The Lexical Notions of *Action* and *Situation* Underlying the Correspondence between Verbs of Motion and Those of Communication

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1. Introduction

Some intransitive verbs in the class of verbs of motion describe the direction of motion. For instance, the verb *fall* describes the motion from top to bottom ; the verb *rise* from bottom to top. The verbs *escape* and *walk* are also included in the same class, and their directed motion is a change of location from one place (Source) to another (Goal) :

(1)　　a .　The convict escaped from the police to the mountains.
　　　　b .　The student walked from the campus to the station.

Although both sentences cover some distance from the Source, the verb *walk* can occur with a measure phrase but the verb *escape* cannot, as seen in (2a, b) :

(2)　　a .　(=(994)) We walked five miles.　　　　　　　　　　　　　(Levin 1993 : 265)
　　　　b .　(=(976)) *The convict escaped three miles.　　　　　　　　(Levin 1993 : 263)

This paper aims to look carefully into some behaviors of the motion verbs and consider why some of them allow a measure phrase, while others do not. Especially, we focus our attention on the semantic features of the verbs, since both of them are syntactically in the same class : unergatives. Therefore, the semantic analysis must lead to the explanation of their inconsistent behaviors with the measure phrases. To verify the explanation, we will apply it to some irregular behaviors of verbs of communication, which can be defined as an abstract variant of verbs of motion, and show the validity of the semantic features which we are proposing with the verbs of motion in this paper.

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2. Theoretical Framework

As seen in Section 1, both *walk* and *escape* are categorized into the same unergative verb class : i. e., they have an argument in their specifier position syntactically. Thus, as we cannot solve the problem of (2) with their syntactic properties alone, we should look for the solution in the field of verbal semantics. Levin (1993 : 1) assumes that the behavior of a verb . . . is to a large extent determined by its meaning. To see her assumption concretely, let us look at the following two pairs quoted from her examples : the transitives, *break* and *hit*.

(3)   a . The little boy broke the window.
        b . The window broke.
        c . Carla hit the door.
        d . *The door hit.   (Levin 1993 : 9)

The verb *break* appears in the causative/inchoative alternation as shown in (3a, b), while *hit* does not as in (3c, d). The verb *break* expresses a change of state plus a notion of cause when transitive, while *hit* expresses contact by motion without any change of state. The causative/inchoative alternation is found with verbs whose meaning involves causing a change of state. These notions of "motion," "contact," "change of state," and "cause" are taken into account in a lexical representation of verb meaning, and it is these notions which determine the syntactic behavior of verbs.

Kageyama (2001) indicates the distribution of these lexical notions diagrammatically in (4), where each core notion, ⟨action⟩, ⟨change⟩, or ⟨state⟩, corresponds to some aspectual property of a verb. A transitive verb with causative aspect covers from ⟨action⟩ to ⟨state⟩; a transitive/an intransitive (unergative) verb with activity aspect covers only ⟨action⟩ notion. An intransitive (unaccusative) verb has the scope over ⟨change⟩ to ⟨state⟩ or only over ⟨state⟩.

(4)

Transitive verbs   Causative (*Kowasu, Ireru*)

Activity (*Osu*)

⟨Action⟩   →   ⟨Change⟩   →   ⟨State⟩

Activity (*Hataraku*)   Change of state (*Sodatu*)   State (*Aru*)

Dislocation (*Nagareru*)

Intransitive verbs

Unergative verbs   Unaccusative verbs

(Kageyama 2001 : 8) (English translations are ours)
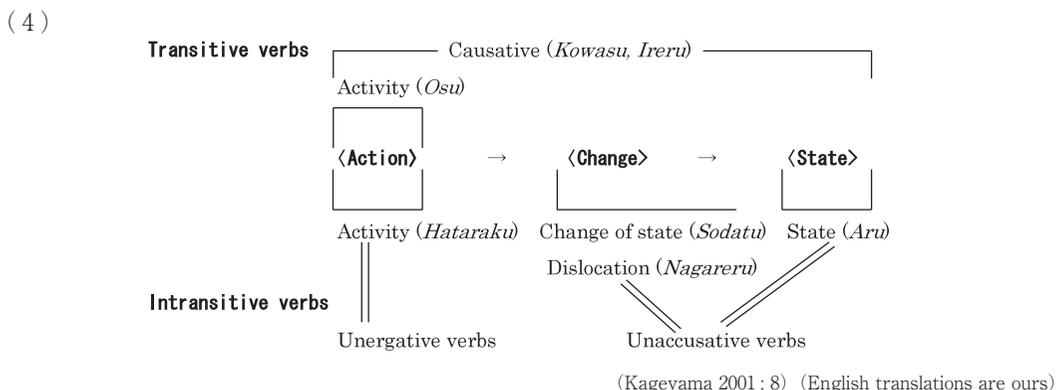
Figure 1   Semantic scope of verbs

We are going to utilize these semantic lexical notions to analyze the irregular behaviors of the verbs of motion and describe the reason for the behaviors from the next section. Especially, we will give weight to the first facet of the scope, ⟨action⟩, in our analysis.

