Lexical Semantics
Week 12: Notes on aspect and telicity

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1 Review: aspectual classes

Vendler divided verbs$^{\hat{*}}$ into four **aspectual classes**, based on temporal or durational properties:

States	*Activities*	*Accomplishments*	*Achievements*
know	run	paint a picture	recognize
believe	walk	make a chair	spot
have	swim	deliver a sermon	find
desire	push a cart	draw a circle	lose
love	drive a car	recover from illness	die

Vendler's two tests can be used to assign binary features to verbal predicates:

Progressive	*Durative*-for	Aspectual class	Example
+	+	Activities	*run, draw, push a cart*
+	−	Accomplishments	*run a mile, draw a circle*
−	+	States	*know, love*
−	−	Achievements	*notice, find, win, die*

- **the progressive criterion** tests for whether an eventuality (cf. Bach 1986) is internally dynamic/changing (and whether it has internality at all)
  - states fail the test because they are unchanging, while activities pass it:

    (1) *The soup was being cool — State

    (2) Juri was dancing. — Activity

  - accomplishments pass the test because they are both dynamic and durative; achievements fail because they are punctual

    (3) Juri was baking a cake. — Accomplishment

    (4) *Juri was reaching the house. — Achievement

  - the fifth, non-Vendlerian class of **semelfactives** pass on an iterative interpretation, but not otherwise

    (5) a. Juri was coughing. — Semelfactive, iterated

    b. *Juri was blinking once — Semelfactive, non-iterated

- durative eventualities can be modified by **durative** *for*-adverbials:

(6) a. Juri was angry for two hours. **States**
b. Juri danced for one hour. **Activity**
c. *Juri built a chair for one hour. **Accomplishment**
d. *Juri reached the house for one hour. **Achievement**

2 Some modifications to the Vendlerian system

We've already seen that the two-feature Vendlerian system falls short in some ways:

- a two-feature binary scheme predicts at most four aspectual classes, leaving off **semelfactives**
- although Vendler claims to classify verbs, certain verbs can appear in more than one class, depending on features of the arguments/objects with which they occur:

(7) a. Juri ran (for an hour) Activity
b. Juri ran a mile (*for an hour) Accomplishment

Last time, we settled on a three-way feature classification:

1. Dynamicity:
   an event is dynamic if it involves change and/or non-uniform internal structure
2. Durativity:
   as above, durative events occupy time
3. Telicity:
   events are *telic* (also, *bounded*) if they have a natural goal (=*telos*), culmination, or completion point. Events which are not telic are called *atelic*.

Aspectual class	*Dynamic*	*Durative*	*Telic*	Examples
Accomplishment	+	+	+	*draw a circle, build a house, empty a bucket*
Activity	+	+	−	*walk, chat, play, gurgle, pour*
Achievement	+	−	+	*notice, recognize, win, arrive*
Semelfactive	+	−	−	*jump, hit, beep, cough, tap, wink*
State	−	+	−	*be tall, know, contain, understand*

Not all of the possible classes on this system exist:

- as we discussed last time, this is because certain feature combinations imply others
- this is reminiscent of the feature classification we used for count vs. non-count nouns

2.1 Aspectual diagnostics in the three-way system [from Week 11]

1. ***In* adverbials:**
   - *telic* predicates take *in*-adverbials, while *atelic* predicates take *for*-adverbials
   - the precise interpretation differs depending on the aspectual class of the modified predicate, as seen above

- *in*-adverbials modifying dynamic, durative, and telic predicates (accomplishments) express the duration of the event (or at least upper bounds on its duration):

  (8) Jones can eat an apple in 60 seconds.
  It takes Jones 60 seconds to consume an apple from start to finish

- *in*-adverbials on dynamic, non-durative, telic events describe the 'delay':

  (9) He recognized her in a minute or so.
  There was a delay of a minute or so before he went from not recognizing to recognizing her.

