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## PROTOTYPE SEMANTICS: A CASE STUDY OF TE K-/IK- CONSTRUCTIONS IN JAPANESE

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### 1. Introduction

Many directional and aspectual concepts in Japanese are encoded by verb serialization, for example, VerbStem.te + Verb.<sup>1</sup> Two basic motion verbs, K- and IK-, corresponding to COME and GO in English, respectively, participate in this serialization as second verbs. Such constructions are referred to as *TE-constructions* and abbreviated to TE-Cs in this study.<sup>2</sup>

There have been many worthy attempts to provide a comprehensive account of K- and IK- in the TE-Cs (Morita, 1968; Takahashi, 1969; Yoshikawa, 1971; Makiuchi, 1972; Endo, 1982; Gray, 1983; Teramura, 1984; Hamada, 1989, *inter alia*). However, most of them are taxonomies of usages, and explanations they offer are satisfying only to those who already know TE-Cs. Yoshikawa (1971), for example, classifies the TE-Cs as follows.

- (1) When physical motion is involved, K- indicates motion toward the speaker and IK- motion away from the speaker. The first verb indicates:
  - a. Action before coming/going.
  - b. Means for coming/going.
  - c. Circumstance of coming/going.
- When no physical motion is involved:
  - d. K- and IK- indicate a process of emergence and disappearance, respectively.
  - e. K- and IK- indicate a process of change.
  - f. K- indicates the inception of a process.
  - g. K- indicates continuation up to the reference time.
  - h. IK- indicates continuation from the reference time.

This type of list gives those who are not familiar with the TE-Cs a spurious impression that these usages are independent of each other, and thus must be learned separately. Takahashi (1975) reports that children about age 4 have already acquired all TE-Cs, except (1g,h), which are learned later than age 6.<sup>3</sup> Explanations regarding the order of acquisition are prone to be *ad hoc* within previous frameworks.

The problems with structurally identical and yet semantically distinct clusters of construction have been recognized by empirical linguists for some time. Fillmore (1975, 1982a), for example, urges a need for semantic theories which are based on the idea of *prototype*. In prototype semantics, the meaning of a linguistic form is represented through the presentation of a prototype rather than through a statement of the conditions necessary and sufficient for the form to be used appropriately. Prototype semantics can provide not only how each TE-C is related to the canonical meaning of K-/IK- but it can also predict that those TE-Cs in which the canonical meaning of K-/IK- is preserved are easier to learn than those in which the meaning is deviant.

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Another problem with previous analyses is that no attempt has been made to explain the interaction between K-/IK- and the grammatical tense of the TE-Cs. For example, the same situation can be expressed by K- and IK-, if the former is in the past tense, and the latter in the non-past tense in (2a), but only if both are in the non-past tense in (2b). This phenomenon cannot be explained without referring to underlying metaphors as was done by Lakoff (1987) regarding THERE-constructions.<sup>4</sup>

- (2) a. danro no hi ga kiete [kita/iku].  
 hearth GEN fire NOM vanish came/go  
 'The fire in the hearth is about to go out.'
- b. dandan samuku natte [kuru/iku].  
 gradually cold become come/go  
 'It will become cold gradually.'

In the framework of prototype semantics, the present study categorizes the TE-Cs according to underlying metaphors and illustrates how each TE-C is related to the central TE-C, in which K- and IK- indicate both motion and direction in physical space as they do as main predicates. It is demonstrated that no adequate description of TE-Cs can be achieved without recourse to the concept of prototype and metaphorical mapping.

The organization of this study is as follows. In Section 2, the canonical uses of K- and IK- are described; in Section 3, the characteristics of the verbs to which *te* is attached (TE-verb hereafter) are discussed using the framework of Vendler (1957). Section 4 summarizes Lakoff's analysis of THERE-constructions. The balance, Sections 5–9, categorize the TE-Cs and illustrate their characteristics in comparison with THERE-constructions.

## 2. Verbs K- and IK-

### 2.1. Concepts involved in K- and IK-

The relationships between meaning of K- and IK- as main verbs, which is referred to as the canonical meaning of K- and IK-, and those in the TE-Cs are not arbitrary, although they are not obvious in such taxonomies as (1). Generally, lexical items indicate a bundle of concepts, some of which may be more central than others. In a prototypical usage, all salient concepts are present, while in non-typical usages, only some of them are.<sup>5</sup> Therefore, in order to see the relationships between the canonical meaning of K- and IK- and their meaning in TE-Cs, it is essential to identify the concepts typically encoded in the former.

Five concepts—motion, direction, duration, origin, and goal—are associated with K- and IK-.

- (A) Motion: the entity moves.
- (B) Direction: the motion is either toward or not toward the speaker.
- (C) Duration: the motion is understood to have duration in the time domain.
- (D) Origin: the location of the entity before the motion takes place.
- (E) Goal: the location of the entity when the motion is completed.

(A) and (B) are inherent properties of lexical items K- and IK-, and (D) and (E) can be expressed by post-positional phrases. However, (C) is not part of K-/IK-, but rather is part of the frames or scenarios that these verbs evoke. As lexical items, K- and IK- are punctual achievement verbs which cannot be used to focus on the duration of a motion. Therefore, even though coming and going obviously take some time, the grammatical means to express the progressive aspect (VerbStem.te + i-) does not work with these verbs.

- (3) a. *zyoon wa ima hon o yonde iru.*  
 Joan TOP now book ACC read stay  
 'Joan is reading a book now.'
- b. *\*zyoon wa ima gakkoo ni itte iru.*  
 Joan TOP now school to go stay  
 'Joan is on the way to school now.'

The concept of duration is called for when these verbs are accompanied by both origin and goal NPs.

- (4) *zyoon wa tookyoo kara kyotoo ni [kita/itta].*  
 Joan TOP Tokyo from Kyoto to came/went  
 'Joan [came/went] to Kyoto from Tokyo.'

If the mover is not the speaker, time adverbials are associated with the arrival rather than the departure with K-, whereas they are associated with the departure with IK-.

- (5) *san zi ni, zyoon wa tookyoo kara kyotoo ni [kita/itta].*  
 3 o'clock at Joan TOP Tokyo from Kyoto to came/went  
 'Lit. At 3 o'clock, Joan [came/went] to Kyoto from Tokyo. (Joan arrived at Kyoto at 3 with K-, and she left Tokyo at 3 with IK-.)'

This phenomenon indicates that the time adverbials are speaker-oriented, that is, they refer to the time when the mover comes to or goes away from the speaker. In other words, IK- places a focus on the inception of motion (leaving for a destination somewhere), and K- on the achievement (arriving at somewhere) if the mover is not the speaker. If the mover is the speaker, time adverbials typically indicate the arrival time with both verbs.

