The more in front, the later: The role of positional terms in time metaphors

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1. Introduction

In Conceptual Metaphor Theory (Lakoff and Johnson, 1980, 1999), the relationship between concepts of space and time has been among the various topics most studied. It has been noticed that many languages have ways of expressing elapse of time using vocabulary of space. Systematic relations between spatial concepts, such as IN-FRONT or BEHIND, are reported to map onto temporal concepts, such as EARLIER or LATER, over and over again (Clark, 1973; Evans, 2003; Grady, 1997; Haspelmath, 1997; Lakoff and Johnson, 1980, 1999; Radden, 1996; Traugott, 1975, 1978 for English; Hill, 1978 for Hausa; Radden, 2006 for Hungarian; Vu, 1998 for Chinese; Shinohara, 1997, 2000, 2002a, 2005 for Japanese; Moore, 2000, 2006 for Wolof; Núñez and Sweetser, 2006 for Aymara, among many others). For instance, the phrase 'ahead of the deadline' employs the spatial term 'ahead' (IN-FRONT) and it means 'earlier than' the deadline. The phrase 'behind schedule' employs the spatial term 'behind', and it means 'later than' the schedule. Thus, in these cases, IN-FRONT maps onto EARLIER and BEHIND maps onto LATER. Although universality has not been observed in the patterns of mappings between these concepts, at least some cross-linguistic tendencies have been found.

Building upon the afore-mentioned past studies, the current paper focuses on a rather understudied phenomenon in this field, namely, the effect of event terms on the mapping pattern between IN-FRONT/BEHIND and EARLIER/LATER. Specifically, we will demonstrate that words denoting named members of temporal cycles ('positional terms' by Fillmore, 1997...
The conference dinner follows something') is another example. Other researchers like N
IN-FRONT or BEHIND concept. In SEQUENCE AS POSITION, Ego, or the experiencer's point-of-view, does not serve as a reference
two or more time points or events are compared in terms of an EARLIER/LATER relation and expressed using a word that has an
classifying TIME IS MOTION. He argues that the so-called Moving Time should be sub-classified into the deictic sub-type and the

moDhe, and demonstrate that they invoke the LATER IS IN-FRONT when used in conjunction with positional terms. Finally, in section 5 we will summarize our conclusions and mention future prospects.

2. The mappings between IN-FRONT/BEHIND and EARLIER/LATER in space-time metaphors

In this section, we will summarize previous studies on the issues directly related to the present study, that is, the,
mappings between IN-FRONT/BEHIND and EARLIER/LATER. In Conceptual Metaphor Theory, space-to-time mappings,
especially the TIME IS MOTION metaphor, have often been subcategorized on the basis of the moving object. Thus researchers have discussed two sub-metaphors, Moving Ego (e.g., ‘We are entering a new age’) and Moving Time (e.g.,
‘Christmas is approaching’, ‘Time passed by’).

Recently, Moore (2000, 2001, 2004, 2006) has pointed out that the deictic/non-deictic distinction is no less important in sub-
classifying TIME IS MOTION. He argues that the so-called Moving Time should be sub-classified into the deictic sub-type and the
non-deictic sub-type, and he labels the latter as SEQUENCE AS POSITION (ON A PATH). In this type of non-deictic time metaphor,
two or more time points or events are compared in terms of an EARLIER/LATER relation and expressed using a word that has an
IN-FRONT or BEHIND concept. In SEQUENCE AS POSITION, Ego, or the experiencer’s point-of-view, does not serve as a reference point;
rather, two temporal points are compared with regard to each other. For example, the sentence ‘Pat left before John called’ illustrates this type; ‘The conference dinner follows the plenary address’ (the verb ‘follow’ means ‘to come or go behind something’) is another example. Other researchers like Núñez and Sweetser (2006) support Moore’s argument and distinguish between Ego-Reference-Point and Time-Reference-Point time metaphors. The present study adopts the sub-classification of TIME IS MOTION into deictic and non-deictic subcategories and focuses exclusively on non-deictic time metaphors.

In SEQUENCE AS POSITION, two contrastive tendencies have been found with regard to mappings between IN-FRONT/ BEHIND and EARLIER/LATER concepts. In many languages, IN-FRONT tends to be mapped onto EARLIER and BEHIND onto LATER, as illustrated by the examples ‘Pat left before John called’ or ‘The conference dinner follows the plenary address’. These mappings between IN-FRONT/BEHIND and EARLIER/LATER have been attested in many languages (Clark, 1973; Evans, 2003; Grady, 1997; Lakoff and Johnson, 1980, 1999; Núñez et al., 2006; Radden, 1996, 2006; Traugott, 1975, 1978; Yu, 1998; Shinohara, 1997, 2000, 2002a, 2005; Moore, 2000, 2001, 2004, 2006; Núñez and Sweetser, 2006, to name some), which are summed up in (1).

