; and, in the second case, time (understood as an ego) is moving. In the former case, the object must be moving towards an ego; in the latter case, the ego must be moving over a landscape.

However, our formulation of the subcases also differs from Shinohara (1999b) because his two postulated submappings TIME IS A MOVING OBJECT and TIME IS A LINE ALONG WHICH OBSERVERS MOVE again run into the problem that there is no way to unify the notion of lines and moving objects in a general metaphor. The subcases that we have suggested for TIME PASSING IS MOTION, on the other hand, allow for the motion concept to be unified into moving entities or moving egos. This is not to say that time is not understood as a line along which observers move, but that if the target domain is limited to the concept of TIME PASSING as opposed to TIME itself, the similarities in the source domains of the two subcases become apparent. In addition, we shall also re-interpret Lakoff's background condition as a presupposition. We shall show below how this presupposition of the location of the ego plays a crucial role in the metaphorical mapping.

With the reformulation of the special subcases, a more precise ontology becomes apparent, as given in (6) for English:

(6)   The General Metaphor: TIME PASSING IS MOTION
       Ontology: The passage of time is understood in terms of entities
       (objects or egos) that move.
       Presupposition: The ego is situated at the present time.
       Special Case 1: Time passing is an object that moves towards an ego.
       Special Case 2: Time passing is an ego that moves across a landscape.

The mappings between the source and target domains for each of the special cases are given below in Table 1. We shall revise this table after discussing the Mandarin data, but it can serve as a starting point for comparison between the two languages.

Table 1: Mappings between source and target domains for TIME PASSING IS
          MOTION *(English)*

Source Domain	*Target Domain (Case 1)*	*Target Domain (Case 2)*
moving entity	time	ego
orientation of moving entity	towards ego	towards future
orientation of ego	towards future	towards future

Table 1 sets out what is being mapped in each case. In case 1, the moving entity in the source domain is mapped to time in the target domain. The orientation of time is towards the ego. For example (3) above, all the instances relate to a point in time for a particular ego (i.e., 'you' in (3a) and (3b) and 'I' in (3c)). The orientation of the ego is towards the future (example (5a)). In case 2, the moving entity is the ego who is oriented and moves towards a point in the future (examples (4) and (5b)).

In this section we have laid out a modified analysis of the TIME IS MOTION metaphor in English. The main advantages to our reanalysis are 1) that it more clearly defines the scope of the target domain, and 2) that we are thus able to specify what concepts can be mapped between the source and target domains. However, it does have a similar disadvantage to the proposal by Lakoff (1993, 1994) since the mappings between the subcases are inconsistent; that is, the moving entity is being mapped to time in the first case, but is mapped to the ego in the second case. The second case, as it stands now, only has the notion of time passing because the ego moves over the landscape.

In what follows, we shall analyze the same metaphor in Chinese to see if there is a universal conceptualization of time as motion, as Yu (1998) claims. Before we leave the discussion on English, however, we should like to mention two examples that do not fit into either the Lakovian model or our revised model of TIME PASSING IS MOTION, namely (7) and (8) below:[7]

(7)   In the preceding weeks, we have failed to meet the minimum sales goals that
       we set for ourselves.

(8)   In the following weeks, we need to make a sustained effort to reach our
       quarterly sales figures.

In (7), 'preceding' refers to the time prior to the time up to this point for the

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[7] This anomaly was first pointed out in Lakoff and Johnson 1980 (who noted that the issue was
     raised by C. Fillmore (p.c.)), but was not resolved or discussed in later work (i.e., Lakoff 1993,
     1994).

speaker and listeners. Note that this concept cannot map onto either of the TIME IS MOTION subcases that we have mentioned above, because if X precedes Y, it means that X starts before Y, which means that X must be in the future, given the orientation of the ego is towards the future Figure 3(a). But the intended meaning is that the events under discussion happened prior to this point in time Figure 3(b).
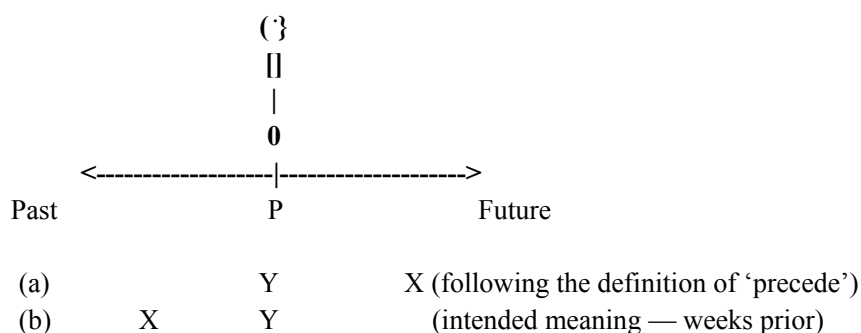
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        (a)                  Y          X (following the definition of 'precede')
        (b)          X       Y              (intended meaning — weeks prior)
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Figure 3: Anomaly with 'precede'

