This paper is concerned with the interaction between aspectual classes of verbs and time adverbials in Korean. The time adverbials that will be given special attention are tojan (corresponding roughly to ‘for (the period of)’) and tojan-e (corresponding roughly to ‘in the period of’) phrases, which serve to distinguish different aspectual classes of verbs.

The time adverbial with tojan is most compatible with states and activities but not normally with accomplishments and achievements. I will adopt basically Vendler’s classification of verbs (cf. Dowty 1979). The prototypical situation for the tojan adverbial can be conceived as one in which reference is made to all subintervals of the mentioned interval, so that the state or activity in question can be true all the time through the whole given interval.

Let us consider the compatibility of the tojan adverbial with the different aspetual classes, taking examples. First, let us observe the class of state verbs.

\[(1) \text{na-nin tu sikan tojan ti}^\text{ip-i karjew-as'- ta} \]

I Top two hour for back Subj itchy Past Decl

‘My back itched for two hours.’

\[\phi \text{ is true } \left( \begin{array}{c} 2 \text{ hrs} \\ \end{array} \right) \blacktriangleleft \text{utterance time} \]

Other verbs in this class include other sensation verbs like apfi-ta(painful), mæp-ta(hot), mik'irsp-ta(slippery), sik'irsp-ta(noisy), muksp-ta(heavy); apperance verbs like jep'it-ta(pretty), sinsiha-ta(fresh), noph-ta(high), khi-ta(big); inherent nature verbs like sanap-ta(fierce); emotive verbs like
silphi-ta (sad), dop-ta (lonely), sapsophha-ta (regretful); evaluative verbs like cuijohta-ta (important), nap’i-ta (bad), phjønliha-ta (convenient); attitude verbs like chincolhata (kind), kongsonha-ta (polite), kjømsønha-ta (humble), komanja-ta (haughty); is’-ta (be), kath-ta (identical), etc. The toyan adverbial is highly compatible with sensation and attitude verbs; sensation may begin, continue for any length of time and then terminate and attitude may be subject to control. Emotive verbs are less compatible with short period or specific time point adverbials, since the state of emotion has a rather long period of time to continue and has less clear starting and ending points than sensation.

(3) ??na-nin to sikan toyan silphi-øs’-ta
‘I was sad for two hours.’

Cf. na-nin haru copil silphi-øs’-ta
‘I was sad all day long.’

The same adverbial is most compatible with is’-ta (be), since the state of existence can have clear starting and ending points and a uniformly continuing period. The toyan adverbial is less compatible with appearance or inherent nature description verbs, since their states have no clear beginning and ending points and usually continue for a comparatively long period of time.

Let us turn to the class of activity verbs. The toyan adverbial is highly compatible with activity verbs. Observe.

(4) Cholsu-nin se sikan toyan kør-øs’-ta
Top three hours for walk Past Decl
‘Cholsu walked for three hours.’

This class includes such verbs as ul-ta (cry), us-ta (smile), t’wi-ta (run), ca-ta (sleep), malha-ta (talk), chumchu-ta (dance), masi-ta (drink), jnjukha-ta (play), uncunha-ta (drive), ‘k’il-ta (pull), chac-ta (look for), po-ta (watch), tit-ta (listen), kuri-ta (roll), tol-ta (rotate), kjøsekha-ta (continue), etc. Agency of the subject of the verb is the most important character of this class of verbs and when the verb takes an animate subject volition is
involved.

The movement verbs of this class, however, may not take any goal or extent expression. This point will be raised later in the discussion of accomplishment verbs. The attitude verbs such as chincalha-ta (kind) included in the state class may have certain characteristics of this activity class. But the attitude verbs cannot take the progressive form (-ko is'-ta), while activity can (cf. ‘She is being kind.’).

On the other hand, achievement verbs do not occur with the togan adverbial. Observe the following.

(5) *Minsu-nin han sikan togan hækjónchæk-il palkjánha-jaš'-ta
Top one hour for solution OM find Past Decl
‘Minsu found a solution for an hour.’

