Achievement Verbs and the Progressive Meanings

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Abstract

This paper deals with achievement verbs based on Vendler's (1967) four categorizations of aspectual properties of verbs. It has been widely thought in the literature that achievement verbs express an event that occurs at a single moment as typically characterized as the featural opposition [+telic, -stages] in Rothstein (2004). I argue against this conventional analysis on achievement verbs and show that some subtypes of achievement verbs denote a durative event with a focus on the process of change. Furthermore, I discuss progressive forms of achievement verbs and point out the differences in meaning according to the subclasses of achievement verbs. My own claim is that the differences are attributed to the distinction between process- and goal-focusing verb types associated with telicity and focus-placement.

Key words: achievement verbs, aspect, telicity, progressive achievements
到達動詞，アスペクト，完結性，到達動詞進行形

1. Introduction

According to Vendler's (1967) four categories of events based on the time schemata, i.e., states, activities, accomplishments, and achievements, achievement verbs are thought to express an occurrence at a single moment like *reach the hilltop* and *spot/recognize something*.[1] This viewpoint on achievements has been widely accepted in the literature and many researchers treat achievements as punctual events (Smith 1991, Tenny 1992, Beavers 2002, among many others). The purposes of this paper are reconsideration of this conventional analysis of achievements and exploration of what 'achievement verbs' really are. In the following discussions aspectual properties and the meanings of progressive achievements will be investigated in depth. We claim that difference in meaning of progressive achievements just parallel the distinction between goal- vs. process-focusing verb types.

This paper is organized as follows:

In the next section we point out the inadequacy of Rothstein's (2004) definition of achievements based on the featural opposition. In section 3, aspectual properties are investigated over a vast range of change verbs and we make a revision of the scope of achievement verbs. Section 4 discusses the meanings of progressive achievements and difference in meaning seen among the subclasses. Section 5 is a conclusion.

2．Inadequacy of Rothstein's (2004) featural opposition

Rothstein (2004) distinguishes Vendler's four verb classes in terms of what she thinks 'two crucial aspectual properties,' [±stages] and [±telic].

(1) States:　　　　　　　　[−telic, −stages]

　　Activities:　　　　　　[−telic, +stages]

　　Achievements:　　　　[+telic, −stages]

　　Accomplishments: [+telic, +stages] (Rothstein 2004: 12)

[±telic] denotes whether or not the event implies the telic point or the final goal.

[±stages] denotes whether or not the event is constituted by a set of 'process stages' (cf. Landman (1992)). According to Rothstein's featural opposition, achievement verbs, which are characterized by [+telic, −stages], represent a punctual change of state that will develop into a specific goal.

Furthermore, Rothstein assumes the templates of the four event types as indicated in (2).

(2) Verb class templates

　a. States　　　　　　　　λ e.P(e)

　b. Activities　　　　　　λ e.(DO(P))(e)

　c. Achievements　　　　λ e.(BECOME(P))(e)

　d. Accomplishments　　λ e.$\exists e_1 \exists e_2$ [e=^{s}($e_1 \cup e_2$)$\land$(DO(P))(e_1)$\land$Cul(e)=e_2]

　(Rothstein 2004: 35)

What the template of achievements (2c) means is that achievements are events (e) that change (BECOME) into a state (P). The characterization by the featural opposition, [+telic, −stages], restrict achievements only to a punctual change into state with a specific final goal, which seems incompatible with our intuition that the processes

of change in some cases are slow and gradual. This consideration leads us to the conclusion that the scope of achievements defined by Rothstein is inappropriate. In the next section we will make a revision of the scope of achievement verbs and a broader range of change verbs will be shown as the subclasses of achievement verbs.

3. Achievement verbs and telicity/duration tests

In the previous section we pointed out the inadequacy of the definition of achievement verbs by Rothstein and argued that a wider range of change verbs should be taken into consideration as achievement verbs. Thus we propose a revision of achievement verbs as shown in（3）（cf. Dowty（1979: 68））.