3．*Action* and *Situation* in the Semantic Constructions of Verbs of Motion

We introduced some lexical notions by Levin (1993) in the previous section. In this section, we will use the notions to deal with some examples of verbs of motion, *escape* and *walk*, quoted here again：

（2） a．（＝(994)) We walked five miles.   (Levin 1993：265)
　　　 b．（＝(976)) *The convict escaped three miles.   (Levin 1993：263)

Both *escape* and *walk* are categorized into the same class, verbs of motion, and as they are unergatives, both of them cover only the 〈action〉 facet according to Kageyama's semantic scope. From the notion quoted so far, it seems that we cannot find a clue to the problem of (2). However, when we consider how we walk or how we escape carefully, we can see the difference between the way of walking and that of escaping. The subject *we* in (2a) had to be doing the action of walking whenever the speaker of (2a) utters the sentence. The speaker cannot say *he/she walked at dinner that night* when the subject was eating. In contrast, *the convict* in (2b) could always be under the situation of escaping no matter what other things he/she was doing as long as he/she was away of the police illegally. For example, *the convict* being escaping could be eating, sleeping, or bathing. Thus, we suppose that the lexical notion 〈action〉 may have two subtypes：namely, *action* and *situation*. *Action* represents the deictic and continuous movement of doing by an agent like *walk*, while *situation* represents the circumstance or conditions under which an agent could do something else, which is shown in (2).

（5） 〈**action**〉 <　a．〈**action**〉：*walk, run, swim, climb, fall, rise, etc.*
　　　　　　　　　　 b．〈**situation**〉：*escape, leave, depart, return, etc.*

The measure phrase, *three miles* or *five miles,* appoints the movement of how long the entity moves forward. We cannot measure the movement of an entity if the entity does not actually move. Therefore, we hypothesize that the *action* verb can appear with a measure phrase, while the *situation* verb cannot. It is impossible to measure how long *the convict* has accurately escaped when he/she is bathing or sleeping. The similar observation is found in Greenbaum and Quirk (1990：49). They say that simple present tense is used with dynamic senses to refer to events that repeatedly occur without limitation on their extension into the past or future. That is why we can say *Bill drinks heavily* when Bill is not actually drinking. This example is a habitual present tense. We suppose that the similar extension can occur in the example of (2b), though it is not a habitual event.

The two subtypes of 〈action〉 which we postulate in (5) will lead us further into a consideration of the possibility of the transitive derivation of verbs of motion. When the motion of an unergative verb expresses the action of (5a), the motion continues and evolves for a certain period of time. It could culminate in some excessive point if bad conditions are combined. Under such circumstance, some effect of the culminated motion could occasionally return to the agent：i. e., the verb changes into a reflexive (cf. Nakau and Nishimura (1998：181)). On the other hand, when the motion expresses the situation of (5b), the motion in fact can be intermittent or have some break. It means that the motion does not culminate in an excessive point. The unergative verb cannot become a reflexive in the latter case. From these differences, we can say that *escape* is an intransitive verb inherently, while *walk* can be a transitive verb if the conditions are satisfied. The following examples with resultative phrases

justify the above considerations :

(6) (＝(979)) *Resultative Phrase :
                *The convict escaped exhausted.
                (on the interpretation where the escape exhausts the convict)

<div align="right">(Levin 1993 : 263)</div>

(7) (＝(995)) Resultative Phrase :
                a . We walked ourselves into a state of exhaustion.
                b . Tom ran the soles off his shoes.

<div align="right">(Levin 1993 : 265)</div>

In (7a), the *action* of *walk* can have *oneself* as its internal argument, and affects an excessive motion to the argument. The resultative phrase specifies how they look after the long tiresome walking, for example. In (6), the *situation* of *escape* cannot have such an internal argument. It, therefore, does not occur with a resultative phrase which modifies the state of an internal argument.

In sum, we hypothesized two kinds of action, *action* and *situation*, to explain the irregular behaviors about a measure phrase with *walk* and *escape*. Furthermore, we also showed that the two notions play a crucial role for the possibilities of resultative constructions of the motion verbs. Thus, we can say that these two notions must be clearly distinguished one from the other.

4. *Action* and *Situation* in the Semantic Constructions of Verbs of Communication

As assumed in the previous section, the action verbs which describe motion of the agent can be categorized into two types. One of the types consists of the verbs referring mainly to the *action* of an agent like *walk*, and the other contains the verbs expressing the whole *situation* in which an agent is involved like *escape*. In this section, we will discuss whether the hypothesis can be as well applied to a few similar movements of abstract entities such as information transfer which is described with verbs of communication.