Verbs belonging to this class are: tah-ta (reach), t'ona-ta (leave), sl-ta (freeze), cuk-ta (die), nah-ta (be born), state verbs + -ci-ta (become), palk-ta (brighten), štup-ta (darken), kut-ta (harden), sik-ta (cool), sicakha-ta (begin), kichi-ta (stop), pat-ta (receive), et-ta (acquire), ilh-ta (lose), nunchi-chæ-ta (become aware of), k'etat-ta (realize), ara-chæ-ta (recognize), kis'haka-ta (remember), ic-ta (forget), k'æ-ta (awaken), cam-til-ta (fall asleep), ip-ta (put on), pat-ta (take off), etc.

Some verbs from this class such as ic-ta (forget), kis'haka-ta (remember), ip-ta (put on) can occur with the togan adverbial and in that case the adverbial shows how long the result state of the achievement continues. Consider the following.

(6) Yunhi-nin ki il - il haru togan ic - aš' - taka taim nal
Top the event OM a day for forget Past and then next day
kiakha - jaš' - ta
remember Past Decl
‘Yunhi forgot the event for a day and then she remembered it the next day.’

Here ‘haru togan ic-aš’-ta’ is similar to the result state expression ‘haru togan ic-ko-is'-aš’-ta.’ (Such verbs as kichi-ta take the -a is'-ta form
instead.) Observe the following.

(7) pi - ka tu sikan toyan kichi - as' - ta (=kichi-ə is'-ta)
   rain SM two hours for stop Past Decl
   ‘Rain has stopped for two hours.’

The reason why achievement verbs rarely occur with toyan is that the achievement involved is perceived to take place momentarily rather than for any prolonged period of time. Therefore, in such cases as nok-ta (melt) and ol-ta (freeze), parts of a given amount of snow and water may be perceived to go on achieving melting and freezing respectively. So the progressive form ‘nun (snow)-i nok-ko is’-ta’ entails ‘nun-i nok-as’-ta’. And ‘nun-i han sikan toyan nok-as’-ta’ can rarely occur but once it occurs it does not have any concept of the extent of the snow involved and there must be someone present who observes the process for the whole period of one hour). In the progressive form its difference from activity lies in that it involves change of state whereas activity does not. Likewise all the achievement verbs involve change of state, possibly with BECOME as the higher predicate.

The class of accomplishment verbs cannot occur with the toyan adverbial, either. Let us observe examples.

(8) *na-nin han sikan toyan hakkjo-k'aci ka - as’ - ta
   I Top one hour for school up to go Past Decl
   ‘I went up to the school for an hour.’
(9) *? ilk'un-til-in tu tal toyan cip tu chae - ril
    worker Pl Top two month for house two Classif OM
    ci - as' - ta
    build Past Decl

This class includes: (won(circle)-il, kirim(picture)-il) kiri-ta, cit-ta(build), mantil-ta(make); homul-ta(destroy), ciu-ta(erase), (NP-ril) cuk-i-ta
(kill), k'æt'iri-ta(break); chilha-ta(paint); cop-hi-ta(narrow), nalp-hi-ta

1) At the workshop, Soo-song Shin raised the question of the possible occurrence of nok-ta with toyan.
Anyone who accepts (8) or (9) as grammatical is interpreting them in the sense of toyan-e with e deleted. If there is no extent expression in the object NP, the same verb can be used for activity. Consider.

(10) ki saram-til-in il-njøn toyan cip-il ci-øs'-ta
the man PI Top one year house OM build Past Decl

'They built houses for one year.'

Here cip(house) may be used in the general kind sense making the VP an activity expression. In this case there is no concept of extent involved. It is noted here that the same kind sense is expressed in the singular form cip in Korean, whereas it is expressed in the indefinite plural form 'houses' in English. If cip is interpreted in the singular sense (though it is not normally done) the sentence can convey no sense of completion in building a house.

The major difference between activities and accomplishments, as is well understood, is that a sentence with an accomplishment verb in a progressive tense cannot entail the same sentence in a simple tense, whereas a sentence with an activity verb can. Consider.

(11) a. ki ai-nin won han-kae-ril kiri-ko is'-øs'-ta
the child Top circle one Classif OM draw Prog Past Decl

'The child was drawing a circle',

b. ki ai-nin won han-kae-ril kiri-øs'-ta

Past

'The child drew a circle'.

The toyan adverbial cannot be attached to either (11a) or (11b). If someone says 'ki ai-nin il (one)-pun(minute) toyan won-il kiri-øs'-ta', his intended meaning is with the kind sense of won, making the VP an activity rather
than an accomplishment.