(1) The general tendency in SEQUENCE AS POSITION:
EARLIER IS IN-FRONT, LATER IS BEHIND

Moore (2001, 2006) formulates this tendency in the form of an elaborated set of generalization, as shown in (2).

a. If an IN-FRONT or BEHIND expression-type means ‘earlier’ or ‘later’ and occurs freely without deictic
anchoring, IN-FRONT will correspond to ‘earlier’ and BEHIND will correspond to ‘later’.
b. Where there is an expression in a language that contradicts part (a) of the tendency, the more common, less
marked, way of saying ‘earlier’ or ‘later’ in that language will conform to tendency (a) if it employs an
IN-FRONT or BEHIND expression.

2 The first author’s previous studies on the uses of the Japanese IN-FRONT term saki (Shinohara, 2002a, 2005) have revealed that positional terms play at least some role concerning the LATER IS IN-FRONT mapping, though these studies were based on several examples composed by the author. The second author has noticed that the Marathi speaker’s construal of sequential events is similar to the uses of saki in terms of the LATER IS IN-FRONT mapping. Through discussion on these findings, we saw that further exploration of this issue would contribute to the development of a more elaborated and powerful model of mappings between IN-FRONT/BEHIND and EARLIER/LATER. Thus, we have selected these two languages to explore this issue.
(2a) expresses the same idea with (1), which is about the non-deictic subtype of Moving Time, viz. SEQUENCE AS POSITION. When an expression is deictically anchored as in ‘Ahead of us lay ten days of intensive training’ or ‘The accident is behind you now, so try to forget it’, it is not an example of SEQUENCE AS POSITION. In case of SEQUENCE AS POSITION, (2a) is the default mapping pattern. There can be exceptions to (2a), where the EARLIER IS IN-FRONT/LATER IS BEHIND mappings do not hold (see (3) and (4) in the next section), but (2b) states that such expressions are marked cases in the language and there will be other, less marked ways of expressing EARLIER/LATER relations in that language. (2b) predicts that such unmarked expressions will conform to (2a). The present paper technically builds upon Moore’s formulation (2), but it may suffice to refer to (1) in order to follow most of our argument.

Before proceeding further, a note of clarification is in order. Núñez and Sweetser (2006) report that in Aymara, an Amerindian language spoken in Andean highlands, the space around Ego’s body is divided into front and back, and these spaces are systematically mapped onto time in the opposite way as the pattern exhibited in most languages discussed in the literature. In Aymara, the space in front of Ego is mapped onto the Past while the space behind Ego is mapped onto the Future. This construal of time is unusual compared with that in many languages reported hitherto (in most languages we know, the Future is in front of the speaker and the Past is behind the speaker). However, Aymara also has Time-Reference-Point (non-deictic) metaphors, which are in conformity with the general tendency in (1): the planting cycle has a ‘front’ (the start) and a ‘back’ (the end), so the ‘front planting’ is before other plantings in the same cycle (Núñez and Sweetser, 2006:417). These data indicate that Aymara has the SEQUENCE AS POSITION subtype of time metaphor and its mapping patterns are EARLIER IS IN-FRONT/LATER IS BEHIND. Thus, the case of Aymara is not an exception to tendency (1) as far as non-deictic time expressions are concerned. The examples we are going to present in what follows are real exceptions to tendency (1), and we will discuss how they are related to ‘positional terms’, which we will introduce in the next section.

3. Positional terms invoking LATER IS IN-FRONT, EARLIER IS BEHIND

In addition to his generalization (2), Moore (2000:163–165) presents significant insights concerning the mappings between IN-FRONT/BEHIND and EARLIER/LATER. He found some expressions that look like examples of SEQUENCE AS POSITION but have a LATER IS IN-FRONT mapping. These examples seem to counter the generalization (2a). A close look at such examples reveals, as Moore points out, the interesting fact that they tend to include a particular kind of temporal term as reference point. They are what Fillmore calls ‘positional terms’:

Some repeating sequences have named members, as, for example, “summer”/“autumn”/“winter”/“spring”, the sequence “Sunday”/“Monday”, etc., and two that I haven’t mentioned yet, namely, the months of the year and the numbered dates of months. The named members of cycles I will refer to as positional terms. (Fillmore, 1997 [1971]:50)

To the examples Fillmore gives in this quotation, Moore (2000:164) adds the times of the day and the names of festivals or holidays that are sequenced and shared in a culture such as New Year’s Day, Martin Luther King Jr.’s birthday, Valentine’s Day, Easter, Halloween, Thanksgiving, and Christmas, since all of such terms are sequenced members of temporal cycles.

Moore argues that these kinds of terms have a special function among temporal metaphors. When a positional term serves as a reference point in an expression of time, as in ‘in front of Monday’, such a phrase sometimes, if not always, has a meaning that conforms to the LATER IS IN-FRONT mapping. The following examples (3) from Hausa (a language of the Chadic group, which is of the Afro-Asiatic family, spoken in and around Nigeria by approximately 8 million speakers (Asher and Moseley, 1994)), and (4) from Spanish are testimony to this fact.