（3）Achievement verbs

A. Cognition（realized as transitive verbs）:

   detect, find, discover, notice, perceive, recognize, spot, witness

B. Acquisition and Loss（realized as transitive verbs）:

   acquire, get, lose, win

C. Arrival and Departure（realized as transitive/intransitive verbs）:

   arrive, land, reach, leave, depart

D. Emergence, Appearance and Disappearance（realized as intransitive verbs）:

   happen, occur, emerge, sprout, arise, appear, disappear, die

E. Change of quantity（realized as intransitive verbs）:

   increase, decrease, ascend, descend, rise, sink, fall, drop, lower

F. Change of State（Bounded states）（realized as intransitive verbs）

   break, shatter, split, explode, collapse, open, close, shut, melt, freeze,
   caramelize, solidify, empty, straighten, dry, flat

G. Change of State（Unbounded states）（realized as intransitive verbs）[2]

   cool, warm, narrow, slim, slow, thin, lengthen, shorten, widen, broaden,
   whiten,dampen, fatten, thicken, heighten, lighten, loosen, sharpen, soften, harden,
   stiffen, weaken, strengthen, tighten, fossilize, industrialize, modernize,westernize,
   fade, rot, deteriorate, corrode, decay, shrivel, age, shrink, decline, yellow

In order to assess the validity of the featural opposition ［+telic, −stages］ proposed

by Rothstein, telicity and duration of the event will be examined according to the subclasses assumed in （3）.

3.1　Telicity

The simplest test for telicity is a well-known *in/for a time* diagnosis, where atelic and telic sentences occur with *for* and *in a time*, respectively.

（4）a. John ran in the park for/*in half an hour.

　　b. John ran to the park*for/in half an hour.

According to this cooccurrence selection, the groups （E） and （G） are distinguished from the other groups in that the verbs belonging to （E） and （G） accept both *for* and *in a time* as is shown in （5）.

（5）a. The soup cooled {for/in} ten minutes.（Dowty 1979: 88）

　　b. The plane descended {for/in} 20 minutes.（Hay, Kennedy and Levin 1999: 40）

　　c. The water level rose for a week after the flood.

　　c'. The water level rose 5 centimeters in two days because of the flood.

The difference between （5c） and （5c'） shows that 'difference value'（Hay, Kennedy and Levin 1999: 4）or the difference of the amount of the change denoted by the verb takes a crucial role in determining telicity of the predicate. Whereas the predicate is atelic without an explicit statement of the difference of change amount like （5c）, the predicate is telic when the difference value is made explicit like （5c'）.

On the other hand, the verbs belonging to the groups （A）, （B）, （C）, （D）, and （F） express a change into definite final state and the event predicated by the verb is completed just when the object attains the goal. Therefore, the event is always telic as will be indicated by the rejection of cooccurrence with *for a time* in （6）.

（6）a. John spotted his partner at the party {*for/in} a moment.

　　b. The children in the English-class acquired those words {*for/in} two hours.

　　c. The plane will land on the airport {*for/in} five minutes.

　　d. The injured man died {*for/in} two hours.

　　e. The tank emptied after the plug was pulled {*for/in} ten minutes.

These observations bring us to the conclusion that most subclasses of achievement verbs are characterized by the feature ［+telic］ whereas change of quantity verbs and change of unbounded state verbs have no specific property in telicity.

3.2 Duration of the event

Let us turn to the other feature of［±stages］. It represents whether or not the event presupposes a process stage along a change of state. The cooccurrence with a gradual adverbial expression will be helpful as a diagnosis of［±stages］. According to Pinōn (2000), *gradually* requires an explicit designation of 'a scale of change' (Pinōn (2000: 449)). This means that the event denoted by the verb occurring with *gradually* is assumed to presuppose a process stage, and therefore the event is gradual. In the following discussion we will present the findings whether the verbs of each class are compatible with *gradually*.

3.2.1 *Group（A）*

Among the verbs of group（A）, there is diversity in the possibility of cooccurrence with *gradually*. First, possible cases are shown in（7）.[3]

(7) a. After a series of experiments, the scientist gradually discovered a new type of gene.

　　a' The scientist suddenly discovered a new type of gene.

　　b. After he returned, he gradually noticed their sickness and then prepared an antidote.（*WB*）

　　b'. I noticed right away that he was telling a lie.

　　c. I gradually perceived a change in her attitude.

　　c'. I perceived at once the change in her attitude.

　　d. She gradually recognized the granting voice of Dr. Sarnoff.

　　d'. I recognized it instantly and felt a quiver of panic.（*COB*）

Discover, notice, perceive, and *recognize*, which are thought to express punctual cognition, can occur with *gradually* as well as instantaneous adverbs like *immediately* and *instantly*. This means that these verbs imply the presence of a process stage along the change of state.