In (8), 'following' refers to the time after to this point in time for the speaker and listeners. Note that this concept also cannot map onto either of the TIME PASSING IS MOTION subcases that we have mentioned above, because if X follows Y, it means that X is behind Y, which means that X should be an event in the past, given the orientation of the ego is towards the future Figure 4(a). But the intended meaning is that the events under discussion will happen in the future relative to the present point in time Figure 4(b).
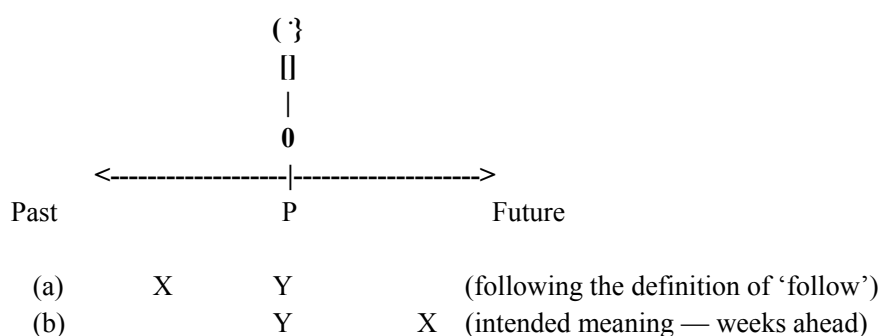
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     Past                    P            Future

        (a)          X       Y            (following the definition of 'follow')
        (b)                  Y       X   (intended meaning — weeks ahead)
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Figure 4: Anomaly with 'following'

We shall leave this puzzle and come back to it in the discussion section after we have analyzed the TIME PASSING IS MOTION metaphor in Mandarin. To foreshadow our findings, we shall argue that the orientation of the ego is a parameter that is language-specific, while the concept of time passing as a moving entity towards an ego is universal.

3. TIME PASSING IS MOTION metaphor in Chinese

In this section, we shall look at two subcases of the TIME PASSING IS MOTION metaphor in Mandarin Chinese that are similar in several respects to the English TIME PASSING IS MOTION metaphor.[8] We shall first propose our analysis for Mandarin and compare our proposals with previous analyses. In particular, we shall argue that the orientation of the ego is the TIME PASSING IS A MOVING ENTITY is facing towards the past, supporting C. Huang's (1981) and Alverson's (1994) analysis, but contrary to Yu's (1998) analysis. We shall also argue that TIME PASSING IS AN EGO MOVING OVER A LANDSCAPE is not accurate for Mandarin, and instead suggest that the source domain must be narrowed to a MOVING POINT that has an ego attached.[9]

3.1 TIME PASSING IS A MOVING ENTITY

One salient difference between English and Chinese concepts of time in the TIME PASSING IS MOTION metaphor is that in Chinese the ego is oriented towards the past (examples (9a-c)):

(9) a. *qian-nian   wo   dao   meiguo   qu   le.*
        front-year   I   to   America   go   ASP
        'I went to America two years ago (the year before last).'
     b. *wo dasuan   hou-nian   jiehun.*
        I   plan   back-year   marry
        'I plan to marry two years from now (the year after next).'

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8 The Mandarin Chinese discussed in this paper refers to the Mandarin that is currently spoken in Taiwan. Some classical Chinese examples are cited because they are more condensed in form and meaning, and they also represent the same set of expressions that are used today.

9 Tai (1989) also proposes that Mandarin has both subcases of the TIME IS MOTION metaphor. However, he does not delve into the orientation issue.

  c. *qian bu jian gu ren, hou bu jian lai zhe*
    front not see ancient people back not see come those
    'Before me, I can't see any predecessors; behind me I can't see any
    followers.'
    (Chen Zi-ang 'A Ballad written while ascending You-zhou platform'
    (cited in C. Huang 1981))

In the examples in (9), what is in front of the speaker is in the past, while what is in back of the speaker is in the future. However, even though the ego's orientation is different, time still approaches the ego from the future as it does in English (examples (10)-(13)).

  Example (10) gives the definition of time as something that comes to the present and goes to the past. Thus, time is approaching from the future.

  (10) *wang gu lai jin   weizhi zhou.*
      go   past come present call   time
      'Time is what comes to the present and goes to the past.'
      (Huai Nan Zi, Han Dynasty (cited in C. Huang 1981))

In (11), the speaker wants to enjoy the present, s/he doesn't want to wait for the future:

  (11) *wei le   dang ji-shi, he   neng dai lai   zi.*
      make merry should immediate how can   wait coming pronoun
      'One should enjoy the present; there is no cause to wait for the time yet to come.'
      (Nineteen Ancient Poems (cited in C. Huang 1981))

In (12), a particular point in time (i.e., Christmas) is moving towards the speaker:[10]

  (12) *shengdanjie kuai dao   le.*
      Christmas   quick arrive ASP
      'Christmas is almost here.'

  In (13) time is again coming towards the speaker. Note that the expressions in (13) are highly lexicalized.

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[10] Discussion of a possible ambiguous reading of this example can be found in Section 3.3.