(3) ranar Talata tana gaba da ranar Littinin
‘Tuesday is in front of Monday.’ (gaba ‘front’)
(Quoted by Moore, 2000:90, from Hill, 1978:536)

(4) Del quince para atras hay boletos, pero del quince para adelante, no hay.
‘From the fifteenth back there are tickets [available], but from the fifteenth forward there aren’t.’
(There are tickets available before the fifteenth but not after.)
(Moore, 2000:91)

These examples include positional terms such as ‘Monday’, ‘Tuesday’, or ‘fifteenth’. In (3), Tuesday is said to be ‘in front of Monday’. Since Tuesday is later than Monday, a later time is expressed as being in front of an earlier time. Thus, LATER IS IN-FRONT holds in this case. The same mapping is attested by (4).

3 We further add events that usually occur in a fixed sequence, such as events in a business transaction scenario (the day of order, the day of payment, the day of shipment, etc.) and events in the hospital scenario (the day of hospitalization, the day of surgery operation, the day of discharge, etc.) and the like. The events in these scenarios are structured in typical orders, and interlocutors are supposed to share such knowledge. Moreover, these events can occur over and over again in their typical orders. Therefore, these are event terms that have fixed positions in a sequence, and in this sense, share the same important property with positional terms.
As summarized in (1), the general mapping pattern in the case of SEQUENCE AS POSITION metaphor is EARLIER IS IN-FRONT/LATER IS BEHIND. Examples (3) and (4) do not conform to the generalization in (1), but rather exhibit the opposite mapping pattern, viz. LATER IS IN-FRONT/EARLIER IS BEHIND. These examples conform to the SEQUENCE AS POSITION metaphor in that they simply compare EARLIER/LATER relations between two temporal points and do not contain Ego as a reference point.

Moore observes that such examples are exceptional. He does not develop further arguments on the role of positional terms in his later work (Moore, 2006), nor do other researchers thus far working on this issue. The LATER IS IN-FRONT/EARLIER IS BEHIND mapping in the case of positional terms does not seem to be a dominant phenomenon cross-linguistically. Nonetheless, the role of positional terms in some languages is not trivial. In the next section we will examine examples from Japanese and Marathi and demonstrate that although they run counter to Moore’s generalization in (2), they can be accounted for by Moore’s earlier observation (2000:163–165) about positional terms.

4. The effect of positional terms in Japanese and Marathi

4.1. Japanese saki

In this section, we will show that the Japanese IN-FRONT term saki exhibits the mapping pattern LATER IS IN-FRONT productively when it is accompanied by a positional term. It is neither idiomatic nor dialectal. The productivity of this type of mapping and its close relation to positional terms as instantiated by saki suggest that this mapping is worth investigating.

In space-to-time mapping based on the observer’s viewpoint, FUTURE IS IN-FRONT/PAST IS BEHIND basically holds in Japanese. Thus, kono saki (in front of this) means ‘the future ahead’. Japanese has the TIME IS MOTION metaphor, including all the three sub-types, Moving Ego, Moving Time, and SEQUENCE AS POSITION. In all these subtypes, IN–FRONT/BEHIND terms are mapped onto EARLIER/LATER concepts basically in the same way as in English and many other languages that have been studied (Shinohara, 1997, 2000, 2002a). Thus, the mapping pattern in (1) generally holds for Japanese.

The most common IN-FRONT word used for these mappings is mae (etymologically ‘in the direction of the eyes’ (Shinmura, 1998)), which is the least marked term denoting FRONT or IN-FRONT. Mae can refer to the front part of a person or other life form or objects, and its extended spatial uses include ‘the space in front of something’ and ‘the space in the direction of motion’. A more marked IN-FRONT term saki, which means ‘a tip or a sharpened end sticking out of an object’, is also very frequently used for TIME IS MOTION. Extended spatial uses of saki include ‘the space near the tip of a narrow object’, ‘the space in the direction of motion (of an object in any shape)’. Within the relative frame of reference (Levett, 1996; Levinson, 1996, 2003:38–50), that is, when neither the intrinsic shape of the reference object nor the geographical environment is involved in determining the reference frame, saki is used dominantly with an in-tandem frame (Clark, 1973, also referred to as ‘translation’ by Levinson, 2003:84–89, or ‘ego-aligned strategy’ by Moore, 2000), where an object situated farther than the reference object from the observer’s viewpoint is regarded as being IN-FRONT of the reference object. In contrast, mae is used dominantly with a mirror-image frame of reference (Clark, 1973, also referred to as ‘reflection’ by Levinson, 2003:84–89, or ‘ego-opposed strategy’ by Moore, 2000), where an object between the observer and the reference object is regarded as being IN-FRONT of the reference object.

In comparing two events in terms of an EARLIER/LATER relation, saki can be used either for the EARLIER IS IN-FRONT or for the LATER IS IN-FRONT construal of time. When it is accompanied by a positional term as a reference point and by proper particles, it may allow both patterns of construal. On the other hand, when its reference point is indicated by a term referring to an event that does not imply an intrinsically fixed temporal order, only EARLIER IS IN-FRONT is allowed (LATER IS IN-FRONT is blocked). The following examples (5)–(7) illustrate the point.