While K- and IK- canonically indicate motion and direction and imply duration, these verbs in TE-Cs indicate motion and direction, only direction, or direction and duration. Therefore, direction is considered as the most central involvement in the meaning of K- and IK- in TE-Cs.

## 2.2. Canonical Usages of K- and IK-

K- indicates the motion toward the speaker or toward the place considered to be the speaker's territory, for example, his/her own home or place of employment. IK-, on the other hand, indicates the motion of any orientation, except the one toward the speaker or his/her territory. When the mover is the speaker, K- is selected if s/he is at the goal, and IK- if s/he is at the origin. Unlike English COME/GO, the deictic center of K-/IK- is restricted to the speaker.<sup>6</sup> For instance, if the mover is the speaker and the goal is the hearer's house, IK- — but not K- — is the natural selection, whereas if the mover is someone other than the speaker and the goal is the speaker's house, K-, but not IK-, will be selected (asterisks indicate unacceptability).<sup>7</sup>

- (6) a. *anata no uti ni [iku/\*kuru].*  
 you GEN house to go/come  
 '(I)'ll [go/\*come] to your house.'
- b. *zyoon wa watasi no uti ni [kuru/\*iku].*  
 Joan TOP 1st.sg GEN house to come/go  
 'Joan will [come/\*go] to my house.'

Even if the goal is neither the location of the speaker nor his/her territory, K- may nonetheless be selected when the origin of the mover is farther than the goal, that is, the motion is toward the speaker. For example, although *ano* 'that (distal)' in (7a) indicates that the store is not in the speaker's vicinity, K- may be chosen if Joan's origin of the motion is farther away than the store. In (7b), in contrast, the use of K- is anomalous

because, given the habitual interpretation indicated by the non-past tense and the adverb *yoku* 'often', the origin of the motion (next door) is closer to the speaker than is the goal.

- (7) a. *zyoon wa yoku ano mise ni [kuru/iku].*  
 Joan TOP often that store to come/go  
 'Joan [comes/goes] to that store frequently.'
- b. *tonari no zyoon wa yoku ano mise ni [\*kuru/iku].*  
 next door GEN Joan TOP often that store to come/go  
 'My next-door neighbor, Joan, [\*comes/goes] to that store frequently.'

If the speaker's location at the speech time is distinct from the goal which is his/her territory, there will be two potential deictic centers.

- (8) *ima kara sugu boku no uti ni [kite/itte] kudasai.* (Kuno 1978)  
 now from soon 1st.sg GEN house to come/go please do  
 'Please [come/go] to my house now.'

The K- sentence in (8) is appropriate if both the speaker and hearer move to the goal. The IK- sentence, on the other hand, is appropriate if only the hearer moves to the goal, that is, the speaker will not be at the goal when the hearer arrives there.

Kuno (1978) explains this phenomenon in terms of empathy. The first person is higher than the second or third person in the empathy hierarchy of speech-act participants (a revised version of the one in Kuno and Kaburaki, 1975)—which is abbreviated as E(1st person) > E(2nd/3rd person). He posits an empathy constraint for K- as E(person at goal) > E(person at origin) and that for IK- as E(person at origin) ≥ E(person at goal). In other words, the person at the goal must be higher in the empathy hierarchy than the mover in sentences with K-, whereas the person at the goal cannot be higher than the person at the origin in sentences with IK-.

Kuno claims that in (8) with K-, if only the hearer moves, the result will be E(person at goal = hearer.2nd.person) > E(person at origin = speaker.1st.person), violating the empathy hierarchy. If, on the other hand, the speaker is also a mover, the result will be E(person at goal = speaker at goal) > E(person at origin = speaker at speech time). Kuno stipulates the hierarchy of speech-act participants in such a way that the speaker at the goal is higher in the hierarchy than the speaker at the origin.

However, if this were the case, (9) with K-, also from Kuno (1978), would have to be accepted. Suppose that the sentence is felicitously uttered, the speaker will be at the goal when the move is completed: E(person at goal = speaker at goal) > E(person at origin = speaker at speech time).

- (9) *ima kara sugu boku no uti ni [\*kimasyoo/ikimasyoo].*  
 now from soon 1st.sg GEN house to come/go(Hortative)  
 'Let's [\*come/go] to my house now.'

The fact that K- is unacceptable in (9) demonstrates that Kuno's analysis is inadequate.

His explanation regarding IK- in (8), that is, the speaker does not accompany the hearer, is also dubious. He claims that if the speaker moves, the result will be E(person at origin = hearer.2nd.person) ≥ E(person at goal = speaker.1st.person), violating the empathy hierarchy. This explanation is absurd because the hearer is supposed to be a mover regardless of the speaker's accompaniment because the sentence is intended to make a request. Therefore, the equation should be E(persons at origin = speaker and hearer) ≥ E(persons at goal = speaker and hearer)—which agrees with the empathy hierarchy, and thus IK- must be acceptable even when both the speaker and hearer move to the goal in his analysis.

A more plausible explanation would be as follows. In (8), the speaker requests that the hearer go to the speaker's house. IK- is selected because the motion is away from the speaker at the speech time. Whether or not the speaker accompanies the hearer is immaterial. It is the case with K- which requires some explanation.

As Ooe (1975) points out, if the speaker presents himself/herself as being at the goal at the mover's intended arrival time, K- may be selected even though the speaker is not at the goal at the speech time.<sup>8</sup>

- (10) zyon ga konban roku zi ni soko ni [kimasu/ikimasu] node, watasi  
 John NOM tonight 6 o'clock at there to come/go(Polite) because I  
 ga saki ni itte matte imasu. (Ooe, 1975)  
 NOM ahead go will be waiting(Polite)  
 'John is [coming/going] there at six tonight, so I am going there first and will wait (for him).'

In (8), K- may be selected because the speaker intends to be at the goal when the hearer arrives there, and in order for the speaker to do so, s/he must get the goal before or at the same time as the time of the hearer's arrival.

In (9), K- is unacceptable because the sentence asserts that the speaker is a mover, and the motion is away from his/her location at the speech time. Regarding the deictic center, the speaker's location at the speech time has precedence over his/her location when the motion is completed, that is, at the goal—which is contrary to Kuno's claim. Thus, K- in (9) is inappropriate.

Similar to COME and GO, K- is selected when the moving object comes into sight, and IK- when the object goes out of sight without a particular goal. These uses motivate the TE-Cs indicating emergence and disappearance in Yoshikawa's taxonomy.

- (11) a. a, kita.  
 oh came  
 'Oh, (here s/he) comes.'  
 b. aaa, itte-simatta.  
 well is-gone  
 'Well, (s/he) is gone.'

Notice that (11a) is in the past tense even though the moving entity has not reached the speaker. The past tense indicates that the entity has entered the speaker's sight. While K- by itself can predicate the subject, IK- must be accompanied by *simaw-*, indicating the perfective aspect, when it is used to express disappearance of the entity referred to by the subject.