(13) a. *jiang-lai*
        immediate come
        'future'
     b. *wei-lai*
        yet come
        'future'
     c. *lai-ri*
        coming day
        'future days'
     d. *lai-nian*
        coming year
        'future years'
        (cf. Yu 1998:104, ex. (61a-d))

The conceptualization of time as a moving entity is schematized in Figure 5:

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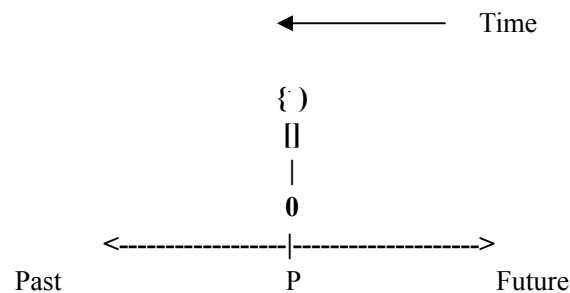
Figure 5: Time is a moving entity, ego is oriented towards the past

Thus, we propose that the first subcase of the TIME IS MOTION metaphor in Mandarin is where time is understood as a moving entity that approaches an ego who is facing the past.

3.2 TIME PASSING IS A MOVING POINT ON A LANDSCAPE

Can time passing in Mandarin also be conceived of as an ego moving and facing towards the future, as in English? Example (14) is often cited in support of the moving ego metaphor (cf. Huang 1977, Yu 1998):

(14) *women   yijing   jinru   le   ershiyi   shiji.*
     we   already enter LE twenty-first century
     'We have already entered the twenty-first century.'

In addition to example (14), there are other examples such as (15):[11]

(15) *women   kuai   dao   qimokao   le.*
     We   soon arrive term-final-exam LE
     'We're fast approaching finals.'

In example (14), the speakers have already attained a particular milestone on the landscape. In (15), the speakers have yet to attain a particular milestone. These examples indicate that milestones must be mapped from the source domain of landscape to the target domain of time. In the target domain, these milestones indicate a temporal landmark (i.e., a particular point in time). Figure 6 gives a preliminary conceptualization:

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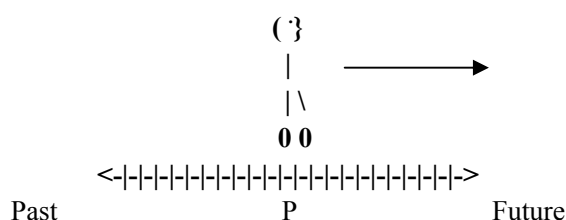
Figure 6: Time passing is an ego moving over a landscape
(preliminary conceptualization)

In Figure 6, the landscape over which the ego is moving is dotted with landmarks of time. The ego moves forward over the landscape, and in doing so passes these markers.

However, this explanation of the second subcase has the following problems. First, it still involves primarily an ego moving over a landscape. It is the movement of the ego that indicates the passage of time. As mentioned in Section 2, this means that this subcase is inconsistent with the first subcase where TIME IS A MOVING ENTITY.

Second, it is interesting to note that in almost all the instances given in Yu (1998), the ego can never be an individual.[12] The ego may refer to a country (16a), mankind

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[11] The acceptability of this sentence varies with speakers' ages. The majority of college-age speakers found this sentence acceptable, while speakers a generation older varied more as to its acceptability.

[12] Yu's (1998) data is based on data from the Mandarin Chinese that is presently spoken in Mainland China.

(16b), or a group of people (i.e., (14), (15), and (16c)).

(16) a. *Gongheguo zou guo le   sishiwu nian bu pingfan de*
republic   walk over PRT forty-five years not ordinary MOD
licheng.
journey
'The Republic has walked over an extraordinary journey of forty-five
years.' (Yu 1998:117, ex. (91))

b. *Renlei jijiang kua   ru   xin   shiji.*
Mankind soon   stride into new century
'Mankind will soon stride into the new century.'
(Yu 1998:119, ex. (96b))

c. *Tamen zheng mai   zhe   da   bu, ben   xiang*
they   PRT   stride PRT   big step run-quickly toward
canlan   de   mingtian.
splendid MOD   tomorrow
'With big strides, they are running toward the splendid tomorrow.'
(Yu 1998:119, ex. (96d))

In addition, it is not possible to replace the plural pronoun form with a singular form, as
(17a-b) shows (cf. (14)-(15)):

(17) a. **wo   yijing jinru le   ershiyi   shiji.*
I   already enter ASP   twenty-first century

b. **wo   kuai   dao   qimokao   le.*
I   soon   arrive term-final-exam LE

There is an apparent counter-example to the restriction on the ego as being a plural
entity (18).

(18) *Ta zhi yong le   shige yue   jiu   wancheng le*
he only use PRT ten   months already accomplish PERF
quannian renwu, tiqian   jinru xiayi nian.
whole-year task   ahead-of-time enter next   year
'He only used ten months to accomplish the whole year's task, having
entered next year ahead of time.' (Yu 1998:120, ex. (97))[13]

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[13] One reviewer pointed out that the nominalizer DE should be inserted between *quannian* and
renwu. While we agree with a reviewer on this point, there was no DE in the cited text.

In (18), what the speaker has entered is next year's workload, not the next year itself. *Xiayi nian* is a metonymic extension referring to the workload for next year.[14] Thus *ta* is not entering a new year; he is beginning his tasks for the next year earlier than expected.

However, there is a case where a singular form can be used as in (19) below:

(19) a. *wo   bu   zhidao   ta   zeme   guo   (tade)   rizi.*
       I   NEG   know   s/he   how   pass   his/her   day
       'I don't know how s/he passes his/her days.'

    b. *ta   mimihuhu   de   guo   (tade)   rizi.*
       s/he   daze   DE   pass   his/her   day
       'S/he passed his/her days in a dazed manner.'