(5) Obon-yori saki-ni yasumi-o torimasu.
   Bon.Festival-than front-Loc off.day-Acc take

‘(I) will take some days off before [after] the Bon Festival.’

The example (5) includes a positional term Obon. This sentence is ambiguous with regard to the EARLIER/LATER relation: it allows both the ‘earlier than’ interpretation and the ‘later than’ interpretation. That is, Obon-yori saki can be understood as either ‘before Obon’ or ‘after Obon’. Other positional terms behave in the same way: e.g., season terms like haru (spring),

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4 As a method, we employed a usual practice in theoretical linguistics including semantics, i.e., composing example sentences that highlight the points to be tested and consulting native speakers for their acceptability. The examples in this section were checked by fifty native speakers of Japanese. They all agreed with the judgment of the example sentences. These examples are representative cases and the informants all agreed that the acceptable sentence patterns can be productively used by replacing the temporal word with other positional terms. In order to supplement the composed examples with actually used data, we also conducted a small-scale web-based search.

5 Moore takes this term from Fillmore (1982:41) (personal communication via Email on January 14th, 2009).

6 Sentence subjects are often omitted in Japanese.

7 Obon is the name of a Buddhist festival in Japan (we usually put an honorific affix o- to bon, which is a Buddhist word). It takes place in the middle of August, or in some regions, in the middle of July. Many people take days off during this period to return to their hometown to see their families and the spirits of their ancestors that are believed to come back home during this period. In many regions all over Japan, traditional dance parties are held in town squares or parks. The word Obon is considered a positional term because it is situated in the fixed order of events in the Japanese calendar.
natsu (summer), aki (autumn), and fuyu (winter); events or festivals like Kurisumasu (Christmas), Shoogatsu (New Year), Seejin-no hi (Coming of Age Day), Gooruden Wiiku (Golden Week, consecutive holidays in May), Tanabata (the Star Festival), and so forth; as well as days of the week and months. Including these terms, all the other positional terms also behave like Obon.

On the other hand, saki means only ‘earlier than’ when used with non-positional terms, or terms implying no fixed temporal order, as illustrated by (6).

\[
(6) \text{madofuki-}Yori \text{ saki-}Ni \text{ furosooji-o shimasu.}
\]
\[
\text{window.wiping-than front-Loc bath.cleaning-Acc do}
\]
\[
'(I) will clean the bathroom before [*after*] wiping the windows.'
\]

Cleaning the bathroom and wiping the windows may take place in any sequence; that is, we can clean the bathroom before wiping the windows or, in reverse, we might wipe the windows before cleaning the bathroom. They do not constitute a fixed sequence. Therefore, these are not included among positional terms. These non-positional terms, when used with saki, do not allow the ‘later than’ interpretation as (6) shows. The same is true for other non-positional events like drawing a picture or making a phone call. Therefore, the contrast seen between the temporal interpretations of (5) and (6) should be attributed to whether they include a positional term as the reference point of saki or not. These observations indicate that in Japanese, if a positional term is used as the reference point of the IN-FRONT word saki, it can trigger the LATER IS IN-FRONT construal, but an event term implying no fixed temporal order cannot do this.

Such LATER IS IN-FRONT uses of saki with positional terms are not felt as exceptional cases in Japanese. To confirm this, we conducted a survey by means of a Google search using saki and various positional terms as key words. They included the four season terms and some of the event terms such as Kurisumasu, which are listed above. Though the search was limited to only some of the positional terms; more than 1000 examples of the use of saki were found that conform to LATER IS IN-FRONT. These expressions contained a variety of particles (e.g., X-no saki-ni; X-kara saki-ni; X-yori saki-ni; and instead of -ni; particles like -ga [Nominative]; -no [Genitive]; -mo [also] can appear in this form). Moreover, such uses are not idiomatic. Positional terms can structurally replace each other in such uses without changing the interpretation of the EARLIER/LATER relation (that is, they are in a paradigmatic relation with X in the above form). The Google search was not restricted geographically and samples did not include dialectal expressions. These facts supplement the native speakers’ intuition that saki accompanied by a positional term can productively mean ‘later than’.

As we mentioned earlier, we include dates in the business transaction scenario and dates of the hospital scenario in the set of positional terms in this study because these are event terms with fixed typical positions in a sequence of events. Some examples we obtained from the web included such terms, and they meant a LATER IS IN-FRONT relation. We also found examples including numbers like centuries, years in B.C., C.E., or ages. These temporal segments are not supposed to occur repeatedly (at least in a linear perception of time), but it is clear that they are ‘ordered’. Therefore, in this study, we also treat such terms as an extension of positional terms. To generalize, shared knowledge of ordered events may trigger the LATER IS IN-FRONT interpretation of saki, and positional terms as originally defined by Fillmore, i.e., sequential segments in a repeated cycle of time, may be prototypical cases of the terms that have this function.\(^8\)