### 2.3. Metaphorical extensions of K- and IK-

While K- is frequently used metaphorically, that is, predicating non-physical subjects, metaphorical extensions of IK- are rather limited in ordinary conversation. Similar to the case of IK- indicating disappearance, *simaw-* is needed when the subject of IK- refers to a non-physical entity. In (12), (a) is a poetic expression, and (b) is unacceptable; (c), (d), and (e), however, are quite ordinary.

- (12) a. haru ga iku.  
 spring NOM go  
 'Lit. Spring is going away. (Spring is passing.)'  
 b. \*senzai itiguu no kooki ga itta.  
 1000 years once GEN chance NOM went  
 'The chance of a lifetime has gone.'

- c. senzai itiguu no kooki ga itte-simatta.  
 1000 years once GEN chance NOM has gone  
 'The chance of a lifetime has gone.'
- d. haru ga kita.  
 spring NOM came  
 'Spring has come.'
- e. senzai itiguu no kooki ga kita.  
 1000 years once GEN chance NOM came  
 'The chance of a lifetime has come.'

IK- by itself can predicate a non-physical subject only when the subject refers to or stands metonymically for some information (the *conduit metaphor* in Reddy, 1979) and the goal is not the speaker.

- (13) moo sugu [renraku/denwa] ga ikimasu.  
 soon notice/telephone NOM go(Polite)  
 'Lit. [Notice/Telephone] will go (to you) soon. (You'll receive [notice/a phone call] soon.)'

#### 2.4. Interpretation of tense markers

As the general interpretation of tense, the past indicates that the event has taken place prior to the speech time, and the non-past indicates either that the event will take place after the speech time, or that it is habitual. However, when the moving entity is visible for both interlocutors, these rules may not be observed.

- (14) a. a, kotti ni [kuru/kita].  
 oh this direction to come/came  
 'Oh, (here [it/he/she]) comes toward us.'
- b. a, migi ni [iku/itta].  
 oh right to go/went  
 'Oh, [it/he/she] goes to rightward.'

The past tense in (14a) and the non-past tense in (14b) are deviant from the general interpretation of tense markers because the moving entity has not reached the goal in the former, and it has already started to move in the latter.

In Japanese, when the speaker has recognized the location of some object in the immediate past, the past tense is more likely to be used than the non-past tense as in (15).

- (15) a, koko ni atta.  
 oh here LOC existed  
 'Lit. Oh, it was here. (Oh, here (it) is.)'

The past tense in (14a) is to be understood as an instance of this usage.

As for (14b), the non-past tense may be used to indicate a process in progress when the referred entity is visible for both interlocutors as illustrated in the following example.

- (16) a, tokeru, tokeru.  
 oh melt melt  
 'Oh, it's melting.'

### 3. Aktionsart of TE-verbs

TE-verbs in the TE-Cs must indicate some change of state; this condition excludes stative verbs, unless stative verbs can express temporal states. Activities, accomplishments, and achievements in Vendler's (1957) classification can appear as TE-verbs. Similar to states, activities do not have any inherent terminal point, for example, *aruk*- 'walk', *mi*- 'watch', and *tabe*- 'eat', although a terminal point can be added by 'quantification', for example,

*iti zikan aruku* ‘walk for one hour’ and *ringo o mittu taberu* ‘eat three apples’. In contrast, accomplishments and achievements have inherent terminal points. Examples of the former are *ake-* ‘open (transitive)’, *kowas-* ‘break (transitive)’ and *tate-* ‘build’; and for the latter, *ak-* ‘open (intransitive)’, *koware-* ‘break (intransitive)’, and *tuk-* ‘arrive’. Achievements are inchoative in nature, whereas accomplishments involve some causality, that is, doing something causes a change of state (Dowty, 1979).

If adding *i-* ‘stay’ to the verb in question, which is the grammatical means to express the progressive/perfect aspect of activity and accomplishment verbs, results in ungrammaticality, the verb is stative, whereas if adding *i-* indicates only perfect, the verb is an achievement.<sup>9</sup> For example,

- dekite* ‘be able (state)’ + *iru* exist (non-past) → ungrammatical  
*tabete* ‘eat (activity)’ + *iru* → ‘is eating/has eaten’  
*akete* ‘open (transitive, accomplishment)’ + *iru* → ‘is opening/has opened’  
*tuite* ‘arrive (achievement)’ + *iru* → ‘has arrived’.

As in English, achievements in Japanese cannot co-occur with verbs which serve as terminative quantifiers, for example, *oe-*, *owar-*, *yam-* ‘finish/end’.

Most achievements that occur in the TE-Cs are durative achievements, which are categorized as achievements by Dowty, but not by Vendler. If  $\phi$  is an achievement predicate, then if  $\phi(x)$  is true at an interval  $I$ , then  $\phi(x)$  is false at all subintervals of  $I$ . For example, *hi ga kieru* ‘fire goes out’ is not true until the fire has gone out. However, the event need not be instantaneous. If the fire becomes weaker, one may anticipate its going out and say *hi ga kie hazimeta* ‘The fire began to go out’. Those achievement verbs which can co-occur with *hazime-* ‘begin’ are referred to as *durative achievements*, for example, *araware-* ‘appear’, *hutor-* ‘become fat’, *kie-* ‘vanish’, *ukab-* ‘spring’, and *wakar-* ‘understand’.

Non-durative achievements, for example, *sin-* ‘die’ and *tuk-* ‘arrive’, may co-occur with *hazime-*; however, such verbs must take a plural subject to indicate that the event type is repeated.

- (17) a. [tomodati/\*zyoon]      ga      sini    hazimeta.  
          friends/Joan            NOM   die    began  
          ‘[(My) friends/\*Joan] began to die (out).’  
       b. [okyaku-san/\*zyoon]    ga      tuki    hazimeta.  
          customers/Joan          NOM   arrive began  
          ‘[The customers/\*Joan] began to arrive.’

Because achievements cannot be turned into the progressive by adding *i-*, the TE-Cs are the primary means to express the progressive aspect (a process in progress) in Japanese grammar.

- (18) a. samuku    naru.  
          cold      become  
          ‘It will become cold.’  
       b. samuku    natte    [kuru/\*iru].  
          cold      become    come/stay  
          ‘It’s getting cold.’

#### 4. THERE-constructions

Lakoff (1987) presents eleven types of deictic THERE-construction. Four that are relevant to the analysis of the TE-Cs are exemplified below.<sup>10</sup>

- (19) Physical-space THERE-construction  
       a. [There goes/Here comes] Harry into the bar.  
       b. [There goes/Here comes] the bus into the terminal.