Contrary to this, *find* and *witness* reject the cooccurrence with *gradually*.

(8) a. *I gradually found the receipt while I was putting away old teaching material.

　　b. *Anyone who gradually witnessed the attack should call the police.

The difference in cooccurrence selection with *gradually* depends on the lexical meaning of the verb. While the acceptable verbs as in（7）imply some process stages

along a change of cognition, *find* and *witness* imply cognition occurring just in an instance without any process before.

3.2.2　*Group*（B）*and*（C）

As for the groups（B）and（C）, almost all the verbs except for *acquire* reject the cooccurrence with *gradually*.

（9）a. Using the notebooks as a reference, I gradually acquired a vocabulary of plants with which to finally begin making the pictures I had in mind.（*WB*）

　　b. *Kate gradually lost her purse in the train this morning.

　　c. *The guest gradually {arrived at/left} the inn.[(4)]

　　d. *The plane gradually {landed at/took off} Kennedy Airport.

　　e. *The party gradually reached the summit of Mt. Everest.

These results suggest that acquisition/loss verbs and locative arrival/departure verbs generally denote an instantaneous change of state.

3.3.3　*Group*（D）

The verbs belonging to the group（D）have no problem with the cooccurrence with *gradually*. The exceptions for this are *happen* and *die*.

（10）a. *The accident gradually happened on a notorious black spot on the A43.

　　b. *The patient gradually died of cancer this morning.

　　c. As he drew, an image gradually appeared on the page.（*Ichikawa*）

　　d. It gradually occurred to him that she might not desire him.

　　e. The cloud upon my wife's face began to disappear by degrees.（*OED*）

　　f. The {pain/fear} gradually passed away from the injured soldier.

These findings suggest that verbs of appearance/disappearance implicate process stages before the attainment of the change.

3.3.4　*Group*（F）

By intuition, a break or an explosion of an object occurs at a moment and the verbs expressing various manners of breaking denote an instantaneous change of state. The cooccurrence selection complies with this intuition. They are incompatible with gradual adverbial expressions like *gradually* and *little by little*, which suggests that these verbs

do not imply any preliminary stages.

(11) a. *The vase gradually {broke/shattered/split} because it was handled roughly.

　　 a'. The vase {broke/shattered/split} when it dropped on the floor

　　 b. *The gas main exploded little by little because of the earthquake.

　　 b'. The time bomb exploded just at midnight.

　　 c. *The World Trade Center gradually collapsed after the slams of the jetliners.

　　 c'. The nuclear power station collapsed at 5:30 a.m. this morning.

　As for the remaining verbs in the group（F）, no problem arises in the cooccurrence with *gradually* as is shown in（12）.

(12) a. The ice cream left on the table gradually melted.

　　 b. The washings gradually dried under the thin winter sunshine.

　　 c. The door of the garage {gradually/suddenly} {opened/closed/shut}.

　　 d. Nancy gradually woke from her daydreaming to reality.

　　 e. The winding road gradually straightened and we were on a plateau at last.

　These findings show that the process along a change of definite state expands over time and that these verbs imply a process stage as the inherent lexical meaning.

3.3.5　*Group（E）and（G）*

　The verbs in the groups（E）and（G）generally harmonize with *gradually*. Various uncontrollable changes involved in nature like weather, temperature, water level and brightness do not always occur at a moment. Some processes expand over time, others go on rapidly.

(13) a. The number of prisoners gradually increased as a corollary of the government's determination to combat violent crime.

　　 b. The population of the town gradually decreased as young people moved to the cities.

　　 c. The number of commuters to London gradually dropped between 1980 and 1990.

　　 d. The average price of goods gradually rose after the war.

(14) a. The feverish skin gradually cooled by the evaporation of the sweat.

　　 b. His hair gradually thinned and his skin has lost all hint of youth.

　　 c. The old flowers in the vase gradually faded.

To sum up the observations in this section, achievement verbs are not necessarily characterized by the featural opposition of [+telic, −stages]. Rather, the verb itself specifies neither telicity nor duration of the event and the context determines the aspectual property of the predication. (15) simply diagrams the classification of achievement verbs based on the revised featural opposition.