We have argued so far that in Japanese, if saki is accompanied by a positional term as the reference point, it can trigger the LATER IS IN-FRONT construal. This is not to say that EARLIER IS IN-FRONT construal is totally rejected. In general, both interpretations are possible in such cases if the particle -yori is used. Some other particles, however, seem to restrict the interpretation to only LATER IS IN-FRONT. In other words, some particles block the EARLIER IS IN-FRONT construal. One such example is -kara (from). Consider the example in (7).

\[
(7) \text{Obon-}Kara \text{ saki-}Ni \text{ yasumi-o torimasu.}
\]
\[
\text{Bon.Festival-from front-Loc off.day-Acc take}
\]
\[
'(I) will take some days off after [*before*] the Bon Festival.'
\]

In (7), the EARLIER IS IN-FRONT reading is completely blocked, and only the LATER IS IN-FRONT reading remains. Moreover, a non-positional term plus -kara results in an unacceptable expression. See (8).

\[
(8) \text{madofuki-}Kara \text{ saki-}Ni \text{ furosooji-o shimasu.}
\]
\[
\text{window.wiping-from front-Loc bath.cleaning-Acc do}
\]
\[
'(I) will clean the bathroom after [*before*] wiping the windows.'
\]

Thus, when the particle -kara is combined with a positional term and saki, it allows only the ‘later than’ interpretation as in (7), and it rejects non-positional terms completely as in (8). The same is true for other non-positional events like drawing a picture or making a phone call. The interaction between a (non-)positional term and -yori/-kara is summarized in (9).

\(^8\) We thank Kevin Moore for discussing this point with us in personal communication.
(9) a. positional term-yori saki-ni: EARLIER, LATER
b. positional term-kara saki-ni: - - - - -, LATER
c. non-positional term-yori saki-ni: EARLIER, - - - -
d. non-positional term-kara saki-ni: *

From the distribution shown in (9), it can be seen that the choice of the temporal interpretation is jointly determined by the kind of reference term (positional or non-positional) and the kind of particle. Some other choices of particles allow only ‘later than’ interpretation. The Topic particle -wa, as in X-kara [-yori] saki-wa, and the Genitive particle -no, as in X-no saki-ni [-wa], block the ‘earlier than’ interpretation. The semantic interaction between saki and these particles may be at work here, which remains to be investigated. It can at least be concluded here that positional terms can trigger the LATER IS IN-FRONT interpretation of saki.

One more comment on the use of saki is in order here. Since the basic spatial use of saki is ‘in-tandem’ (or ‘translation’/‘ego-aligned’), it may appear that this basic use is the main factor that determines the LATER IS IN-FRONT interpretation of saki. However, this is not so. If the mapping of in-tandem spatial use onto time is the only trigger for LATER IS IN-FRONT, we cannot explain why terms implying arbitrary temporal relations do not allow this mapping. It is clear that positional terms trigger the LATER IS IN-FRONT interpretation of saki as we have demonstrated in this section. It becomes even clearer when we consider examples from Marathi, which we will discuss next.

4.2. Marathi puDhe

Another example of the role that positional terms play in triggering the LATER IS IN-FRONT construal comes from Marathi. One Marathi IN-FRONT term, puDhe, exhibits the mapping pattern LATER IS IN-FRONT when it is accompanied by a positional term, while it cannot do so when accompanied by non-positional terms.10

In Marathi, the FUTURE IS IN-FRONT/PAST IS BEHIND mapping pattern basically holds, as in Japanese. Thus, yaa puDhe (in front of this) means ‘the future ahead’. Marathi has TIME IS MOTION, where Moving Ego and Ego-centered Moving Time subtypes are at least attested.11 With these two subtypes, IN-FRONT/BEHIND terms are systematically mapped onto EARLIER/LATER concepts, as do English and many other languages (Pardeshi and Shinohara, 2007; Shinohara and Pardeshi, 2007).

The least marked IN-FRONT/BEHIND terms used for TIME IS MOTION are puDhe and maage respectively (though Marathi has another word for the concept IN-FRONT, samor, its basic meaning seems to be ‘opposite’ and it is not used in TIME metaphors). In a relative frame of reference (Levinson, 2003:84–89) for spatial relations, puDhe and maage conform to the ‘reflection’ sub-type or ‘mirror-image’ (Clark, 1973; Hill, 1978, 1982) as in English, where reference objects are construed to be facing the viewer. For example, tyaa dzhaaar Daad-(byaa)-puDhe cenDu aahe (there is a ball in front of the tree) means that the ball is between the speaker and the tree; tyaa dzhaaar Daad-(byaa)-maage cenDu aahe (there is a ball behind the tree) means that the ball is on the farther side of the tree from the speaker’s viewpoint. In dynamic spatial contexts, Marathi speakers very commonly use puDhe and maage according to the direction of Ego’s motion. For example, on a train/bus ride, puDhtsa station (front station) means ‘next station’ and maagtsa station (back station) means ‘previous station’.