- (20) Conceptual-space (existence) THERE-construction
  - a. There goes our last hope.
  - b. Here comes the chance of a lifetime.
- (21) Perceptual-space THERE-construction
  - a. [There goes/Here comes] the beep.
  - b. [There goes/Here comes] the pain in my knee.
- (22) Activity-start THERE-construction
  - a. There goes Harry, meditating again.
  - b. \*Here comes Harry, meditating again. (Physical-space deixis only.)

Lakoff claims that the physical-space deixis is central, that is, the central function of THERE-constructions is for the speaker to direct the hearer's attention to the entity referred to by the subject in physical space. He then explicates how other deictic THERE-constructions cluster around the central one by means of metaphors.

- (23) Conceptual-space (existence) to physical space
  - a. Concepts are entities.
  - b. Concepts are located in conceptual space.
  - c. Existence is location here; non-existence is location away.

Conceptual-space deixis is minimally distant from the central deixis. Things that exist in physical space are located; likewise things that exist in our mind, where things come into and go out of existence.

The perceptual-space deixis is distinct from the central deixis in several ways. For example, sentences in the physical-space THERE-construction have corresponding sentences with the canonical word order.

- (24) a. There's Harry.
- b. Harry is there.

Sentences in the THERE-construction with non-visual perception do not have such correspondences.

- (25) a. There's the beep.
- b. \*The beep is there.

The metaphors to map perceptual space to physical space are as follows.

- (26) Perceptual space to physical space
  - a. Percepts are entities.
  - b. Percepts are located in perceptual space.
  - c. Realized is distal (THERE); soon-to-be realized is proximal (HERE).
  - d. Activation of perception is motion.

In the activity-start THERE-construction, within which only THERE-GOES can appear, there is no motion—only an activity. Activity is conceptualized in terms of motion along a path, and THERE designates its starting point.

- (27) Activity-start deixis to physical-space deixis
  - Activities are motions along a path.

In the conceptual-space and perceptual-space THERE-constructions, THERE-GOES indicates to the immediate past, whereas HERE-COMES the immediate future even though the grammatical tense is fixed to the non-past. In the activity-start THERE-construction, in contrast, THERE-GOES refers to a situation in progress.

Together with idiosyncratic constraints, the metaphors presented above predict the selection of locative adverbial HERE/THERE as well as motion verb COME/GO. The concepts introduced by Lakoff are of general utility in classifying TE-Cs.

## 5. General remarks on TE-constructions

There are similarities between K-/IK- in the TE-Cs and COME/GO in the four types of THERE-constructions in Lakoff's classification: physical-space deixis, conceptual-space (existence) deixis, perceptual-space deixis, and activity-start deixis. In the following, I will first categorize TE-Cs based on space in which they are to be interpreted. As with the THERE-constructions, the prototype of TE-C operates in physical space, with the other TE-Cs linked to it by various metaphorical mappings.

Such TE-C referring to physical space is central for the following reasons. First, the canonical meaning of K- and IK- is preserved, that is, the selection of K-/IK- is based on the same rules which govern K- and IK- as main predicates. Second, the general interpretation of tense is valid: the past indicates that the event has taken place prior to the speech time, and the non-past indicates either that the event will take place after the speech time, or that it is habitual. Therefore, K- and IK- in the prototypical TE-C are minimally distant from their canonical uses.

English and Japanese are almost identical regarding the uses of these basic motion verbs in central constructions, so that those who have acquired one system do not have serious difficulty in understanding the other. In non-central constructions, however, while spatial metaphors are adequate to account for THERE-constructions, both spatial and temporal metaphors are needed to explain the complexity of the interaction between K-/IK- and the tense in TE-Cs.

## 6. Physical-space TE-constructions

### 6.1. *Prototype: physical-motion TE-construction*

The prototypical TE-C is the *physical-motion TE-C*, in which K- and IK- indicate both a motion and its direction in physical space, as they do as main predicates. K- indicates a direction toward the speaker, whereas IK- any direction except the one toward the speaker.

- (28) a. gohan o tabete [kita/itta].  
meal ACC eat came/went  
'Having had a meal, (I) [came (here)/went (there)].'
- b. eki ni hasitte [kita/itta].  
station to run came/went  
'Lit. (I) [came/went] to the station running.'
- c. hon o gakkoo ni motte [kuru/iku].  
book ACC school to hold come/go  
'(I)'ll [bring/take] the book to school.'
- d. zyoou wa osoosiki ni akai huku o kite [kita/itta].  
Joan TOP funeral to red dress ACC wear came/went  
'Joan wore a red dress to the funeral service.'

In (28d) with K-, the speaker was at the goal when Joan arrived, whereas with IK- the speaker describes the event locating himself/herself at the origin of Joan's motion.

As Yoshikawa (1971) points out, TE-verbs indicate an action the subject performed before coming/going, or they indicate the means or circumstance of the motion referred to by K-/IK-. The past tense is used to refer to past events, and the non-past to future or habitual events.

### 6.2. *Point-of-view TE-construction*

In the physical-motion TE-C, both motion and direction are expressed by K-/IK-. A slightly deviant case from this prototype occurs when the TE-verb indicates a motion, and K-/IK- indicates only direction. Consequently, K- and IK- imply the location of the

speaker's viewpoint. By identifying one's viewpoint in the description, one is able to add ambience and vivid imagery to the statements. This type of TE-C is referred to as *point-of-view TE-C*.

While absence of K-/IK- causes a change in truth-value in the physical-motion TE-C, statements without them retain the same truth-value because K-/IK- is not predicative in the point-of-view TE-C.

- (29) a. *neko ga ido no naka ni otita.*  
cat NOM well GEN inside to fell  
'The cat fell into the well.'
- b. *neko ga ido no naka ni otite [kita/itta].* (Gray, 1983)  
cat NOM well GEN inside to fall came/went  
'The cat fell into the well. (The speaker is at the bottom of the well with *kita* and outside the well with *itta*.)'
- c. *hakutyoo ga hokkaidoo ni watatta.*  
swan NOM Hokkaido to migrated  
'Swans migrated to Hokkaido.'
- d. *hakutyoo ga hokkaidoo ni watatte [kita/itta].*  
swan NOM Hokkaido to migrate came/went  
'Swans migrated to Hokkaido. (The speaker is in Hokkaido with *kita* and not in Hokkaido with *itta*.)'

As with the physical-motion TE-C, the past tense is used to refer to events in the past in the point-of-view TE-C. However, the interpretation of the non-past tense is slightly different. The non-past is used to refer either to events in progress or to habituals, rather than to future events. This is a natural consequence of the function of this TE-C. In order for the speaker to describe an event from a particular perspective, the speaker must witness it.

**6.2.1. Subtype: moving-scenery TE-construction.** When the speaker moves toward or away from some object, it is also possible to describe the situation as if the speaker is standing still and the object moves toward or away from the speaker. We experience this perspective when we travel by train. Physical objects seem to come and go as we move through physical space.