    *ta   guo   (tade)   rizi
      s/he   pass   his/her   day

In (19) the ego is a single entity that is moving through time in an indeterminate manner.

Third, although it is the ego that must be moving over the landscape, the ego can never stop, as example (20a) demonstrates. Moreover, it is possible for someone to wish that time, when it is being understood as a moving entity, can stop, as in (20b).

(20) a. **tamen   xiwang   tamen   bu   hui   jinru/daoda   mingtian.*
      they   wish   they   NEG   can   enter/reach   tomorrow

    b. *Tamen   xiwang   mingtian   yongyuan   bu   hui   lai.*
      they   wish   tomorrow   forever   NEG   can   come
      'They wish tomorrow would never come.'

Thus we must ask ourselves: Why would the target domain not allow an ego to stop when it clearly could do so in the source domain? That is, a person walking over a landscape could stop along the way. Moreover, in the first subcase, the source to target domain mapping is straightforward. A moving entity can stop moving in the source domain and when the moving entity is mapped to time, it can also stop.

These three questions－why inconsistencies between the subcases exist, why the ego must be plural in all cases except for those involving the verb *guo* 'to pass', and why the ego cannot stop and be detached from the moving time point－compel us to

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[14] Another possible explanation is that the phrase *de renwu* 'MOD task' has been ellipsed from the latter part of the sentence (as in 'the next year of work').

reexamine the source domain. First, we observe that *guo* is an activity verb, while verbs such as *jinru* 'enter' (example (14)) and *dao* 'arrive' (example (15)) are achievement verbs. Moreover, examples such as (16)-(18), while not using achievement verbs, all have a time phrase that indicates a point in time when a certain state will be achieved. The achievement is demarcated by a temporal landmark which is a milestone in the landscape.

The above two facts lead us to suspect that the contrasts have something to do with how a temporal milestone is defined or perceived. This in turn leads us back to our presupposition that the ego must always be located in the present time. Given that the location of the ego must be at the present time-point, there is an alternative conceptualization available. We could conceptualize that it is the reference time-point that is moving while the ego moves by virtue of its location. This conceptualization will account for all the data that were originally thought to support a moving ego metaphor. It is also strongly supported by the fact that the ego cannot run ahead or fall behind a particular point in time in Mandarin. As the reference point of the present moves forward over the time landscape, the attached group ego moves with it. Example (21) demonstrates that the ego must be attached, and that it must move forward with time, as dictated by the presupposition and the metaphorical mapping of movement:

(21) *Shijian   bu   deng   ren.*
     time   not   wait   person
    'Time will wait for no person.' (cf. Yu 1998:126, ex. (106b))

Under this conceptualization of moving time-point with attached ego, we observe that since the landscape is part of the mapping, the observer must also be part of the mapping (because of the location presupposition). Hence, there cannot be conceptual incoherence between the landscape and the ego. In addition, temporal milestones such as the twenty-first century are conventionalized and shared by our culture(s). In other words, when the temporal milestone 'the twenty-first century' is used, it assumes a generic perceiver. Conceptual incoherence arises when the ego and the temporal landscape entail different perspectives. This accounts for the unacceptable individual subject with achievement events marked by generic endpoints (i.e., (17a & b)).

Our account predicts that when a specific interpretation of a typically general temporal landscape is available, then an individual is allowed. Such an example is found in both English and Chinese as supporting evidence of our account. Given a science fiction context of time-travel, the following sentence (in both English and Chinese) is perfectly acceptable.

(22) *Wo/Zhangsan   jijiang   jinru   shiwu   shiji.*
I/John   will   enter   fifteen   century
'I/John will be entering the fifteenth century.'

Note that the time-travel scenario alters the temporal landscape, because the fifteenth century (or other absolute time points) are now observed and defined for this particular individual.

This analysis also accounts for the collocation of activity verbs (typically 'pass' in English or *guo* 'to pass' in Chinese) with individual subjects. Notice that in these sentences the timescape is defined relative to the ego and the sentence focuses on the manner of the motion. For example, in (23) the definite article indicates a definite and specific timescape linked to the subject:

(23) He passed the time happily.

Moreover, the sentence is incomplete without the adjunct. One can substitute other adjuncts such 'in a drunken stupor' and 'in limbo', and so forth; but the adjunct can never be omitted. Similarly, when a detailed description of the time is given, it is usually anaphorically linked to the subject, as in (24a-b):

(24) a. S/he passed his/her time reading.
      b. S/he passed his/her high school years dating underachievers.

Example (19b) and (19c) show that the same observations hold for Chinese (excluding the definite article observation, because Chinese does not have a definite article). But, as in English, the sentence is incomplete without the adjunct (19c).[15] Moreover, the description of time may be anaphorically linked to the subject (19a-b).

To sum up the discussion above, we propose that the TIME PASSING IS A MOVING EGO metaphor be revised to TIME PASSING IS A MOVING POINT ON A LANDSCAPE as in Figure 7.

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[15] There is a possible reading in certain contrastive contexts with stress on *tade* 'his/her'.

