Event Structure of Some Activity Predicates

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1. Introduction

I discuss the event structure of what is referred to as activity predicate in Korean. Activity predicate in English can be defined as the predication of an action over an individual (see Vendler 1957, Dowty 1979, Levin 1993, Rappaport Hovav & Levin 1998, Rothstein 2004, *inter alia*). For instance, some English verbs of manner of motion (a kind of activity predicates) are given in (1) (see more examples in Levin 1993: 89); they describe a manner of motion or means of motion (Levin 1993), as the name suggests.

(1) Jane jumped / walked / ran / rolled / spun.

The English activity predicates in (1) are considered to have the simplex event structure in (2b) having no smaller subevents: the event structures of the other aspectual classes are also given in (2) (see e.g. Rappaport Hovav & Levin 1998):

(2) a. States: [x <STATE>]
b. Activities: [x ACT<\textsc{manner}>]
c. Achievements: [\textsc{become} [x <STATE>]]
d. Accomplishments: [[x ACT] CAUSE [\textsc{become} [y <STATE>]]]

The corresponding Korean verbs of the English activity verbs are presented in the following:

    Tom-Nom jump-Pst-Dec / walk-Pst-Dec / run-Pst-Dec / roll-Pst-Dec / spin-Pst-Dec
    ‘Tom jumped / walked / ran / rolled / spun.’

It is generally assumed that the Korean activity verbs in (3) have the simplex event structure in (2b), just like the English counterparts.

In this paper, however, I propose the hypothesis that some "activity" predicates in Korean are actually a kind of accomplishment predicates with a complex causation event structure, rather than genuine activity predicates having the simplex event structure. I discuss two pieces of evidence supporting the hypothesis: (i) the Korean "activity" predicates allow failed attempt interpretations and (ii) the "activity" predicates in Korean can be modified by the time-span adverbials like *il pwun maney* 'in a minute'. It is shown below that failed attempt interpretation requires an accomplishment predicate (Lee 2015); the modification of *in*-adverbials is known to distinguish accomplishment from activity (see Dowty 1979, Rothstein 2004, among others).
2. Non-culmination interpretation

English accomplishment predicates (involving e.g. break, open, etc) require the occurrences of the inherent result states of the predicates. So as illustrated in (4) it is contradictory to deny the occurrences of the relevant results of the accomplishment predicates, after asserting the events of the predicates.

(4) a. Jane broke the window, #but it was not broken.
   b. Jane opened the window, #but it was not opened.
   c. Jane turned on the light, #but it was not turned on.
   d. Jane turned off the light, #but it was not turned off.

However, it is not that every language has the same property as English in this respect. In some other languages, it is not necessary that the result of an accomplishment predicate must actually occur (see Japanese in Ikegami 1985, Hindi in Singh 1998, Arunachalam & Kothari 2011, Korean in Park 1993, Lee 2004, Lee 2015, Thai in Koenig and Muansuwan 2000, Salish languages in Bar-el et al. 2005, Tamil in Pederson 2008, Chinese in Koenig and Chief 2008, among many others). When the result of an accomplishment predicate does not occur in the actual world, it is called non-culmination interpretation. There are two types of non-culmination interpretation, partial result interpretation (only some result actually occurs) and failed attempt interpretation (no result actually occurs). Consider the failed attempt readings of the Korean accomplishments in (5). Note, however, that the default interpretations of the accomplishment predicates are the readings with actual occurrences of the results.

   he-Nom window-Acc break-Pst-but at.all break-Pass-Comp Neg-Pst-Dec
   (lit.) 'He broke the window, but it was not broken at all.'
   he-Nom window-Acc open-Pst-but at.all open-Pass-Comp Neg-Pst-Dec
   (lit.) 'He opened the window, but it was not opened at all.'
   he-Nom light-Acc turn.on-Pst-but light-Nom turn.on-Pass-Comp Neg-Pst-Dec
   (lit.) 'He turned on the light, but it was not turned on.'
   he-Nom light-Acc turn.off-Pst-but light-Nom turn.off-Pass-Comp Neg-Pst-Dec
   (lit.) 'He turned off the light, but it was not turned off.'