- (30) a. *yama ni tikazuite itta.*  
mountain to move closer went  
'(I) went toward the mountain.'
- b. *yama ga tikazuite kita.*  
mountain NOM move closer came  
'Lit. The mountain came closer (to me).'
- c. *yama kara toozakatte itta.*  
mountain from move away went  
'(I) went away from the mountain.'
- d. *yama ga toozakatte itta.*  
mountain NOM move away went  
'Lit. The mountain went away (from me).'

This kind of description is unique to TE-Cs. If K-/IK- is the main predicate, this perspective cannot be expressed.

- (31) a. yama ni itta.  
           mountain to went  
           ‘(I) went to the mountain.’
- b. \*yama ga kita.  
           mountain NOM came  
           ‘Lit. The mountain came.’

The moving-scenery TE-C is categorized as a subtype of the point-of-view TE-C because they have in common the characteristics regarding the truth-value and the tense interpretation.

### 6.3. *Transfer TE-construction*

There are two kinds of verbs which take a goal NP: those which express a motion of the referent of the subject (already discussed above), and those which express a motion of the referent of the direct object, for example, *kas-* ‘lend’, *nage-* ‘throw’, and *okur-* ‘send’. When the TE-verb is of the later type, the construction is referred to as the *transfer TE-C*. Takahashi (1969) recognizes that in this TE-C, where only the referent of the object moves, K- can—but IK- cannot—be utilized. K- in the transfer TE-C typically indicates that the goal is the speaker, and thus the goal is usually not overtly identified.

- (32) zyoon ga (watasi ni) hanataba o nagete kita.  
       Joan NOM 1st.sg to bouquet ACC throw came  
       ‘Joan threw her bouquet in my direction.’

The transferred object need not be a physical entity, for example, *iw-* ‘say’ and *tutae-* ‘tell’ can be TE-verbs. For example, what is transferred in (33) is Joan’s words (or more accurately the information) promising some money, not the money itself.

- (33) zyoon ga (watasi ni) okane o kasu to itte kita.  
       Joan NOM 1st.sg to money ACC lend QUOT say came  
       ‘Joan said to me that she’ll lend the money (to [me/someone]).’

Recall that based on the conduit metaphor, IK- can predicate NPs which indicate or stand for information. However, IK- cannot appear in the transfer TE-C even when the transferred entity is information. This constraint is unpredictable, and thus must be stated in the description of the transfer TE-C.

The general interpretation rules of tense are applicable in this TE-C. The past tense is used to refer to past events, and the non-past to future or habitual events.

In (32, 33), the sentences with and without K- are synonymous. However, there are cases in which adding K- is obligatory, not because of non-synonymy, but because of an independently motivated constraint of the Japanese language—which is the topic of the next section.

**6.3.1. *Subject-centered TE-verbs.*** Adding K- is obligatory in sentences which describe situations where the speaker is a participant referred to by the goal NP—not by the subject NP—and the verb is what Kuno and Kaburaki (1975) refer to as *subject-centered*. Most verbs in Japanese are either subject-centered, for example, *okur-* ‘send’ and *age-* ‘give’, or neutral, for example, *iw-* ‘say’ and *mise-* ‘show’. If the verb is subject-centered, the sentence does not comfortably accommodate the speaker as a direct/indirect object.

- (34) zeemusyo ga watasi ni tokusokuzyo o [\*okutta/okutte kita].  
       revenue office NOM 1st.sg to demand note ACC sent/send came  
       ‘The revenue office sent me a demand note.’

Kuno and Kaburaki claim that with subject-centered verbs, the empathy hierarchy of surface structure is  $E(\text{subject}) > E(\text{object}) > E(\text{agentive in passive})$ . Sentence (34) then has  $E(\text{subject} = 3\text{rd person}) > E(\text{object} = 1\text{st person})$ , which violates the hierarchy of speech-act participants, and is thus unnatural. K- is object-centered (or more appropriately *goal-centered* as Gray, 1983, argues), and adding it overrides the surface case empathy focus and makes the empathy  $E(\text{object} = 1\text{st person}) > E(\text{subject} = 3\text{rd person})$ , in accordance with the empathy hierarchy of speech-act participants.

In other words, if the speaker is a participant of the described situation, the unmarked subject selection is the speaker. There are, however, cases in which a non-speaker subject is acceptable. Sentence (35b), for example, is acceptable because Joan is selected for the sake of intrasentential topic continuity.

- (35) a. \*zyoon [wa/ga] watasi kara okane o karita.  
 Joan TOP/NOM 1st.sg from money ACC borrowed  
 'Joan borrowed some money from me.'
- b. zyoon wa watasi kara okane o karite ryokoo ni itta.  
 Joan TOP 1st.sg from money ACC borrow travel for went  
 'Joan borrowed some money from me and went on a trip.'

If one attempts to describe an event objectively, that is, as if some third person were describing it, one can make a distinction between one's roles of narrator and an event participant by superficially violating the empathy hierarchy of speech-act participants. One can select another participant as subject and put oneself in an object position, but because the empathy focus is pretended to be not on the speaker, this selection does not violate the hierarchy of speech-act participants. This attempt is illustrated in (36).

- (36) tanaka wa zizitu watasi kara wairo o uketotta.  
 TOP in fact 1st.sg from bribe ACC received  
 'In fact, Tanaka received a bribe from me.'

On the other hand, if the selection of non-speaker subject is based solely on discourse-topic continuity, the speaker feels comfortable in indicating that the narration is still made subjectively even though s/he is not referred to by the subject NP. It is on this occasion that the speaker adds K- in order to emphasize his/her point of view.

A subtype of this use of K- is what Tokunaga (1986) refers to as *affective deixis*, in which K- contrasts with *kure-* 'give', not with IK-. In affective deixis, the recipient (indirect object) of *kure-* is the speaker or someone whom the speaker considers to be his/her insider, for example, family members.<sup>11</sup> If the speaker is grateful to the referent of the subject for his/her act in which the speaker is the recipient, *kure-* will be selected. If, on the other hand, the speaker is annoyed with the person for his/her act, K- will be selected. Tokunaga (1986, p. 130) illustrates such a contrast using examples in (37).

- (37) a. tomu wa watasi ga komatte ita node okane o kasite kureta.  
 Tom TOP I NOM was in trouble because money ACC lend gave  
 'Tom lent me money because I was in trouble (with money, and I am grateful to him).'
- b. tomu wa watasi ga iranai to iu noni okane o kasite kita.  
 Tom TOP I NOM need not QUOT say although money ACC lend came  
 'Tom lent me money, although I said I didn't need it (and I am annoyed).'

K- in (38) does not carry this negative connotation. The difference is due to expectations in the social norm. For example, for a bank to lend money is a routine transaction, whereas to lend money to a friend is not. Therefore, if a friend did lend money to the speaker, the speaker would be grateful. On the other hand, if it is a bank which lent money, the

speaker typically need not show appreciation, and consequently, K- does not imply the speaker's annoyance.