In Korean, the verb chac-ta is ambiguous between 'look for' (or 'try to find') and 'find', and it appears as if it were an accomplishment verb. But chac-ta₁ (look for) is an activity and chac-ta₂ (find) an achievement; the past progressive form ‘ai (child)–ril chac-ko is'-as'-ta’ is necessarily in the 'look for' sense and entails the simple past ‘ai-ril chac-as'-ta’ in the same sense. Chac-ta₁ can have the togal adverbial modification, which is not true of chac-ta₂ (find). Chac-ta₂ is a verb of momentary achievement and shows no result state that can be modified by the togal phrase. It cannot occur in the volitional context.‘(chac)-taka mal-as'-ta’ (was (look) ing (for) and then stopped); chac in this context must be the activity verb. Al-ta (know) in the momentary achievement sense can hardly occur in the same context (*? al-taka mal-as'ta) but the occurrence of a proverb saying ‘al-taka-to mori-1 il’ (something one almost comes to know but fails to) is interesting to see.

The verb muk-hi-ta (have NP stay) behaves as an accomplishment verb with some extent NP as follows:

(12) John-in se sonnim-il chare-ro kathin jakwan-e muk-hi-
   Top three guest OM turn in same hotel at stay have
   as'-ta
   Past Decl
   ‘John had three guests stay at the same hotel in turn.’

Consequently, the togal phrase such as sahil togal (for three days) cannot be put before se sonnim in the above sentence. The phrase sahil togal (s'ik) can be made to modify muk (stay) by being placed just before it. The causative verb cae-u-ta (have NP sleep) has the same behavior (cf. *na-nin se sikan (hour) topan se ai-ril cae-u-as'-ta). Therefore, the occurrence of the togal adverbial must be restricted in the underlying form of a sentence like (12) and its movement must be constrained (cf. my 1973). It reveals scope ambiguity. All the accomplishment verbs may be analysed as involving [φ CAUSE [BECOME φ]]. Although it takes time to CAUSE the change, the goal of state change is understood normally to be reached
momentarily.

So far I have discussed the compatibility of the *to*an phrase with four different aspectual classes of verbs. Now let me turn to the compatibility of the *to*an-e adverbial with the different classes of verbs. First, observe the classes of state verbs.

(13) *?na-nin tu sikan to*an-e tiŋ-i karjɔw-ɔs’-ta
    I Top two hour period in back SM itchy Past Decl
    `My back itched in two hours.'

However, the same sentence becomes all right with extent NP's. Observe.

(14) na-nin tu sikan to*an-e tiŋ-i se kunde-ka karjɔw-ɔs’-ta
    three place SM
    `Three spots in my back itched in two hours.'
(15) na-nin tu sikan to*an-e tiŋ-i se pɔn karjɔw-ɔs’-ta
    three time
    `My back itched three times in two hours.'

If the time period is specifically restricted *to*an-e may occur as follows:

(16) na-nin cusa mac-in cikhu tu sikan to*an-e tiŋ-i
    I Top injection get Past Rel right after two hour period in back
    i karjɔw-ɔs’-ta
    SM
    `My back itched in two hours right after I got a shot.'

Even in this case the interpretation is that my back itched (at least) once.

The *to*an-e phrase cannot occur with activity verbs as follows:

(17) *Minsu-nin se sikan to*an-e kɔr-ɔs’-ta
    Top three hour period in walk Past Decl
    `Minsu walked in three hours.'

However, observe the following possibility:

(18) Minsu-nin næ-ka ɔps-nin to*an-e kɔr-ɔs’-ta
    Top I SM absent Rel walk Past Decl
    `Minsu walked in my absence.'
The adverbial can occur with achievement verbs as follows:

(19) Yôphi-nin han sikan \textit{tojan-e} hækjalchæk-il palkjanha-\textit{jas'-ta}  
Top one hour solution OM find Past Decl  
‘Yonghi found a solution in an hour.’  
Cf. \((Vt: t \in 1 \text{ hr})\) \(AT (t, \text{BECOME} [\text{KNOW} (y, s)])\)

The \textit{tojan-e} phrase also occurs freely with accomplishments as follows:

(20) ilk’un- til- in tasos tal \textit{tojan-e} kjou cip han chae - ril ci-  
worker Pl Top five month only house one Classif OM build\(\text{\textit{\textit{\textit{o}s’ - ta}}}\)  
Past Decl  
‘The workers built only one house in five months.’