In comparing two events in terms of their EARLIER/LATER relationship, puDhe and maage reveal completely opposite mappings from those in English and in many languages reported hitherto when accompanied by positional terms. On the other hand, when accompanied by non-positional terms, puDhe and maage result in unacceptable expressions, i.e., they cannot be used at all. Examples (10) and (11) illustrate this.

(10) a. GaNapati-wisarjanaa-cyaa-puDh-cyaa diwashii bombspoT dzaaallaa Ganapati-immersion-of-front-of day bomb blast became ‘There was a bomb blast on the day after Ganesh immersion day.’

b. GaNapati-wisarjanaa-cyaa-maag-cyaa diwashii bombspoT dzaaallaa Ganapati-immersion-of-back-of day bomb blast became ‘There was a bomb blast on the day before Ganesh immersion day.’

9 It has been observed elsewhere that -kara cannot accompany a temporal term in the Ego-centered Moving Time metaphor (Shinohara, 2002b). This may be because -kara implies detachment of a moving object from the source: time cannot both move and be detached from the flow of time itself. Thus, we cannot say Kurisumasu-ga juunigatsu-kara chikazuite kuru (Christmas is approaching from December).
10 As we did for Japanese, we employed the method of composing example sentences and asking native speakers for judgment. Acceptability of the examples in this section was checked by thirty-three native speakers of Marathi.
11 The following example (i) instantiates Moving Ego and (ii) instantiates Ego-centered Moving Time in Marathi.

(i) aapan bhaaratiya aataa jaagatikikaNaa-cyaa yugaa-t pravesh kar-at aahot we Indians now globalization-of era-in entry do-CP are ‘We Indians are entering the era of globalization now.’

(ii) ganapatiutsawa puDh-cyaa mahinyaa-war ye-un Theplaa aahot Ganesh festival front-of month-on come-CP stop be ‘Ganesh festival is going to come in a month’s time.’
In (10a), puDhe (front) means ‘after’ and in (10b), maage (back) means ‘before’. Therefore, LATER IS IN-FRONT/EARLIER IS BEHIND holds in these examples. The reference point of the IN-FRONT/BEHIND terms in (10) is a positional term, that is, GaNapati-wisarjan (Ganesh immersion day, which is a Hindu festival in Hindu calendar). Contrast (10) with the following example (11), which uses non-positional terms as reference points for the IN-FRONT/BEHIND terms.

(11) *kapaDe dhutalyaa-puDhe/dhuNyaa-maage aaghol karin

The sequential order of bathing and washing clothes is not fixed in Marathi culture, so these are non-positional terms. The example in (11) is completely unacceptable. Neither puDhe nor maage can mean ‘before’ or ‘after’. This suggests that non-positional terms block puDhe and maage from expressing EARLIER/LATER relations. The same kind of blocking occurs when other non-positional events like drawing a picture or making a phone call replace bathing or washing clothes in (11). Instead, the purely temporal postpositions aadhi (before) and nantar (after) can be used in these cases. By replacing puDhe with nantar or maage with aadhi, (11) becomes perfectly acceptable.

The contrast between the temporal interpretations of (10) and (11) should be attributed to whether they include a positional term as a reference point or not, just as in the Japanese use of saki. These observations indicate that in Marathi, if a positional term is used as the reference point for the IN-FRONT/BEHIND term, it can trigger the LATER IS IN-FRONT/EARLIER IS BEHIND construal, but a non-positional term cannot do this.

The LATER IS IN-FRONT/EARLIER IS BEHIND mapping cannot be attributed to the basic spatial reference frame since the basic uses of puDhe and maage in a relative frame of reference are based on the mirror-image type just like English. That is, spatially, these words are used in the same way as the English ‘in front’ and ‘behind’. Nevertheless, they shift to LATER IS IN-FRONT/EARLIER IS BEHIND in the temporal domain only when positional terms accompany them. This constitutes strong evidence that it is positional terms that determine the possibility of the occurrence of the LATER IS IN-FRONT/EARLIER IS BEHIND construal in Marathi.

In addition to these typical TIME IS MOTION expressions, there is another piece of supplementary evidence for the LATER IS IN-FRONT/EARLIER IS BEHIND construal triggered by sequential terms that accompany puDhe and maage. They are expressions that involve linearly ordered entities such as songs on a CD or chapters in a book. Consider examples (12) and (13).

(12) sahaawyaa gaaNyaa-cyaa puDh [maaga]-tsa gaaNa koNata?
sixth song-of front [back]-of N song.N which one ‘What is the song in front [back] of the sixth one?’

The answer to example (12) should be that the song in front of the sixth one is the ‘seventh’ one while the song behind the sixth is the ‘fifth’ one. Thus, the LATER IS IN-FRONT/EARLIER IS BEHIND mappings hold. Note that it is not necessary that the music is being played at the time of utterance. The same patterns are seen for chapters in a book as demonstrated by example (13).

(13) tsawathyaa-prakaraNaa-cyaa puuDh [maaga]-ca prakaraNaan koNata?
fourth-chapter-of front [back]-of chapters which one ‘Which is the chapter in front [back] of the fourth one?’