(15) Featural Opposition of Achievement Verbs

	[−stages]	[±stages]
[+telic]	*find, witness,* Group (B), Group (C), *die, happen* break/explosion verbs	Group (A), *acquire,* Group (D) Group (F)
[±telic]	＊　　＊　　＊	Group (E), (G)

The notation of '±' designates underspecification.

4. Semantics of Progressive Achievements

In this section we will shift our argument to progressive uses of achievement verbs (progressive achievements, for convenience) and discuss subtle differences in meaning brought about by the verb-type of achievement.

It is generally assumed that achievement verbs are inconsistent with the progressive as shown in (16).

(16) a. ?John is noticing the hole in the floor.

b. ? She is recognising the one with the moustache.

c. ? He's spotting the car. (Kearns 1991: 166-167)

The traditional account for this phenomenon is that the punctuality of achievement verbs is incompatible with the duration that the progressive requires. The progressive is possible, however, for some achievement verbs as has been pointed out in the literature.

(17) a. The train is arriving at platform 4.

b. The queen was dying. ((17a,b) Quirk et al. 1985: 209)

c. Jane is just reaching the summit. (Rothstein 2004: 43)

Progressive achievements as shown in (17) represent 'fortunate progressives'

（Dowty 1979）and require what Caudal and Roussarie（2000: 362）calls 'prospective reading' paraphrased into 'the subject is about to V.' The progressive is possible only in the case where the utterance is sufficiently close to the goal point and the realization of the attainment is anticipatory enough. In the examples of（17a-c）, the arrival of the train, the queen's death, and Jane's reaching of the summit, respectively, must be expected as a plausible event in an immediate future.

In this sense, progressive achievements seem to be quite different in meaning from the 'normal' and 'natural' progressives of activity verbs like（18）.

（18）a. When I called on him, he was cooking dinner.

b. Do be quiet, please! The baby is sleeping.

c. What are you doing? --- I'm preparing for the examination.

The question is what brings about the requirement of the special reading of progressive achievements in（17）. Before pursuing this question, we will begin by the observations of differences in nuance and situation of progressive achievements of each subclass in（3）.

4.1　Unacceptable cases: Group（A）and（B）

Cognition and acquisition/loss verbs, as shown in（16）（repeated here）, resist the progressive because the punctual event expressed by the verb does not coincide with the duration that the progressive presupposes.

（16）a. ?John is noticing the hole in the floor.

b. ?She is recognising the one with the moustache.

c. ?He's spotting the car.[5]（Kearns 1991: 166-167）

Find and *win*, which seem to be counterexamples for this, accept the progressive as will be shown in（19）in the next subsection. This may be because the events of finding something and winning presuppose durational processes in order to attain the goal.

4.2 Prospective Reading: Group（C）, *win*, *find*, and *die*

The progressives of *win*, *find*, *die*, and arrival/departure verbs are possible only when the subject almost reaches the final goal of the act and the attainment of the act can be anticipatory enough in the situation.

（19）a. Flight 246 is now arriving at Gate 20.

  b. Jones is dying.

  c. Mary is winning.（Kearns 1991: 272）

  d. Dafna is finding her shoes.（Rothstein 2004: 36）

 If the context is in violation of this 'prospective reading'（cf. Caudal and Roussarie 2000: 362）, the progressive is unacceptable.

(20)a. *Mary was reaching the top of the mountain when she had to take refuge from an avalanche. So she didn't make it that time.（cf. Rothstein 2004: 56）

  b. *The Celtics are winning tomorrow.（Vlach 1981: 280）

(20a) is unacceptable because the subject, *Mary*, actually didn't attain the goal and (20b) sounds odd because *tomorrow* makes the situation fixed in advance（Vlach 1981: 280）.

4.3 Group（D）and（F）

 Emergence and appearance/disappearance verbs naturally occur in the progressive.

(21)a. What's happening?

  b. The environmental problem was gradually arising in 1990s.

  c. The young grass was gradually sprouting as it got warmer.

  d. One by one the names are disappearing from the professional register.（*BOE*）

 The situations seen in (21) are slightly different from those in (19). In (21), the process, which has already started but not completed yet, is just going on toward the attainment of the goal. Progressive achievements of Group（F）express a similar meaning.