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  0 0
  ●→→→→→ Time
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Past              P              Future
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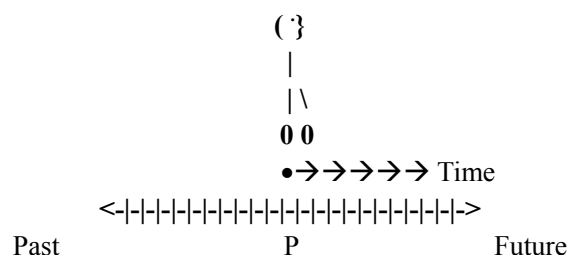
Figure 7: Time passing is a moving point on a landscape

The moving point in the source domain maps to the reference-time point in the target domain. Given the presupposition of the location of the ego, this metaphor entails that an ego moves with the time point. The landscape is a series of landmarks which are interpreted as temporal eventive milestones over which the reference point and attached ego move. This explanation has several advantages. First, the inconsistencies in the mappings between the subcases of TIME IS MOTION disappear. Now both subcases involve a moving entity. In the first case, the moving entity approaches an ego. In the second case, the moving entity (or point) has the ego attached. Second, it can account for why the ego is unable to stop as it moves forward in time. Since the ego is attached to the reference point, and this point must continually move forward, the ego must move forward with it.

3.3 A seemingly ambiguous interpretation

What is our basis for claiming that a point in time (i.e., 'Christmas') is moving towards an ego-referent as in (12) above (repeated here below as (25) for convenience) when in a straightforward spatial example like (26) 'Taipei' is not moving?[16]

    (25)   *shengdanjie*   *kuai*   *dao*   *le.*
            Christmas   quick   arrive   ASP
            'Christmas is almost here.'
    (26)   *Taibei*   *kuai*   *dao*   *le.*
            Taipei   quick   arrive   ASP
            'Taipei is coming up quickly.'

That is, why is (25) not treated as an instance of the TIME PASSING IS A MOVING POINT ON A LANDSCAPE metaphor where an unspecified agent would be moving

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[16] Thanks to a reviewer for bringing up this point.

across a landscape that included particular points in time?

We chose instead to analyze (25) as an example of TIME PASSING IS A MOVING ENTITY. Example (27) is an example in the spatial domain with a similar surface grammatical structure, where 'teacher' is a moving entity:

(27) *Laoshi   kuai   dao   le*.
     Teacher   quick   arrive   ASP
     'The teacher is almost here.'

We interpret (25) along the lines of (27), with 'Christmas' understood as a moving entity. In order to explain our analysis, we focus on the conceptualization of the arrival event.

In terms of conceptualization, an 'arriving' event involves a trajector with an extended path of motion towards a landmark, with the profiling on the trajector entering the vicinity of the relevant destination landmark (Langacker 1987:246). In (26), then, 'Taipei' cannot be the trajector because it does not involve a path of motion. It is instead a landmark. The trajector in the case of (26) is the speaker. The trajector/landmark distinction is clearly seen in (28) below, where either 'Zhangsan' or 'the train' is the profiled trajector moving towards the landmark of Taipei.

(28) *Zhangsan/Huoche   kuai   dao   Taibei   le.*
     Zhangsan/train   quick   arrive   Taipei   ASP
     'Zhangsan/The train is approaching Taipei.'

Turning to the metaphorical instance, however, it is impossible to have profiled trajector such as '*Zhangsan*' or '*Huoche*' as shown in (29):

(29) **Zhangsan/Huoche   kuai   dao   shengdanjie   le.*
     Zhangsan/train   quick   arrive   Christmas   ASP
     'Zhangsan/The train is approaching Christmas.'

As we discussed above, the TIME PASSING IS A MOVING POINT ON A LANDSCAPE metaphor involves only a non-referential generic ego that is attached to a reference point. It does not involve an agentive individual, such as *Zhangsan*, nor does it involve a movable, profilable entity such as a train.

Thus, the seemingly ambiguous interpretation of (25) is no longer ambiguous once it is shown that the trajector cannot be profiled or agentive. Instead, the only linguistically available interpretation is the one in which TIME PASSING IS

UNDERSTOOD AS A MOVING ENTITY. Moreover, the fact that this question of ambiguity can be answered also lends credence to our proposal, since in the original discussion of the two subcases there would be no way to distinguish between the ambiguous readings.

4. Discussion

We now turn to examining our proposal with other analyses and to comparing our two subcases with their English counterparts.

4.1 TIME PASSING IS A MOVING ENTITY

In section 3.1, we proposed that TIME PASSING IS A MOVING ENTITY for Mandarin. This metaphor entails time moving towards an ego that is fixed on the landscape (representing the present). This ego faces towards the past.

However, just as in the English case, where 'precede' and 'follow' entail that the ego would be facing in the 'wrong' direction (i.e., towards the past for English), there are a few cases in Chinese where time is a moving entity and the observer is facing the 'wrong' direction (i.e., the front) as in (30), and schematized in Figure 8:

(30) a. *zhan-wang   qian   cheng*
      look-out   front   route
      'look forwards to the future'
   b. *zhan-wang   wei   lai*
      look-up   yet   come
      'look forwards to the future'   (Yu 1998:100, ex. (53a-b))

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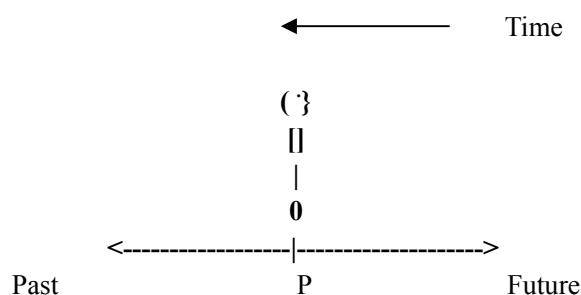
Figure 8: Time is a moving entity, ego is oriented towards the future

We propose that TIME PASSING IS A MOVING ENTITY metaphor is universal in its

mapping of the entity (i.e., from a moving entity to time passing) and in the orientation of the moving entity (i.e., towards the ego). However, the orientation of the ego is language-specific with Chinese preferring an orientation towards the past, and English preferring an orientation towards the future (Table 2).