4.1 Properties of Verbs of Communication

In this subsection, we will deal with *whisper, speak/talk, say, tell, teach* as verbs of communication. These verbs generally appear in textbooks for junior high schools or high schools in Japan. First we will examine the properties of these verbs, in particular, in terms of whether each verb requires *Information* which is transferred by the utterance of an agent and *Goal* : for example, *the news* in (10) plays the role of *Information*. On the other hand, *Rachel* in (9) is the recipient of the transferred information and plays the role of *Goal*. Let us see the behavior of each verb with respect to the roles.

whisper :
  (8) (＝(556)) Susan whispered.
  (9) (＝(557)) Susan whispered to Rachel.
  (10) (＝(558)) Susan whispered the news/a few words.

speak/talk :
- (11) (=(582)) Ellen talked.
- (12) (=(583)) Ellen talked to Helen.
- (13) (=(584)) Ellen talked to Helen about the problem.

say :
- (14) (=(602)) Ellen said that melons were selling well.
- (15) (=(603)) Ellen said to Helen that melons were selling well.

tell :
- (16) (=(541)) Ellen told a story.
- (17) (=(542)) Ellen told a story to Helen.

teach :
- (18) (=(538)) Wanda taught the students.
- (19) (=(540)) Wanda taught the students that the earth was round.

(Levin 1993 : 203-210)

From the observations of *whisper, speak/talk, say*, and *tell* above, we summarize their selectional restrictions on *Information* and/or *Goal* argument(s) in Table 1.

(20)

Table 1

Verbs of Communication	*Information*	*Goal*
whisper	△	△
speak/talk	×	△
say	○	△
tell	○	○
teach	△	○

○ : necessary △ : optional × : unallowable

From the table, we first pay our attention to *tell* and *teach* which have to take *Goal* as an argument. Although the *Goal* argument is not explicitly found in (16), we assume that the verb *tell* has an unexpressed object whose role is *Goal,* and *a story* as *Information* may imply the existence of *Goal* : e. g., *the listener.* For the other verbs, *whisper, speak/talk, say, Goal* is not allowed as an argument but only as an adjunct like a prepositional phrase seen in (9), (12), (15). To see this assumption, let us cancel each resultant state of the sentences in (21).

- (21) a. *Ellen told (me) a story, but I did not hear it.
-     b. Ellen whispered a few words (to me), but I did not hear them.

The example of (21a) causes a contradiction when followed by a second clause, which means that the verb *tell* always conveys some information to someone (=*Goal*) even if it does not express *Goal* explicitly in the syntactic structure.

  Here, analyzing the verbs of communication, two questions arise. The first question is, although

these verbs are all categorized into verbs of communication, why *tell* and *teach* need to have *Goal* as an argument while the others do not. The second question is why the description of *Information* varies from verb to verb. The *Information* argument must be depicted in case of *say* and *tell,* as it could be described optionally with *whisper* and *teach*, and *speak/talk* cannot obviously refer to the argument.

In order to answer the first question, we will see if each verb shows a dative alternation. One of the variants of a dative alternation is the double object construction : *John gave her a present.* In the construction, *her* is a *Goal* argument and *a present Theme* (the hypernym of *Information*). Furthermore, it implies the resultant state that *her* possesses *a present.* If a verb in the class of verbs of communication has the variant, it means that the verb has both *Goal* and *Information* as its arguments.

whisper :
 (22) a . Susan whispered the news to Rachel.
    b . *Susan whispered Rachel the news.

speak/talk :
 (23) a . *Ellen talked something to Helen.
    b . *Ellen talked Helen something.

say :
 (24) (＝(605)) a . Ellen said something to Helen.
        b . *Ellen said Helen something.   (Levin 1993 : 210)

tell :
 (25) (＝(543)) a . Ellen told a story to Helen.
        b . Ellen told Helen a story.   (Levin 1993 : 203)

teach :
 (26) (＝(539)) a . Wanda taught French to the students.
        b . Wanda taught the students French.   (Levin 1993 : 203)

As stated in (23a), *speak/talk* cannot express the transferred *Information* explicitly. Therefore, there is essentially no possibility of a dative construction which needs two arguments, seen in (23b). *Whisper* and *say* can describe *Information* as an argument, but they cannot describe *Goal* as an argument. They describe it only as an adjunct by means of taking *to* phrase like in (22a) and (24a), thus the dative alternation is not allowed as seen in (22b) and (24b). Finally, both *Information* and *Goal* can appear as arguments with *tell* and *teach,* so that the dative alternation is permissible for the verbs as shown in (25b) and (26b).