- atelic predicates are usually bad with *in*-adverbials: we'll discuss the availability of 'repair' readings next class

  (10) #Darcy loved Elizabeth in a year.
  Ok on a repair interpretation: Darcy began to love Elizabeth after a year.

2. **The *take time* construction:**

- like *in*-adverbials, which it often paraphrases, the *take time* construction picks for telic predicates which are associated (via assertion or presupposition) with a process

  (11) Accomplishments: within-event process duration
  a. It took a minute for Jones to eat an apple.
  b. It took a day for us to build the table.
  c. It took ten minutes for Jones to run a mile.

  (12) Achievements: pre-event process duration
  a. It took a minute for him to recognize her
  b. It took three days for Jones to lose his keys.

- as noted by Kearns (2000), the *take time* construction with achievements suggests deliberate effort was put into the preparatory process
- *in*-adverbials do not produce the same impression
- states can combine with *take time* on a 'repair' reading, as above:

  (13) It took a year for Darcy to love Elizabeth

- activities combine with neither *take time* or *in*-adverbials:

  (14) #It took an hour for them to stand.

3. ***For* adverbials:**

- as above, *for* adverbials combine with atelic events, and express the duration of these events
- thus, in combination with a *for* adverbial, an inherently atelic predicate has temporal boundaries

  (15) a. #Jones ate the apple for a minute. **Accomplishment**
  b. #They reached the summit for an hour. **Achievement**

c. Darcy loved Elizabeth for a year. **State**

d. They sang for half an hour. **Activity**

- *for*-adverbials can sometimes combine with telic predicates if they modify the atelic result state:

(16) Ruby flew to Paris for a week. **Accomplishment**
Ruby intended to stay in Paris for a week.

4. **The progressive criterion:**

- the progressive criterion tests for both durativity and dynamicity
- accomplishments and activities combine with progressive marking because they are both durative and dynamic:

(17) a. Pythagoras was drawing a triangle. **Accomplishment**

b. Zeno was thinking. **Activity**

- states are durative, but non-dynamic (static), and fail the progressive criterion
- achievements are dynamic but non-durative:

(18) a. #Jones was finding his keys.

b. #Bertha was turning eighteen.

- but, as noted, process-associated achievements can combine with the progressive, on an interpretation where the progressive picks out the preparatory phase:

(19) a. Jones was dying for three months.

b. Tensing and Hilary were reaching the summit.

5. **Progressive entailments:**

- this diagnostic is distinct from the progressive criterion proposed by Vendler
- Kenny (1963): atelic predicates in the progressive entail the prior occurrence of the same event

(20) a. Jones is singing $\vdash$ Jones has sung. **Activity**

b. Pythagoras is drawing a triangle. **Accomplishment**
$\nvdash$ Pythagoras has drawn a triangle.

- this test is not relevant for predicates which fail the progressive criterion
- entailments under progressive marking are connected to the so-called **imperfective paradox**, which we'll discuss next time

6. **Simple present:**

- if a predicate can be combined with simple present tense to refer to the actual present, then it describes a non-dynamic (static) predicate

(21) a. Kim knows the capitals of all of the states. **State**
interpretation: Kim currently has this information [refers to the present]

b. Kim rides a bicycle. **Activity**
interpretation: Kim habitually/regularly rides a bicycle. [does not refer to the 'actual' present]

c. Kim writes to the mayor. **Accomplishment**
interpretation: habitual

d. Kim taps on the glass. **Semelfactive**
interpretation: habitual

e. Kim notices the hole in the wall. **Achievement**
interpretation: habitual

- thus, this test picks out states and excludes the other aspectual classes
- **Note:** this test is English-specific! The German present tense combines with non-states, often yielding the readings that English requires progressive marking for

7. **The *what happened* test:**

- (not to be confused with the *what happened to X was* test for the patient semantic role!)
- events that can be combined with *what happened was* are dynamic