In (5), the occurrences of the results are explicitly denied, but the sentences are not contradictory. Unlike English counterparts, the sentences in (5) are interpreted as failed attempt: that is, the subject intended to break the window, but he failed in (5a) probably because the window was very strong; the subject intended to open the window, but he failed in (5b) maybe since the window was very heavy; the subject intended to turn on the light, but he failed in (5c) perhaps due to the malfunction of the electric wiring connected to the light and similarly
for (5d).

The failed attempt readings of accomplishment predicates entail the intentionality on the part of the subject (see Lee 2015). When the accomplishment predicates are modified by an adverb like wuyenhi ‘accidentally’ or silswulo ‘by mistake’, the denial of the occurrences of the results causes contradictions.

(6) a. ku-ka wuyenhi/silswulo changmwun-ul kkay-ss-ciman,
    he-Nom accidently/by.mistake window-Acc break-Pst-but
    #cokumto kkay-ci-ci anh-ass-ta.
    at.all break-Pass-Comp Neg-Pst-Dec
    (lit.) 'He accidentally/by mistake broke the window, but it was not broken at all.'
    b. ku-ka wuyenhi/silswulo changmwun-ul yel-ess-ciman,
    he-Nom accidently/by.mistake window-Acc open-Pst-but
    at.all open-Pass-Comp Neg-Pst-Dec
    (lit.) 'He accidentally/by mistake opened the window, but it was not opened at all.'
    c. ku-ka wuyenhi/silswulo pwul-ul khie-ss-ciman,
    he-Nom accidently/by.mistake light-Acc turn.on-Pst-but
    #pwul-i khie-ci-ci anh-ass-ta.
    light-Nom turn.on-Pass-Comp Neg-Pst-Dec
    (lit.) 'He accidentally/by mistake turned on the light, but it was not turned on.'
    d. ku-ka wuyenhi/silswulo pwul-ul kke-ss-ciman,
    he-Nom accidently/by.mistake light-Acc turn.off-Pst-but
    #pwul-i kke-ci-ci anh-ass-ta.
    light-Nom turn.off-Pass-Comp Neg-Pst-Dec
    (lit.) 'He accidentally/by mistake turned off the light, but it was not turned off.'

Since an intention requires a belief about causation, it is argued that failed attempt reading is allowed only for accomplishment whose event structure is a causation (Lee 2015). As expected, achievements do not allow failed attempt interpretation, although the event structure of achievement can represent result of a causation:

(7) a. ku-ka samwusil-ey tochakhay-ss-ciman, #tochakha-l swu eps-ess-ta.
    bag-Nom office-at arrive-Pst-but arrive-Comp way not.exist-Pst-Dec
    (lit.) 'He arrived at the office, but he could not arrive at the office.'
    bag-Nom Jane-at recognize-Pst-but recognize-Comp way not.exist-Pst-Dec
    (lit.) 'He recognized Jane, but he could not recognize Jane.'
    c. ku-ka cip-ul ttena-ss-ciman, #ttena-l swu eps-ess-ta.
    bag-Nom house-Acc leave-Pst-but leave-Comp way not.exist-Pst-Dec
    (lit.) 'He left the house, but he could not leave the house.'

Furthermore, failed attempt reading is not available for state predicates, as shown in the following:
Summarizing, a generalization is that failed attempt reading requires a causation event structure; and in failed attempt reading the causing subevent must occur in the actual world but the caused subevent must be only intended (it must not occur). Based on this generalization, we can test the so-called "activity" verbs by investigating whether they allow failed attempt readings or not. In (9) below the verbs *ttwi-* 'jump', *ket-* 'walk' and *kwulu-* 'roll' seem to license failed attempt readings, even though a specified context appears to be required since the failed attempt readings are not the default readings of the verbs.

(9) a. [Context: Tom's legs are stuck in the mud.]
ku-ka onhimultahayse twi-ess-ciman, cokumto twi-l swu eps-ess-ta.
he-Nom with.all.the.strength jump-Pst-but at.all jump-Rel way not.exist-Pst-Dec
(lit.) 'He jumped with all the strength, but he could not jump at all.'
= (roughly) 'He tried to jump with all the strength, but he could not jump at all.'

b. [Context: Tom's legs are stuck in the mud.]
he-Nom with.all.the.strength walk-Pst-but at.all walk-Rel way not.exist-Pst-Dec
(lit.) 'He walked with all the strength, but he could not walk at all.'
= (roughly) 'He tried to walk with all the strength, but he could not walk at all.'

c. [Context: Tom's legs are stuck in the mud.]
he-Nom with.all.the.strength roll-Pst-but at.all roll-Rel way not.exist-Pst-Dec
(lit.) 'He rolled with all the strength, but he could not roll at all.'
= (roughly) 'He tried to roll with all the strength, but he could not roll at all.'