- (38) ginkoo ga (yatto) okane o kasite kita.  
 bank NOM finally money ACC lend came  
 '(Finally,) the bank lent me the money.'

#### 6.4. Summary

As with their canonical uses, K- and IK- focus on motion and the direction in the physical-motion TE-C. In other words, the canonical meaning of K- and IK- is preserved and, consequently, no special metaphors are needed for an understanding of this TE-C. The interpretation of tense is in accordance with the general rules. Children acquire this TE-C by ages 3.3–4.4 in Takahashi's study.

In the point-of-view TE-C, K- and IK- indicate only direction, and the motion is expressed by the TE-verb. This TE-C is as common as the physical motion TE-C in the speech of children of ages 3.3–4.4. This TE-C has the moving-scenery TE-C as its subtype, which is absent in Takahashi's data on children up to age 6.6. K- and IK- do not participate in the truth-value judgments. The general interpretation rule for the past tense is applicable, but the non-past tense is interpreted as either present progressive or habitual.

In the transfer TE-C, the moving entity is referred to by the object NP, and only K- participates in this TE-C. Similar to the point-of-view TE-C, K- does not affect the truth-value of the statement. The tense is interpreted according to the general rules. With the subject-centered verbs, the presence of K- or *kure-* 'give' is obligatory in ordinary conversation. This TE-C is not found in Takahashi's data.

Table 1

Construction	K-/IK- indicates	K-/IK- affects truth value	Past tense	Non-past tense
Main predicate	Motion, Direction	Yes	Past	Future/Habitual
Physical-motion	Motion, Direction	Yes	Past	Future/Habitual
Point-of-view	Direction	No	Past	Present/Habitual
Transfer	(K- only) Direction	No	Past	Future/Habitual

#### 7. Cognitive TE-construction

K- and IK- in (39) resemble COME and GO in the THERE-construction of conceptual-space (existence) deixis, *Here comes the chance of a lifetime* and *There goes our last hope*.

- (39) a. meean ga ukande kita.  
 good idea NOM flash came  
 'A good idea flashed in my mind.'
- b. saigo no kiboo ga kiete iku.  
 last GEN hope NOM vanish go  
 'There goes our last hope.'

In principle, the metaphors for mapping conceptual space (existence) to physical space in THERE-constructions are also applicable to the sentences in (39). Therefore, any language user who has acquired these metaphors could easily draw an appropriate image schema for those sentences.

This use is clearly motivated by the very human conception of birth and death. To be born is to enter the physical world, and to die is to exit from it—both powerful ideas. (40c–f are from Lakoff, 1987.)

- (40) a. onna no ko ga umarete [kita/kuru].  
female GEN child NOM be born came/come  
'A girl [was/will be] born.'
- b. heetai ga sinde [itta/iku].  
soldier NOM die went/go  
'The soldiers [died/will die].'
- c. There's a baby on the way.  
d. The baby has arrived.  
e. He's gone.  
f. Let us pray for the dear departed.

Naturally, the TE-verbs which occur with K- indicate emergence of some kind, for example, *araware-* 'appear', *mebae-* 'sprout', *otozure-* 'visit', and *wak-* 'spring'; those which occur with IK- indicate disappearance, for example, *kie-* 'vanish', *kudake-* 'break', *sar-* 'leave', and *toke-* 'melt away'.

K- and IK- in the following sentences resemble COME and GO in the THERE-construction of non-visual perception, for example, [*Here comes/There goes*] *the beep*.

- (41) a. onaka ga suite kita.  
stomach NOM become empty came  
'(I) became hungry.'
- b. kanasiku natte kita.  
sad become came  
'(I) became sad.'
- c. hiza no itami ga kiete itta.  
knee GEN pain NOM vanish went  
'The pain in my knee went away.'

There is no difference regarding the function of K-/IK- between TE-Cs with conceptual and perceptual TE-verbs; therefore, I categorize them as *cognitive TE-constructions*.<sup>12</sup> In the cognitive TE-C, the entities that exist in the speaker's consciousness are considered to have entered the speaker's cognitive space, and those which are no longer conceived or perceived are considered to have exited it. The following metaphors map cognitive space to physical space.

- (42) Cognitive space to physical space
- Cognitive objects (concepts/percepts) are entities.
  - Cognitive objects are located in cognitive space.
  - Existence is location here; non-existence is location away.

Figure 1 represents the image schema for the cognitive TE-C. This image is purely spatial and independent of the tense on K-/IK-.

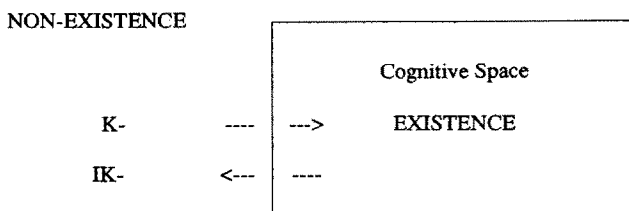


Fig. 1. Image schema for cognitive TE-construction.

In the cognitive TE-C, the goal with K- and the origin with IK- are fixed to the speaker's cognitive space, whereas the origin with K- and the goal with IK- are immaterial.

The tense on K- indicates the time of entrance, and that on IK- the time of exit. Because both the goal with K- and the origin with IK- are the speaker's cognitive space, K- focuses on the completion, and IK- on the inception of metaphorical motion. This difference is also observable when they are used as main predicates with both origin and goal NPs—the phenomenon which was discussed earlier.

Takahashi's data on children's speech show that *umarete k-* 'be-born-come' and *sinde ik-* 'die-go' are learned by ages 3.3–4.4, but the application of the concepts of emergence and disappearance in cognitive space is learned much later. There are some examples of the cognitive TE-C with K-, but no examples are found with IK- in his data.

## 8. Moving-world TE-construction

Fillmore (1971) points out that time is one-dimensional and unidirectional, that is, if two events occur at different times, one of them is necessarily earlier or later than the other. He recognizes two metaphors for time. We can regard time as stable and we move through time, or we can regard ourselves stable and time passes by us. The former metaphor is referred to by *moving world*, and the latter by *moving time*. In the moving-world metaphor, we have come to now from the past and will go into the future, whereas in the moving-time metaphor, the future comes to us, and the past goes away from us.

The physical-space and cognitive-space TE-C are purely spatial in nature. K- and IK- indicate motion and/or direction, and they generally do not make reference to the internal structure of an action or event expressed by the TE-verb. On the other hand, recognition that the motions expressed by K- and IK- have three phases—the inception, the process, and the completion—is essential for understanding the moving-world TE-C.