(21) Minsu-nin se sikan \textit{tonay-e} kjøncu - k’aci kor - \textit{\textit{\textit{o}s’ - ta}}  
Top three hour Kyongju up to walk Past Decl  
‘Minsu walked to Kyongju in three hours.’

(22) nuna-nin han sikan \textit{tojan-e} se aki - ril cæ - u - \textit{\textit{\textit{o}s’ - ta}}  
sister Top one hour three baby OM sleep Caus Past Decl  
‘Sister got three babies off to sleep in an hour.’

Now we can notice that in general \textit{tonay} is compatible with states and activities, whereas \textit{tojan-e} is with achievements and accomplishments complementarily. Let me further examine how \textit{man-e} (=right after) and \textit{an-e} (within) are compatible with those classes.

(23) (state) a. na-nin tu sikan \textit{man-e} (right after) tip-i karjøw-\textit{\textit{o}s’-ta}  
‘My back itched right after two hours.’  
(Here my back didn’t itch for two hours and then it itched.)  
b. ??na-nin tu sikan \textit{an-e} (within) tip-i karjøw-\textit{\textit{o}s’-ta}

(24) (activity) a. ki ai (child)-nin han sikan \textit{man-e} kør-\textit{\textit{o}s’-ta}  
(The child walked right after one hour.)  
b. ?ki ai-nin han sikan \textit{an-e} kør-\textit{\textit{o}s’-ta}

(25) (achievement) a. Minsu-nin han sikan \textit{man-e} hækjalchæk-il pal  
kjønha-\textit{\textit{jas’-ta}}
(One hour passed before Minsu could find a solution.)

b. Minsu-nin han sikan an-e hækjolchæk-il palkjŏn-
ha-jaes'-ta
(Minsu found a solution within one hour.)

(26) (accomplishment) a. ilk’un-til-in tasas tal man-e kjou cip han chae-
ril ci-ōs’-ta
(The workers built a house only after five months. The workers could have spent all of or less than five months for the completion but the idea or preparation should have started five months before the completion. However, if the time period is long enough, say, five years, and the time needed for building a house is not perceived as a particular duration, then it may mean they waited for five years before they could start and complete building a house.)

b. ilk’un-til-in tasas tal an-e cip han chae-ril ci-
ōs’-ta
(The workers built a house within five months.)

The man-e adverbial can occur with states and activities only in the inchoative (BECOME) sense of the verbs involved. For instance, in (23a) karjow-ō ci(become)-ōs’-ta(become itchy) and in (24a) kat-ke tφ(become) -ōs’-ta(came to walk) are their real meanings. The an-e adverbial, unless the time period is specifically designated, is not quite compatible with those verbs as we can see in (23b) and (24b). These adverbials are quite compatible with achievement and accomplishment verbs instead.

Let me turn to the negation of the aspectual classes of verbs. All the negative sentences of any kinds of verbs show the sense of state. Observe the following.

(27) na-nin tu sikan tojan tiŋ-i kariŏp-ci (Comp) ani (not)-ha-jaes’-ta
(My back didn’t itch for two hours.)
(28) Minsu-nin se sikan *t*ο*γ*α*ν  kat-ci *ανι* ha-*jàs’*-ta
(Minsu didn’t walk for three hours.)
(29) Yunhi-nin han sikan *t*ο*γ*α*ν  hækjolchæk-il palkjanha-ci *m*ο*ς*(not able)-ha-*jàs*-ta
(Yunhi couldn’t find a solution for an hour.)
(30) ki saram-til-in tasas tal *t*ο*γ*α*ν  cip han chæ-ril cic-ci *ανι*-ha-*jàs’*-ta
(They didn’t build a house for five months.)