However, it seems not the case that every activity predicates allow failed attempt interpretations. Consider the following sentences:

(10) a. [Context: Tom's legs are stuck in the mud.]
he-Nom with.all.the.strength run-Pst-but at.all run-Rel way not.exist-Pst-Dec
(lit.) 'He ran with all the strength, but he could not run at all.'

b. [Context: Tom is tightly bound.]
ku-ka onhimultahayse chwumchwu-ess-ciman,
he-Nom with.all.the.strength dance-Pst-but
???cokumto chwumchwu-l swu eps-ess-ta.
at.all dance-Rel way not.exist-Pst-Dec
(lit.) 'He danced with all the strength, but he could not dance at all.'
If the sentences in (10) are really contradictory, how to account for the contrasts between (9) and (10) is an interesting question, but I do not discuss it here. What is important in the current study is that the failed attempt readings in (9) suggest that some verbs like *ttwi*- 'jump' and *kel*- 'walk' should be categorized as accomplishment, rather than the activity.

3. Temporal modification

Another property to distinguish accomplishment from activity is temporal modification (*in x time* or *for x time*). In (11a), the accomplishment predicate *opened the door* is compatible with the *in-adverbial in five minutes*, but in (11b) the activity predicate *walked* is not compatible with the *in-adverbial in five minutes*.

(11) a. He opened the door in/?for five minutes.
   b. He walked for/*in five minutes.

This difference in terms of temporal modification can be explained by the (a)telicity (Dowty 1979). Verbs like *open* are accomplishment whose event structure includes an inherent endpoint (i.e. telic), but verbs like *walk* are not accomplishment, but activity whose event structure does not include an inherent endpoint (i.e. atelic).

Under the assumption that the accomplishment and activity in Korean also have the same property with respect to (a)telicity, we can test whether the manner of motion verbs are activity or accomplishment. In fact, as shown in (12), the canonical accomplishment verbs *yel*- 'open' and *chilha*- 'paint' can be modified by the *in-adverbial il pwun-maney* 'in one minute'.

(12) a. ku-ka il pwun-maney/?tongan mwun-ul yel-ess-ta.
   he-Nom one minute-in/for door-Acc open-Pst-Dec
   (lit.) 'He opened the door in/for one minute.'

b. ku-ka il pwun-maney/tongan byek-ul chihay-ss-ta.
   he-Nom one minute-in/for wall-Acc paint-Pst-Dec
   (lit.) 'He painted the wall in/for one minute.'

Like the accomplishment predicates in (12), the manner of motion verbs in (13) can be modified by the *in-adverbial il pwun-maney* 'in one minute'.

(13) a. [Context: Tom's legs are stuck in the mud.]
   ku-ka il pwun maney/tongan ttwi-ess-ta.
   he-Nom one minute in/for jump-Pst-Dec
   (lit.) 'He jumped in/for one minute.'

b. [Context: Tom's legs are stuck in the mud.]
   ku-ka il pwun maney/tongan kel-ess-ta.
   he-Nom one minute in/for walk-Pst-Dec
   (lit.) 'He walked in/for one minute.'
c. [Context: Tom's legs are stuck in the mud.]
  ku-ka il pwun maney/tongan kwul-less-ta.
  he-Nom one minute in/for roll-Pst-Dec
  (lit.) 'He rolled in/for one minute.'

In (13a), the sentence with the in-adverbial may be used in a context wherein Tom tried to jump for one minute but it was not easy to jump since his legs were stuck in the mud, but he finally succeeded in jumping. The availability of the modification with il pwun maney 'in one minute' seems to support the new categorization of the verbs of manner of motion.

However, achievement predicates can also be modified by il pwun maney 'in one minute' as illustrated in the following.