Table 2: Universal mappings between source and target domains for TIME PASSING IS A MOVING ENTITY *(Chinese and English)*

Source Domain	*Target Domain (Case 1)*
moving entity	time
orientation of moving entity	towards ego
Preferred orientation of ego	towards past (Chinese)
	towards future (English)

In both languages, moreover, there can be exceptions to the preferred orientation. Thus, from both a cross-linguistic and intra-linguistic point of view, the orientation of the ego is not crucial to understanding the motivation underlying the TIME PASSING IS A MOVING ENTITY metaphor. However, from a cross-linguistic and intra-linguistic point of view, there is evidence to support the salient mappings of this metaphor; namely that time passing is an entity that moves towards an ego.

Previous work on metaphors of time in Mandarin, such as C. Huang (1981) and Alverson (1994), agrees with our assessment that the orientation of the ego is towards the past.[17] Indeed, these two authors do not mention the existence of examples such as (13), where the ego is facing towards the future.

However, Yu (1998) argues that in Mandarin, as in English, the ego faces the future, and time approaches the static ego from the future. Yu's (1998) account involves an idiosyncratic interpretation of the words *qian* 'front' and *hou* 'back' that are not supported by the evidence. In order to argue against the past to the front orientation, he postulates that time consists of a moving train with a series of cars, with the middle car being the present and the cars following the middle car (i.e., the back cars) representing the future, and the cars preceding the middle car (i.e., the front cars) representing the past. Yu concludes that *qian* and *hou* "respectively refer to car 1 and car 5 relative to car 3, which are all conceived of as entities composing a long moving object—the train,

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[17] S. Huang (1977) also looked at TIME IS MOTION metaphor in Mandarin. However, he conflated the two sub-cases into one metaphor. The Invariance Principle no longer allows such conflation since it requires that "Metaphorical mappings preserve the cognitive topology (that is, the image-schema structure) of the source domain, in a way consistent with the inherent structure of the target domain" (Lakoff 1990).

which has an intrinsic front and back of its own (p.107)." Several problems occur as a result of this explanation. First, bodily experience is rendered secondary to heuristical experience, which is counterintuitive to the foundation of conceptual metaphor research—that there is a bodily basis for metaphors. Second, the postulation of a train, or a long moving object divided into sections is anachronistic. Third, the coherence of the system breaks down because the point of reference is no longer the ego; it is the ego watching a particular point on a moving object. Fourth, the explanation of the train will not work for English, because the back cars will represent the past in English. That is, the train must be turned around in order for his explanation to work in English, which is similar to the parameter we have suggested for the orientation of the ego.[18]

In addition, from a historical point of view, data from the Archaic and Ancient Corpus of Chinese suggests that the moving time metaphor with the static ego facing the past is the traditional and primary conceptualization of time in Mandarin and the only one that has been diachronically consistent for over two thousand years. Furthermore, the time metaphors with the static ego facing the future are modern conceptualizations of time that have only recently entered the language (i.e., example (30a-b)). We also surmise that historical layering is involved in the English cases, as 'precede' is derived from the Latin *praecedere* [pre+cede (to go)] and 'follow' is derived from Old English *folgian* 'to follow.[19] Latin is another language where time is understood as a moving entity that approaches an ego that is facing towards the past (Alverson 1994).

Thus, we postulate that the reason no previous explanation has been adequate is because the historical layering of the metaphorical system has been ignored. We further postulate that inconsistent conceptualizations within a particular metaphor system can only exist if they are borrowed/created at different time periods. Under a historical interpretation it becomes apparent the reason Yu (1998) argues for a future-facing ego in Mandarin. He relies too heavily on a small subset of data taken from modern Mandarin and uses generalizations from this small subset to try to re-interpret and unify a more established generalization. Once data is taken from different time periods, the dichotomy between the ancient and modern orientation of the ego can be explained.

4.2 TIME PASSING IS A MOVING POINT OVER A LANDSCAPE metaphor

We postulated for the second subcase that passing time is being understood as a

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[18] Yu (1998) does not attempt to relate his train metaphor to the English data.

[19] Webster's Ninth New Collegiate Dictionary, 1987, Springfield, Merriam Webster Inc. Note that the conceptual mappings of time have not been examined for Old English.

moving point with an attached ego over a landscape. Our proposal has the following two advantages. First, the two subcases of TIME (PASSING) IS MOTION can have a unified entailment. In both TIME PASSING IS A MOVING ENTITY and TIME PASSING IS A MOVING POINT both involve the concept of movement. In the first case, the moving entity is moving towards a fixed ego that is facing the past. In the second case, a group ego is moving with a reference point over a landscape that is marked with time points. Thus, the main concepts associated with time passing is a moving entity's relationship to an ego, or a moving entity's relationship to the landscape. This entity was initially analyzed as an ego, but our revised analysis proposes that it is the present point in time which entails an attached ego. In both cases the passage of time requires motion of an entity.