All the negative sentences take *t*ο*γ*α*ν, not *t*ο*γ*α*ν-*e*, for the sense of the stative duration of absence. (27) and (28) can be ambiguous between the negative state sense already mentioned (‘itching’ and ‘walking’ never happened for two hours and three hours respectively) and the external negation sense (*I*’*s not the case* that my back itched for two hours (or Minsu walked for three hours); in these cases ‘itching’ and ‘walking’ could have happened, even though not for the whole specified period of time). This scope ambiguity cannot occur in achievements and accomplishments, since *t*ο*γ*α*ν is impossible in their positive statements (see (29, 30)). It is to be noted that momentary achievement verbs take the negative morpheme *m*ο*ς*(not able) instead of *ανι* (see (29)). This is because momentary achievements are hardly subject to volitional control, for which usually *ανι* (not) is used. Because of this stative nature of negative verbs, the following phenomenon occurs in English:

(31) a. He won’t go to Kyoto *until* next Saturday.
    b. *He won’t go to Kyoto *by* next Saturday.
    c. He will go to Kyoto *by* next Saturday.
    d. *He will go to Kyoto *until* next Saturday.

Now let us consider further the difference between *t*ο*γ*α*ν and *t*ο*γ*α*ν-*e*. The *t*ο*γ*α*ν adverbial depicts the sense of continuation for the whole specified period of time. Therefore, the prototypical situation for the adverbial is a homogeneous state and, next, a homogeneous activity. The negative state is one instance and the following is another:
There is no interruption whatsoever in the mountain’s being high for the specified period of time. The only thing is that, in this case of state, change is not easy and the viewer’s situation rather than the state of the object changes. Some examples of homogeneous activity could be is’-ta (exist), ca-ta (sleep), sumshwi-ta (breathe), etc.

Prototypically, a viewer must be present to observe the state or activity for the whole period of time specified by the toyan adverbial, for the state or activity must continue without interruption for the use of toyan. However, pragmatically we allow gaps in this continuation and it is not easy to determine the extent of gaps allowable. When you have [n + time unit + toyan] in the adverbial, the minimally required interval could be (n - 1 -) unit. But depending on the kinds of verbs and contexts, there is much more variation. If you want to say,

(33) na-nin ilsæp toyan ki jaca - ril sarapha-jas’-ta
I Top life the woman OM love Past Decl
‘I loved her for my life.’

it is not enough for you to love her just for a while when you met her and again for a while when you die. There must be at least some period in the middle and much more so that the whole can be viewed or perceived as a continuation.

On the other hand, toyan-e reveals the sense of time period at which some achievement or accomplishment takes place momentarily (at a time point) or taking some subinterval which may include the whole specified period. In this case, a viewer seems to be out of the time period putting the period on the line of continuous time. For the use of toyan-e, there must be some goal (even extent can be conceived as goal) in mind. Observe.
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(34) sip-pun toyan-e il-il ulmana ha-1 su is'-na?
10 minute work OM how much do Fut Rel way be Q
'How much work can you do in the period of ten minutes?'

The speaker of (34) has the extent goal in mind as a point of question. When the extent goal of ability is asked this way the time period to be used is the whole specified period, since ability (or efficiency) is usually measured by its maximum done in a specified time or by the minimal length of time spent on some specified task (cf. pæk (100) meter-ril (OM) mjäs (how many) cho (minute) toyan-e t'wi(OM)run-na (Q)? ‘In how many minutes do you run 100 meters?’)

Consider the differences in the following.

(35) a. Tokyo-e is'-nin toyan na-nin chinku cip-e məməl-əs'-ta
in be Rel I Top friend house at stay Past Decl

‘For the period of my being in Tokyo I stayed at a friend’s.’

b. ? Tokyo-e is'-nin toyan-e na-nin chinku cip-e məməl-əs'-ta

c. Tokyo-e is'-nin toyan-e na-nin chinku cip-e məməl-əs'-əs'-ta
(məməl-in cak-i is'-ta) ‘While in Tokyo I (at least) once stayed
at a friend’s.’

Another difference lies in that toyan can have an immediately following special marker such as in (Topic), il(OM, Emphatic), to(also) or man (only), whereas toyan-e cannot have a following marker il, though it also can have in, to or man following without deletion of e.

The difference between toyan and toyan-e in Korean is analogous, to a certain degree, to the difference between the two locative adverbials -esə and -ə respectively. The locative -esə shows the sense of participation and use of the space, whereas the locative -ə shows the sense of place point viewed from a distance.

Still things remain to be done on the important difference between the two time adverbials in connection with aspectual classes of verbs in Korean.
References

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