The THERE-construction which exhibits slight resemblance to the moving-world TE-C is the one indicating activity-start, for example, *There he goes, meditating again*. Lakoff posits the metaphor, ACTIVITIES ARE MOTIONS ALONG A PATH, to explain this construction. In the activity-start, THERE-construction, only THERE-GOES, not HERE-COMES, designates the starting point on an activity path. Because GO implies a path toward the future, this metaphor is in accordance with moving-world. TE-Cs may encode a similar concept as illustrated in (43).

- (43) yasai      kara      tabete      iku.  
       vegetable from    eat      go  
       '(I)'ll begin eating with vegetables.'

While the activity-path metaphor is restricted in English to express that the onset of activity has just taken place and the activity is on-going at the speech time, the moving-world metaphor applies more broadly in the case of Japanese.

- (44) a. rokuzyuu nen ikite kita.  
       60 years      live    came  
       '(I) have lived for 60 years.'
- b. zutto      gaman-site      kita.  
       long time    endure      came  
       '(I) have endured (it) a long time.'

Unlike the activity-start THERE-construction, non-agentive achievements can appear as TE-verbs in the moving-world TE-C.



- (45) a. kono ko wa dandan hahaoya ni nite kita.  
 this child TOP gradually mother DAT resemble came  
 'The child gradually came to resemble her mother.'
- b. moo sugu miti ga suite kuru.  
 soon street NOM become less crowded come  
 'The streets will be less crowded soon.'

In the moving-world TE-C, the selection between K- and IK- is based on when the inception takes place. If the inception is before the reference point in time and the event is on-going at that point, K- will be selected; if the inception is after the reference point, IK- will be selected.

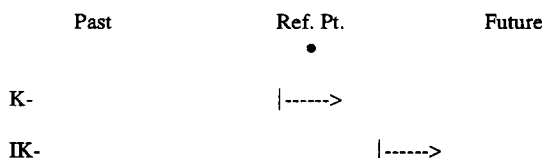


Fig. 2. Image schema for the moving-world TE-construction.

Because the reference point is typically the speech-time, K- is more likely to occur in the past, and IK- in the non-past tense.

- (46) a. dandan wakatte kimasita ne.  
 gradually understand came(Polite) PRT  
 '(S/he) has gradually understood (it), hasn't (s/he)?'
- b. dandan wakatte ikimasu yo.  
 gradually understand go(Polite) PRT  
 '(S/he) will gradually understand (it).'
- c. ima made kare no wagamama o mitomete kita keredo  
 until now he GEN selfishness ACC tolerate came but  
 kore kara wa kyohi-site iku.  
 from now on PRT reject go

'(I) have tolerated his selfish acts until now, but (I'll reject them from now on.'

If K- is in the non-past tense (KURU) or IK- is in the past tense (ITTÁ), some context is necessary to indicate that the reference point is distinct from the speech time.

- (47) a. miti ga konde kuru kara hayaku kaerisasyoo.  
 street NOM become crowded come because soon return(Hortative)  
 '(If we wait too long,) the street will get crowded, so let's go home now.'
- b. sentaku-sitara sode ga tizinde itta.  
 when wash sleeve NOM shrink went  
 'When (I) washed it, the sleeves shrank.'

IKU occasionally indicates that the event referred to by the TE-verb is in progress. In such a case, both interlocutors are observing the change of state.

- (48) koori ga tokete iku.  
 ice NOM melt go  
 'The ice is melting away now.'

Even though K- and IK- place a focus on the inception, it cannot be further specified.

- (49) \*hati zi ni iti peezi me kara yonde [itta/iku/kita/kuru].  
 8 o'clock at first page from read went/go/come/come  
 '(I) [started/will start] reading from the first page at 8 o'clock.'

Because the decomposition of motion into three phases is not part of the canonical meaning of K- and IK-, these verbs in the moving-world TE-C are fairly remote from canonical K- and IK-, and thus cannot be learned easily, especially when the reference time and the speech time are distinct, that is, K- in the non-past tense and IK- in the past tense. In Takahashi's data, the moving-world TE-C with K- has been learned by children at ages 3.3–4.4, but K- is mostly in the past tense, and when the non-past tense is used, it is the so-called historical present, referring to the past. K- in the non-past tense does not occur in the speech of children at age 6.6. The TE-C with IK- is absent in the speech of children at ages 3.3–4.4, but it emerges about ages 4.1–5.6. There is no occurrence of IK- in the past tense in the data up to age 6.6.

### 9. Moving-time TE-construction

The final TE-C is based on the moving-time metaphor: TIME COMES FROM THE FUTURE TOWARD US AND GOES AWAY FROM US INTO THE PAST. This TE-C parallels the moving-scenery TE-C in physical space, in which the observer does not move, but the scenery does.

- (50) a. haru ga megutte kita.  
 spring NOM come round came  
 'Spring has come again.'
- b. akarui mirai ga otozurete kuru.  
 bright future NOM visit come  
 'A bright future will come to us.'
- c. toki ga toori-sugite itta.  
 time NOM pass went  
 'Time passed (us by).'
- d. kako ga toozakatte iku.  
 past NOM move away go  
 'Lit. The past is moving away.'

Although the selection between K- and IK- somewhat resembles that in the cognitive TE-C, the TE-verbs in the moving-time TE-C need not express emergence/disappearance of any kind, and the image schemas for these two types of TE-Cs are different. In the cognitive TE-C, there is a bounded cognitive space, and the entities enter (K-) and exit (IK-) the space. In the moving-time TE-C, there is no bounded space—only a path along which time moves.

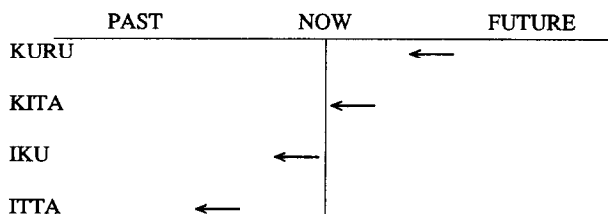


Fig. 3. Image schema for the moving-time TE-construction.

### 10. Concluding remarks

There are six categories of TE-Cs in which K-/IK- marks the direction and/or aspect: the physical-motion TE-C, point-of-view TE-C, transfer TE-C, cognitive TE-C, moving-

world TE-C, and moving-time TE-C. The first three TE-Cs have physical space as the operating domain. The physical-motion TE-C is central in that no special metaphor is needed. K- and IK- indicate only direction in the point-of-view TE-C, designating the speaker's viewpoint in physical space and adding vivid imagery to the sentence. In the transfer TE-C, only K- can be utilized. In these TE-Cs, except with the point-of-view TE-C, the past tense is used to refer to events in the past, and the non-past to those in the future or habitual. In the point-of-view TE-C, the non-past may be used to refer to events in progress.