Here we assume that what dichotomizes the verbs of communication depends mainly on whether the verb describes the notion *action* or *situation.* In this case, we claim that the verbs which allow the dative alternation express *situation*, and the verbs for which the dative alternation is incapable depict *action.* *Whisper*, *speak/talk* and *say* can make a sentence without *Goal*, meaning that these verbs mostly place the focus on an agent's action. Since the *Goal* is less important for these verbs, it does not always need to be described. On the other hand, *tell* and *teach* have to express *Goal*, so both verbs

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depict a whole situation from the utterance of *Information* by agent to *Goal*. In order to support the assumption that the verbs of communication can be also categorized into the two groups like the verbs of motion, we add a temporal phrase, *for five years/minutes*, to each example. The phrase can be seen as an abstract variant of a physical measure phrase like *five miles*. See below :

(27) *whisper* :
    a . *Susan whispered for five years.
    b . Susan whispered for five minutes.

(28) *speak/talk* :
    a . *Ellen talked to Helen for five years.
    b . Ellen talked to Helen for five minutes.

(29) *say* :
    a . *Ellen said something for five years.
    b . *Ellen said something for five minutes.

(30) *tell* :
    a . Ellen told a story for five years.
    b . Ellen told a story for five minutes.

(31) *teach* :
    a . Wanda taught the students for five years.
    b . Wanda taught the students for five minutes.

It is capable for all the verbs except for *say* to add *for five minutes* to the end of the sentences. However, as for the other adjunct, *for five years*, only *tell* and *teach* can have the phrase. From this result, it can be said that *tell* and *teach* are interpreted as the description of *situation*, and both verbs are categorized into a different subgroup from the one where *whisper, speak/talk* and *say* belong. *Tell* and *teach* have the same property of *situation,* since it is possible even if their acts have discontinuity, like *escape* discussed in Section 3. It is allowable to describe the intermittent action over years. However, *whisper, speak/talk,* and *say* describe the continuous actions as well as *walk*, seen in the previous section. Therefore, it is impracticable to depict such actions over years. Finally, concerning the verb *say*, as long as it does not take part in the dative alternation in (24), *say* is categorized as a continuous verb. On the other hand, it cannot accept any of the temporal phrases shown in (29), it is not classified into either continuous nor intermittent verbs. It is not obvious whether the action of *say* should be classified into *action* or *situation*. So far, we tentatively assume from the data of *say* that it portrays a movement that an agent sends *Information* to *Goal*, but its ⟨action⟩ facet does not have so much attention by a speaker.

4. 2 Summary

Let us summarize the main points that have been made in this section. From the tests of dative alternation and *for five minutes/years* attachment, we can analyze that those inconsistent behaviors in the verbs of communication also depend on whether their action is *action* or *situation*. The branch

point is whether they imply *Goal* or not. See the figure 2 of (32) below :

(32)

⟨action⟩	*whisper, speak, talk* ◯		
	say		
⟨situation⟩	*tell*		
	teach		

Action/   Move   Goal
Situation
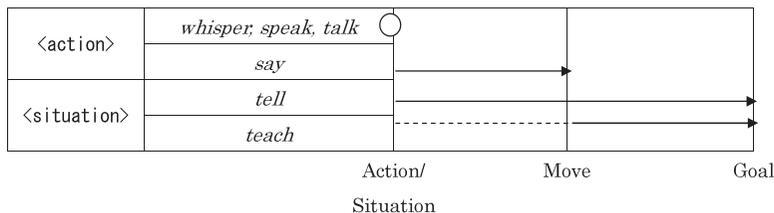
Figure 2

This figure shows that *whisper, speak* and *talk* imply action only, and *say* mainly implies from action to move. On the other hand, *tell* implies the hole situation from action to goal and *teach* mainly from move to goal. When the verbs imply action only or action and move, they are categorized into ⟨action⟩ verbs, and when they cover all the notions, they are ⟨situation⟩ verbs.

5. Conclusion

The main achievement of this paper is the proposal of two types of action : *action* and *situation*. *Action* refers to the continuous physical action. It can culminate in a reflexive action to the agent of the sentence, in case the action is carried too far. *Situation* refers to a certain kind of conditions in which the agent of the sentence is involved, where the agent can actually do the action or he/she can do other things. This idea accounts for the irregular behaviors of verbs of motion with respect to measure phrases and resultative phrases. Furthermore, it also accounts for the problem of verbs of communication concerning dative alternations and temporal phrases. We have showed that the two lexical notions, *action* and *situation*, work for determining the syntactic constructions of physical and abstract movements. Namely, there is an animate physical continuous/intermittent movement, like *walk* or *escape*, and in parallel, there is an abstract entity's continuous/intermittent movement, like *whisper* or *teach*. We, therefore, conclude that the notions, *action* and *situation*, are the key components of meaning which explains the apparently irregular syntactic behaviors between verbs of motion and those of communication.

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