The reply to (13) should be that the chapter in front of the fourth one is the ‘fifth’ one while the one behind the fourth is the ‘third’ one. Again, the LATER IS IN-FRONT/EARLIER IS BEHIND mappings hold. It is not necessary that the book is being read at the time of utterance.

In both cases discussed above, the cue seems to be the numbers. The words referring to the reference points of the IN-FRONT/BEHIND terms in these examples of songs and books are ordinal numbers like ‘fourth’ or ‘sixth’. Indeed, they are not what Fillmore calls ‘positional terms’ because numbers, themselves, are not temporal terms. However, these kinds of words, which clearly indicate a fixed ‘order’ or ‘sequence’, seem to have the same effect as positional terms. These terms can trigger the LATER IS IN-FRONT/EARLIER IS BEHIND construal when used with puDhe and maage in Marathi.

Another point to be noted is that these usages of puDhe and maage seem to conform to their dynamic spatial usages including Ego’s motion. As previously mentioned, puDhe and maage mean ‘next’ and ‘previous’ respectively in situations like a train/bus ride. In such cases, the direction of Ego’s motion is strongly implied: it may be the front/back direction of Ego’s

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12 Out of 33 native speakers who checked the sentences, 23 speakers accepted (10a) and 19 speakers accepted (10b). Others judged these examples as somewhat unnatural expressions; they prefer to use purely temporal terms nantar (after) or aadhi (before) in these contexts. However, when we asked them “Assuming that the Ganesh immersion day was on September 6th last year and if someone uttered the sentences (10a) and (10b), what is the date of the bomb blast?” all the 33 speakers answered “September 7th” for (10a) and “September 5th” for (10b).

13 None of the 33 informants judged (11) as acceptable.

14 All the 33 informants accepted the sentence with nantar and aadhi.

15 All the 33 informants agreed with these interpretations for (12) and (13).
motion that structures the sequential concepts of ‘next’ (in front) and ‘previous’ (behind). If this is the case, (12) and (13) may include both the spatial perspective and temporal metaphor: they seem to be cases where spatial and temporal experiences co-occur or correlate (Grady, 1999; Grady and Johnson, 1997). It is interesting that puDhe and maage take this perspective when Ego’s motion is implied. This concerns our discussion in next section.

4.3. Discussion

As we summarized in (1), the general tendency of the mappings in the SEQUENCE AS POSITION subtype is EARLIER IS IN-FRONT/LATER IS BEHIND. In sections 4.1 and 4.2, we have seen that Japanese saki and Marathi puDhe/maage apparently go against this generalization when accompanied by a positional term. We would, then, need to explain why they exhibit the opposite mapping patterns from the general tendency. In doing so, we have to pay attention to experiential motivations or experiential groundings (Lakoff and Johnson, 1980; Grady, 1997, 1999; Grady and Johnson, 1997; Moore, 2000), which have been central to the Conceptual Metaphor Theory. To explain experiential motivations of exceptions to the general tendency (1), we would like to take Moore’s (2000) idea that such exceptions may not be examples of SEQUENCE AS POSITION but they may actually be examples of Moving Ego.

Moore’s argument is that, in exceptions to the general mapping tendency, the use of positional terms can invoke the Moving Ego metaphor. Moving Ego provides both consistent mapping patterns and experiential motivations for these cases. In Moving Ego, space further in front is metaphorically conceptualized as further in the Future and the space behind Ego is conceptualized as the past. Thus, events further in front are in the later future, while we can think of or remember the past by ‘looking back’. The mappings involved here are, therefore, LATER IS IN-FRONT/EARLIER IS BEHIND. These mappings are in conformity with what we have seen about Japanese saki and Marathi puDhe/maage. On the other hand, the mapping patterns of SEQUENCE AS POSITION, i.e., EARLIER IS IN-FRONT/LATER IS BEHIND, do not conform to these examples. Therefore, SEQUENCE AS POSITION is weaker in explaining the uses of saki and puDhe/maage.

In addition, Moving Ego has experiential motivations or ‘grounding scenarios’ (Moore, 2000) that can explain the mapping patterns LATER IS IN-FRONT/EARLIER IS BEHIND as seen in the uses of saki and puDhe/maage. (14) describes the grounding scenarios for Moving Ego.

(14) **Grounding scenario for Moving Ego** (Moore, 2000:81):

Ego is moving forward. She expects to arrive at some place ahead of her. After a while she arrives and her expectation is realized. Then she continues on her way and the place is behind her.

Target-Domain scenario of Moving Ego:

Ego imagines a time in the future and expects it to occur. After a while it occurs and her expectation is realized. After that, the time is in the past.