Second, conceptualizing TIME PASSING IS A MOVING POINT as the second subcase has the advantage of unifying what Yu (1998) previously divided into two cases (i.e., Cases 2 and 3). Case 3 for Yu (1998) is TIME AS BOTH A MOVING OBJECT AND A STATIONARY LANDSCAPE. That is, he analyzes examples such as (21) as part of Case 3. This analysis, however, has the disadvantage of having a conceptually disparate source domain, which is to be avoided. In addition, the target domain is not simply TIME. It involves, in fact, two separate notions: TIME PASSING is the MOVING OBJECT, while POINTS IN TIME are part of the landscape. Once it is recognized that the examples of the plural ego moving through time *must* move with the present point in time, the two subcases can be viewed as one.

How does our analysis for the second subcase compare with English? First, we note that Lakoff and Turner (1989) also argue that the cases where time moves with the ego are a special subcase of their Case 2 (TIME IS MOTION OVER A LANDSCAPE). Yu writes:

> This is probably because this special case shares all the features of Case 2. That is, there exists a time-landscape over which the Observer travels from the past to the future. However, this case also has features that Case 2 does not have. That is, there is also a time-object moving with the traveling Observer in the same direction. This time-object determines the present time: wherever it is the present time. (Yu 1998:125)

Our point for the Mandarin cases is that in all instances where an ego is moving forward, it must be attached, or go with, the 'time object' or time point, and that this time point reflects the present time. Is it possible, then, that the English cases can also be re-analyzed as a time-object moving with the ego? Moreover, will it still involve a plural ego when there is the concept of achievement involved? We think it does and

we shall sketch out our reasoning below to consider whether English has similar restrictions on its subcase 2.

First, Lakoff (1994:57) gives ten examples of TIME IS MOTION OVER A LANDSCAPE (repeated here in example (31), with letters added):

(31) a. There's going to be trouble *down the road.*
      b. He stayed there for *ten* years.
      c. He stayed there for a *long* time.
      d. His stay in Russia *extended over* many years.
      e. He *passed* the time happily.
      f. He arrived *on* time.
      g. We're *coming up* on Christmas.
      h. We're getting *close to* Christmas.
      i. He'll have his degree *within* 2 years.
      j. I'll be there *in* a minute.

Examples (g) and (h) follow the entailments that we have laid out for TIME IS A MOVING POINT OVER A LANDSCAPE. The ego is plural, and must be attached to the time point. In addition, both involve an achievement point (i.e., 'Christmas'). This point can be viewed more clearly with the examples in (32) and (33):

(32) *I'm coming up/getting close to Christmas.

Example (32) demonstrates that the ego cannot be a singular individual. Example (33a), below, is an example of TIME PASSING IS A MOVING ENTITY and this entity is moving towards an ego, while (33b) is an example of TIME PASSING IS MOVING POINT OVER A LANDSCAPE.

(33) a. They wish Christmas would never come.
      b. ??They wish they would never get to/come up on Christmas.

In (33a), it is possible for the speakers to wish the delay of Christmas. S/he does so by expressing the hope that Christmas will not arrive (i.e., that point in time will stop moving towards her/him.) But it is impossible for the speakers to conceptualize that they will stop moving towards Christmas (33b). Thus, in English, as in Chinese, the plural ego is attached to a time point that continually moves forward without stopping.

Example (31e) is an interesting case, because it is similar to the Mandarin example of *guo* 'to pass' (cf. (19)). In addition, it has a similar mapping in that the ego does not

have to be a generic plural since there is no particular point where an achievement is reached. English can also use other motion verbs, as in (34), but a particular manner must be described as we discussed in Section 3.2:

(34) After the divorce, he moved through his days in a daze.

The other examples in (31), moreover, are not part of the TIME PASSING IS MOTION metaphor. Example (a) can be viewed as the LIFE IS A JOURNEY metaphor. Examples (b-d, f, i, j) are examples of TIME IS A LANDSCAPE. This metaphor involves a piece of a landscape being mapped to a particular period of time in a person's life. But it does not involve movement in either the source or target domains. It merely requires the notion of boundedness in the landscape.

This brings us back to the point that the source and target domains must be clearly defined in order to understand the conceptual mappings that take place. Yu (1998) and Chiu (1998) for example, start out with the concept that TIME IS UNDERSTOOD AS SPACE and from that starting point, then discuss instances involving movement.[20] Time is, in fact, understood as space, and both Yu (1998) and Chiu (1998) provide analyses regarding the use of 'up' and 'down', 'left' and 'right' and their relationship to understanding time. Moreover, time is also understood as a landscape, as we have just discussed above. But the passage of time is a different metaphor, one involving primarily motion. This motion may take place over a landscape (and it makes sense that it would, since time itself is understood as a landscape), but the salient mapping in the TIME PASSING IS MOTION cases is the presence of *movement*. The spatial notion, if it exists, as it must in Case 2, is secondary to the concept of movement. Thus, we propose that English and Chinese have similar mappings for subcase number two once other conceptual mappings (such as TIME IS A LANDSCAPE) are recognized as not being a part of the TIME PASSING IS MOTION metaphor.[21]

Lastly, a moving time conceptualization is preferred over a moving ego conceptualization because the target domain is the passage of time not the passage of an ego. Even if the two conceptualizations have the same descriptive predictions, the moving time conceptualization should be the null hypothesis. However, we have also

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[20] Chiu (1998) argues that 'time and self are moving' and 'time isn't moving and self is moving' is a better analysis of the data.