In the cognitive TE-C, those entities which are active in the speaker's consciousness have come into cognitive space in the past and exist there at the speech time, whereas those which are yet to be realized will come into the space in the future. Those which were real but are not real any longer have left the space, and those which are likely to become not real are leaving the space in the future. The general interpretive rules of tense are applicable in the cognitive TE-C.

The moving-world TE-C is based on the metaphor of moving-world, and K-/IK- indicates the temporal relationship between the event and the speaker's reference point in time. If the inception of the event is before the reference time and the event is on-going at the reference time, K- is selected; if the inception is after the reference point, IK- is selected. If the inception is before the speech time, the past tense is selected; if it is after the speech time, the non-past tense is selected.

The moving-time TE-C is based on the moving-time metaphor. The moving entity in this TE-C is generally time—time itself or a period of time such as a season. These four TE-Cs are not mutually exclusive, and the same event may be expressed with either K- or IK-.

- (51) a. danro no hi ga kiete iku. (Cognitive)  
 hearth GEN fire NOM vanish go  
 'The fire in the hearth is about to go out.'
- b. danro no hi ga kiete kita. (Moving-world)  
 hearth GEN fire NOM vanish came  
 'The fire in the hearth is about to go out.'

In both (51a, b), the fire began to go out before the speech time, and it has not yet completely disappeared. While (51a) is in the cognitive TE-C, in which IK- is selected because the fire is disappearing, (51b) is in the moving-world TE-C within which K- is selected because the inception is before the reference time (which coincides with the speech time), and the event is on-going at that time.

- (52) a. honne ga arawarete kuru. (Cognitive)  
 true intention NOM reveal come  
 'Her true intention will show up.'
- b. honne ga arawarete iku. (Moving-world)  
 true intention NOM reveal go  
 'Her true intention will show up.'

Similarly, K- is selected in (52a) because someone's true intention is predicted to become apparent in the future. But IK- is selected in (52b) because the revealing of someone's true intention is predicted to occur after the reference time, NOW.

If K- occurs with a verb of disappearance, for example (51b), or IK- with a verb of emergence, (52b), the sentence is in the moving-world TE-C. If, on the other hand, K- occurs with a verb of emergence, or IK- with a verb of disappearance, the type of TE-C

cannot be determined solely from the sentence. The speaker may have chosen K-/IK- according to the COGNITIVE-SPACE-AS-PHYSICAL-SPACE metaphor or the moving-world metaphor, making the sentence ambiguous in this respect.

- (53) a. kiboo ga umarete kita. (Cognitive)  
           hope NOM be born came  
           ‘New hope has been born.’
- b. kiboo ga umarete kita. (Moving-world)  
           hope NOM be born came  
           ‘New hope is about to be born.’
- c. kiboo ga umarete kuru. (Cognitive/Moving-world)  
           hope NOM be born come  
           ‘New hope will be born.’

If K- is in the non-past tense, for example (53c), it implies a future event in both the cognitive and moving-world TE-C; therefore, no extensional ambiguity arises, although it becomes uncertain which image schema the speaker has in mind.

In the case of IK-, there is no extensional ambiguity in either the past or non-past tense.

- (54) a. saigo no kiboo ga kiete iku. (Cognitive/Moving-world)  
           last GEN hope NOM vanish go  
           ‘Our last hope will disappear.’
- b. saigo no kiboo ga kiete itta. (Cognitive/Moving-world)  
           last GEN hope NOM vanish go  
           ‘Our last hope has disappeared.’

Another example to illustrate the multiple possibilities of underlying metaphor is provided below. (55a) may be in the cognitive or moving-time TE-C, although there is no extensional ambiguity.

- (55) a. dandan samuku natte kuru. (Cognitive/Moving-time)  
           gradually cold become come  
           ‘It will become cold gradually.’
- b. dandan samuku natte iku. (Moving-world)  
           gradually cold become go  
           ‘It will become cold gradually.’

K- and IK- may have multiple functions in TE-Cs. Without the recognition of underlying metaphors, selection of K-/IK- remains bewildering for the analyst. In many cases, either one can appear as directional indicator. However, given a specific metaphor whose function is to map the direction that K-/IK- indicates in physical space into some other domain, selection is both highly restricted and predictable in the present analysis.

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## NOTES

<sup>1</sup> Similar to the past-tense/perfective suffix *-ta*, *-te* is realized as /de/ when the verb stem ends with a voiced obstruent.

<sup>2</sup> Although several other verbs, for example, *ar-* ‘exist’, *i-* ‘stay’, and *simaw-* ‘put away’, also appear in this type of construction, in the present study I utilize the term *TE-Cs* to refer exclusively to those in which either K- or IK- appears as second verb.

<sup>3</sup> Takahashi categorizes *sinde ik-* 'die go' into the TE-C of a process of change and claims that the TE-C of a process of disappearance is also missing from children's speech. However, I consider that *sinde ik-* indicates a process of disappearance and thus is already acquired by children.

<sup>4</sup> Square brackets are used to delimit alternatives, not to indicate constituency breaks.

<sup>5</sup> Fillmore (1982b) notes that the lexical item *breakfast* typically indicates the meal which is eaten early in the day, after a period of sleep, and which consists of a somewhat unique menu. However, any one of these three concepts can be absent, and yet the word is appropriately uttered to refer to a particular meal. One may call breakfast the meal of eggs, toast, coffee, and orange juice eaten at sunrise without sleep, or one may call such a meal eaten at 3 o'clock in the afternoon after long sleep through the morning. Or one may call a meal consisting of cabbage soup and chocolate pie breakfast if one has it in the morning after sleep through the night. Or some establishments even serve 'breakfast' all day. See also Coleman and Kay (1981) for the English verb *lie*.

<sup>6</sup> See Fillmore (1972, 1973) for the multiple possibilities of the deictic center with English COME and GO. For the comparison of COME/GO and K-/IK-, see Ooe (1975) and Tokunaga (1986).

<sup>7</sup> If the speaker moves to his/her own house, *kaer-* 'go back', instead of K-, will be selected.

<sup>8</sup> According to Ooe, IK- in (11) is not acceptable, but it is acceptable by all native speakers of Japanese with whom I consulted.

<sup>9</sup> Seven years prior to Vendler, Kindaichi (1950) classified Japanese verbs solely on the behavior of VerbStem.te + i-. The results are similar to Vendler's when applied to Japanese verbs. For the comparison of Kindaichi's and Vendler's classification, see Jacobsen (1982).

<sup>10</sup> I made some changes in names of THERE-constructions for expository purposes: they need not be the same as those in Lakoff's analysis.

<sup>11</sup> For the concept of insider/outsider, see Wetzel (1984, 1985).

<sup>12</sup> The term *cognitive* is justified here because the perception expressed by perceptual TE-verbs is not the lower-level perception which contrasts with cognition. For example, we perceive and react to pain even while sleeping, but (42c) is not appropriate to describe this situation. Perception expressed in the TE-C has undergone some cognitive process.

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