(22)a. The tank was gradually emptying after the plug was pulled.

  b. The clothes were slowly drying under the thin winter sunshine.

  c. The corn was rapidly ripening under the bright summer sunshine.

  d. Nancy was gradually waking from her daydreaming to reality.

4.4 Group（E）and（G）

 The verbs in Group（E）and（G）have no problem with the occurrence in the progressive.

(23)a. The inflation is rising rapidly.（*COB*）

  b. The plane was gradually descending toward the runway.

　　c. The population growth is decreasing by 1.4% each year.（*COB*）

(24) a. His body chilled to the bone was gradually warming as he took a rest beside the fire.

　　b. His hair is thinning and his skin has lost all hint of youth.（*COB*）

　　c. The river is gradually broadening towards its mouth.（*Ichikawa*）

　　d. Now that the evenings are lightening, inter-schools sport is resuming.（*WB*）

　　e. The weather conditions are deteriorating gradually.（*WB*）

　　f. The sandbank was eroding at a slow rate.

　The meanings of the progressives in（23）and（24）are quite different from those shown in（19）,（21）and（22）. In the progressives in（23）and（24）, the process of change is paid attention to and the degree of change denoted by the verb is increasing. Note that Group（E）and（G）show peculiarities in that they are characterized by the feature［±telic, ±stages］as was shown in（15）. It means that the verbs of the groups（E）and（G）underspecify telicity or duration of the event. While achievement verbs generally represent telic events with a finite goal and focus on the goal-attainment of the act, the verbs of the groups（E）and（G）lay an emphasis on the process along the change of state. Let us assume this distinction as goal-focusing vs. process-focusing verbs as schematized in（25）.

(25) Parallel between telicity and focus-placement in achievements

　　［+telic］Group（A）（B）（C）（D）（F）→Goal-focusing achievements

　　［±telic］Group（E）（G）　　　　　　　→Process-focusing achievements

　We contend that the demarcation in meaning of progressive achievements neatly correspond to this distinction between goal- and process-focusing achievements and that different meanings in progressive achievements are due to what part of the event the verb focuses on. This consideration will give an answer to the question posed at the beginning of this section. The prospective reading of progressive achievements seen in (17) is due to the goal-focusing property of the verb.

　The foregoing discussions in this section will be recapitulated as follows. Achievement verbs are distinguished between goal-focusing and process-focusing verbs based on telicity and focus-placement and that the distinction between the two types brings about the difference in meaning of progressive achievements of the two types. While progressives of goal-focusing verbs require 'prospective reading' or 'be drawing near

to the final state', those of process-focusing verbs represent the development in the degree of change whether or not it is gradual or punctual. This difference just parallels the distinction of what part of the event is focused on in each verb-type.

5. Concluding Remarks

In this paper we firstly object to Rothstein's definition of achievements based on the featural opposition. Through the examinations of telicity and durativity of the event, we show achievements are not characterized by the feature [+telic, −stages] and that a wider range of change verbs should be taken into consideration. Furthermore, we investigate subtle differences in meaning of progressive achievements according to the subclasses of achievement verbs. We conclude that the differences are due to the distinction between goal- and process-focusing verb types based on telicity and focus-placement.

Notes

(1) The terminology distinction between 'achievements' and 'achievement verbs' in this paper is that the former indicate 'achievement events' and the latter indicate the verbs predicating the event.

(2) The contrast between bounded and unbounded states in the groups (F) and (G), respectively, correspond to the difference between 'closed scale adjectives' (e.g. *empty, full, open, closed*) and 'open scale adjectives' (e.g. *long, short, interesting, inexpensive*) (Kennedy and McNally (2002: 9)) that the verbs are derived from.

(3) I thank Ms Donna Tatsuki and Ms Laura J. Murray for their cooperation as informants of English.

(4) *The guests gradually arrived at the inn* will be acceptable in the reading 'one after another.' In order to avoid this reading, the test sentences are restricted to those with a singular subject.

(5) The only comprehensible reading for (25) is what is called 'slow-motion reading,' (Rothstein (2004: 56-58)) where the speaker is describing one scene of a film set moving at a much slower speed than the standard.

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