(14) a. ku-ka samwusil-ey il pwun maney/*tongan tochakhay-ss-ta.
    bag-Nom office-at one minute in/for arrive-Pst-Dec
    'He arrived at the office in/*for one minute.'

   b. ku-ka Jane-ul il pwun maney/*tongan alapo-ass-ta.
    bag-Nom Jane-at one minute in/for recognize-Pst-Dec
    'He recognized Jane in/*for one minute.'

Then the modification of the in-adverbial in (13) does not necessarily support the claim that the manner of motion verbs are accomplishment. A grammatical property to distinguish achievement from both accomplishment and activity is the modification of for-adverbials. As in (14) the achievement predicates cannot be modified by a for-adverbial, while the accomplishment and activity allow the modification of for-adverbial, as shown in (11) and (12). And in (13), the manner of motion verbs are modified by il pwun tongan 'for one minute', suggesting that they are not achievement. This justifies the use of the in-adverbial in (13) as evidence for the new categorization.

Based on the two pieces of evidence presented above, it is more plausible to view the Korean verbs such as ttwi- 'jump' and kel- 'walk' as accomplishment. I refer to this kind of accomplishment as activity-accomplishment and propose the following complex causation event structure consisting of two subevents:

(15) Activity-Accomplishment: [[x ACT] CAUSE [x ACT<MAN>]]

According to (15), the causing subevent [x ACT] is an unspecified activity, and the caused subevent [x ACT<MAN>] specifies the manner of the verb.

4. Extension to other verbs

I show in this section that in addition to the manner of motion verbs, some other kinds of "activity" verbs are in fact accomplishment verbs.
4.1 Manner of speaking verbs

Verbs of manner of speaking (e.g. *shout*, *whisper*, *scream*, etc.) describes the manner on how the vocal sounds are articulated, and they are a type of activity verbs. It seems that some verbs of manner of speaking in Korean allow their failed attempt readings as follows:

(16) a. [Context: Jane was not completely recovered from injury to her vocal cords.]


Jane-Nom with.all.the.strength shout-Pst-but voice-Nom come.out-Comp Neg-Pst-Dec

(lit.) 'Jane shouted with all the strength, but her vice did not come out.'

b. [Context: Jane was not completely recovered from injury to her vocal cords.]

Jane-i onhimultahayse soksaki-ess-ciman,

voice-Nom come.out-Comp Neg-Pst-Dec

(lit.) 'Jane whispered with all the strength, but her vice did not come out.'

Furthermore, the manner of speaking verbs are compatible with the time-span adverbial *il pwun maney* 'in one minute':

(17) a. [Context: Jane was not completely recovered from injury to her vocal cords.]

Jane-i il pwun maney/tongan solichi-ess-ta.

Jane-Nom one minute in/for shout-Pst-but

(lit.) 'Jane attempted to shout for one minute and then finally succeeded in shouting'.

b. [Context: Jane was not completely recovered from injury to her vocal cords.]

Jane-i il pwun maney/tongan soksaki-ess-ta.

Jane-Nom one minute in/for whisper-Pst-Dec

(lit.) 'Jane attempted to whisper for one minute and then succeeded in whispering. The verbs of manner of speaking are parallel to accomplishment predicate in terms of the two properties, which indicates that they should belong to accomplishment.

4.2 Perception verbs

Some Korean perception verbs appear to permit their failed attempt readings:
5. Conclusion

I argued here that some Korean predicates which have been referred to as activity predicates are actually a kind of accomplishment predicates having the complex causation event structure. As evidence to support this new categorization, I provided the availability of failed attempt interpretations and the modification of in-adverbials. This analysis of accomplishment extends to manner of speaking verbs and perception verbs in Korean. According to our knowledge of facts about the real world, there must be a causing action to jump or walk; without some kind of causing event, we cannot jump or walk. However, in English this causal relation involving activity is linguistically encoded as having a simplex event structure probably because the causing event (e.g. internal functions of our body) of jumping or walking is not very obvious; but nonetheless, in Korean the causal relation is linguistically encoded as having a complex causation event structure. Other languages like Chinese and Japanese permit failed attempt interpretations of accomplishment predicates. It would be interesting to investigate whether the so-called activity
predicates in those languages also allow failed attempt readings and to look into what event structure they actually have.

References


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