Thus, the mappings in Moving Ego are motivated by the spatial experiences. On the other hand, if the LATER IS IN-FRONT/EARLIER IS BEHIND uses of saki and puDhe/maage are to be regarded as examples of SEQUENCE AS POSITION, which is deixis-neutral, we cannot explain the mapping patterns in terms of experiential motivations. Thus, it is more advantageous to consider these usages as instantiations of Moving Ego than of SEQUENCE AS POSITION. In Moore’s (2000:165) explanation of exceptional cases found in Hausa, Spanish, and Wolof, “it is the forward movement involved in the grounding scenario of the Moving Ego metaphor that provides the FRONT/BACK directionality that Ego imposes on positional terms … via the Ego-Aligned strategy”. (The Ego-Aligned strategy corresponds to what Clark, 1973 and Hill, 1978, 1982 call ‘in tandem,’ where objects in front of the viewer are construed as if they look in the same direction as the viewer.) This explanation can also be applied to Japanese and Marathi cases.

A problem remains, however: how can we identify expressions without overt indication of Ego’s motion as instantiations of Moving Ego? The examples of saki and puDhe/maage that we have discussed do not include any linguistic units denoting Ego’s motion. Therefore, we cannot directly identify them as instantiations of Moving Ego. If we put more emphasis on this point than on explaining experiential groundings for conceptual metaphors, we might argue that these expressions are purely sequential, and that there could be two different SEQUENCE AS POSITION metaphors that have completely opposite mappings.

Although there are both merits and a problem to regard the cases of saki and puDhe/maage as instantiating Moving Ego, the merits should be emphasized if we consider the importance of experiential groundings in the Conceptual Metaphor Theory. If we admit two different SEQUENCE AS POSITION metaphors as mentioned above, we cannot find a proper grounding scenario for the cases in question. Nor can we explain why positional terms can trigger LATER IS IN-FRONT/EARLIER IS BEHIND in these cases. It does not seem to be very convincing to claim that these mappings and their relation to positional terms are totally arbitrary.

We should also note that the dynamic uses of puDhe/maage in the spatial frame are compatible with the Moving Ego construal because they strongly imply Ego’s motion, and they thus provide examples including both spatial and temporal interpretations. The existence of cases that evoke both source and target frames is an important support for correlation metaphors (Grady, 1999; Grady and Johnson, 1997). In this sense too, it is more advantageous to regard the cases we have discussed as instantiating Moving Ego, rather than SEQUENCE AS POSITION.
In short, these considerations lead us to regard the mapping patterns LATER IS IN-FRONT/EARLIER IS BEHIND in the uses of \textit{saki} and \textit{puDhe/maage} to be instances of Moving Ego. We support Moore's (2000) idea that such exceptions to the general tendency (2), which include positional terms, are actually examples of Moving Ego.

5. Conclusion and future considerations

As shown in section 4, the behaviors of the Japanese IN-FRONT word \textit{saki} and Marathi IN-FRONT/BEHIND words \textit{puDhe/maage} provide substantial support for the claim that a positional term can trigger LATER IS IN-FRONT/EARLIER IS BEHIND. This phenomenon is more widespread and productive than previously noticed and reported. We would like to formulate this into the following generalization:

\begin{equation}
\text{When an IN-FRONT/BEHIND term entails a temporal concept of sequence and its temporal reference point is referred to by the use of a positional term, the LATER IS IN-FRONT/EARLIER IS BEHIND construal can be triggered.}
\end{equation}

Moore (2000:164) has previously suggested the idea included in (15) and the idea that such a construal may be due to the evocation of the Moving Ego frame, but he regarded it as peripheral and has not explored it further. This paper demonstrates that this is not a trivial phenomenon. It deserves more attention and in-depth investigation.

Before closing the paper, we would like to point out two issues that emerge from our study. One is that the effect of the trigger of positional terms varies cross-linguistically. In Marathi, the use of a positional term with \textit{puDhe} and \textit{maage} inevitably implies the LATER IS IN-FRONT/EARLIER IS BEHIND construal. In Japanese, the use of a positional term with \textit{saki} can be ambiguous between LATER IS IN-FRONT and EARLIER IS IN-FRONT (the ambiguity disappears if certain particles are used), but LATER IS IN-FRONT is productive and not exceptional or idiomatic. In Spanish, there are a few examples of positional terms triggering LATER IS IN-FRONT, but they seem to be quite limited and not very productive. Thus, the effect of a positional term may vary from one language to another: in some languages, positional terms may have no effect on the shift of the EARLIER/LATER construal; in some languages their effect is partial; in other languages they play a very strong role in the shift of the EARLIER/LATER construal. This cross-linguistic variation merits further scrutiny.

Another issue that merits further study is that of potential absence of a certain type or types of time metaphors in languages. If the exceptions to the tendency (1) that we have discussed are examples of Moving Ego, then it follows that in Marathi, IN-FRONT/BEHIND terms are not used for SEQUENCE AS POSITION (though they can be used for Moving Ego). Then, it further follows that Marathi does not have SEQUENCE AS POSITION at all. Although a lot is known about the presence of various subtypes of the TIME IS MOTION metaphor in many languages, very little is known about the absence of particular subtypes of the TIME IS MOTION metaphor in a language. We hope that future research will shed light on these interesting but unexplored areas in subsequent research.

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