[21] In addition, we would like to point out that the mapping is not TIME PASSING IS A JOURNEY. First, the mapping is incomplete because the ego has no control over the journey. S/he cannot stop or change direction as it can do in the source domain of journey. Also having the mapping of time understood as a journey itself would be tautological because journeys take time.

514

shown in this paper that a moving time conceptualization is more powerful because it explains a wider range of data.

5. Conclusion

In sum, we have argued that the concept of time passing should be understood as motion. This analysis can account for both the data in Mandarin and English, with the only difference being that the orientation of the ego in the MOVING ENTITY metaphor is parameterized depending on the language. We have revised the general metaphor as in (35) below:

(35)   The General Metaphor: TIME PASSING IS MOTION
  Ontology: The passage of time is understood in terms of entities that move.
  Presupposition: The ego is situated at the present time.
  Special Case 1: Time passing is an object that moves towards an ego.
  Special Case 2: Time passing is a point (that a plural ego is attached to) that moves across a landscape.

The mappings between the source and target domains for these two cases are given below in Table 3.

Table 3: Mappings between source and target domains for TIME PASSING IS MOTION
  (English and Chinese)

Source Domain	*Target Domain (Case 1)*	*Target Domain (Case 2)*
moving entity	Time-object	Time-point with attached ego
orientation of moving entity	Towards ego	towards future
orientation of ego	Towards future (English) Towards past (Chinese)	towards future

Thus, in arguing for a universal conceptualization of time, TIME PASSING IS MOTION qualifies for both English and Chinese. The only variation involves the orientation of the ego in the first case, with Chinese preferring an orientation towards the past, and English preferring an orientation towards the future.

In arriving at this conclusion, we have argued against Yu's position that the TIME IS MOTION metaphor has an ego facing the future as a universal conceptualization of time, and demonstrated that the orientation is towards the past for Chinese and towards the future for English. Thus, the orientation of the ego is a conceptual subsidiary of the

TIME PASSING IS MOTION metaphor that can be parameterized by language change and variation.

We have also argued that the target domain of passing time should not be confused with the target domain of time itself. In addition, the source domain must be a unified and clear concept. When this fact is recognized, it becomes apparent that the entailments of the MOVING POINT OVER A LANDSCAPE source domain are that the ego is an attached entity that must move with the present time-point. Moreover, we propose that these entailments hold for both English and Chinese.

Recent psycholinguistic work on the TIME IS MOTION metaphor in English has demonstrated that the two cases in English occur with equal frequency (McGlone and Harding 1998, Gentner and Imai 1992, and Boroditsky and Ramscar, in press). However, the diachronic and synchronic data examined here for Mandarin suggest that Case 1 is the primary conceptualization of time for Mandarin speakers. Experiments are underway to test this prediction (Lai 2002).

Understanding time is not limited to motion, of course. Time is also understood as space, as money, as a commodity, among other mappings. Moreover, we use these different source domains in order to map different concepts about time. We suggest that focusing on narrow source domains will facilitate the understanding of these mappings (Ahrens 2001). We disagree with the idea that inconsistency is allowable within the mappings from a single source domain to a single target domain as Lakoff (1994:58) argues is necessary to understanding the TIME IS MOTION metaphor.

Of course, inconsistencies may exist among mappings from different source domains to the same target domain because different aspects of the target domain need to be mapped (Ahrens 1995). But inconsistencies should not exist within the same source domain (barring diachronic considerations as we discussed above). Conceptual metaphor analysis will only be able to contribute to a unified theory of knowledge (e.g., Wilson 1998) when it is recognized that inconsistencies in mappings from the same source domain reflect a gap in understanding. These gaps can be filled, we suggest, by narrowing the source and target domains under consideration so that there are clear conceptual distinctions among them, and of course, by carrying out further data collection and analysis.

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時間的經過是一種運動

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　　在此篇文章中我們將檢驗 "時間是空間" 這個隱喻。余 (1998) 在中英文語料的基礎上主張這是各語言通用的隱喻。我們研究側重於隱喻的一個特定層面：即 "時間的經過是一種運動"。我們主張來源領域中的 "運動" 及空間兩個領域必須清楚區分。這個區分可以解決過去 "時間是運動" 隱喻的傳統分析在中文和英文中不可避免的矛盾現象，我們同時也指出在 "時間是內風景中的動點" 這個特例中，說話者自我必須隨動點移動，且若動詞爲完成位移動詞時，自我必須是複數，而動詞爲動作動詞時則無此限制。最後，在 "時間是動體" 的特例中，自我的面向是一個從屬的概念，在不同語言中和語言變異時會有所不同。

關鍵詞：時間，概念隱喻，語言隱喻，自我