(22) a. What happened was that Kim knew the capitals of all of the states. **State**

b. What happened was that Kim rode a bicycle. **Activity**

c. What happened was that Kim wrote the mayor. **Accomplishment**

d. What happened was that Kim tapped on the glass. **Semelfactive**

e. What happened was that Kim noticed the hole in the wall. **Achievement**

Some cautions about aspectual classes and diagnostics:

- aspectual classes are often described as a classification system for verbs; this isn't quite right
- aspectual class features seem to come together at the level of the VP:
  - for instance, *run* is an activity, but *run a mile* is an accomplishment
  - in order to determine the aspectual class features, we need to take the verb and its complement into account
  - in other cases, a feature-changing complement may not be an NP but a PP
  - subjects can also affect aspectual classification:

    (23) Students eat an apple before class.

  - when using diagnostic tests, it is important to make sure you consider the whole verbal predicate (i.e., the whole event description)
- as noted above, there are sometimes 'repair' readings available

– when applying diagnostic tests, it's important to check whether you're producing a modified reading

– an example of this would be habitual interpretations:

(24) Kim rides a bicycle.

– even though this example is fine, *ride a bike* does not pass the 'simple present' test for states, because (23) can only have a habitual interpretation, on which it describes not one, but multiple events (with a relationship to one another)

3 On the mass/count – telic/atelic parallel

As Bach (1986) points out, there are parellels between count(able) nouns and telic eventualities:

events[+telic] : **processes**(∼activities)[−telic] :: **things**[+count] : **stuff**[−count]

(25) Countability:

a. There were **three dogs** in the yard. [+count] noun

b. *There were **three muds** in the yard. [-count] noun
NB: on a non-packaged reading

(26) Telicity:

a. Jon **ran a mile three times** yesterday. [+telic] eventuality

b. *Jon **slept three times** yesterday. [-telic] eventuality
NB: on a non-inchoative reading

- like count nouns, telic (bounded, quantized) events are countable on their baseline interpretation

(27) a. Jon ran a mile three times yesterday. Accomplishment

b. Kama Rita summited Mount Everest 24 times. Achievement

c. Joy blinked twice to clear her eyes. Semelfactive

- atelic eventualities need to be reinterpreted to be countable:

(28) a. Jon slept three times yesterday. Process/activity
Jon fell asleep three times yesterday

b. Darcy loved Elizabeth twice. State
Darcy loved her once, stopped loving her, and then loved her again
packager, maximal reading

- not all atelic eventualities CAN be reinterpreted:

(29) *Clifford was tall twice. State, individual-level

Bach (1986) and Krifka (1989) are focused on trying to make the parallels rigorous:

- it's not a coincidence that countability and telicity are linked
- telicity, as we've seen, is not a property of the verb alone, but of the verb combined with its arguments

- for instance, adding a countable object to a process/activity verb can give us a telic accomplishment:

(30) a. Jon ran. — Activity, atelic
b. Adding a count noun → Jon ran a mile. — Accomplishment, telic

(31) a. Jessica ate porridge. — Activity, atelic (mass noun)
b. Jessica ate an apple. — Accomplishment, telic (count noun)

- the boundedness of the count nouns adds an inherent culmination point to (some) verbal predicates

Evidence of a relation between the mass/count distinction and the telic/atelic distinction is provided by the existence of certain verbs which can be used to describe telic events when their objects are count nouns, but atelic events when their objects are mass nouns

- the (temporal) boundedness of an event denoted by one of these verbs depends on the (physical) boundedness of the verbs object.

(32) a. Sam ate ice cream. (mass NP object; activity/atelic)
b. Sam ate an ice cream cone. (count NP object; accomplishment/telic)

(33) a. Cory wrote poetry. (mass NP object; activity/atelic)
b. Cory wrote a poem. (count NP object; accomplishment/telic)

- not all verbs show this pattern. Many verbs are atelic, even when their object is a count noun:

(34) a. Dana pushed the cart. (count NP object; activity/atelic)
b. Brett stirred the batter. (count NP object; activity/atelic)

- the noun phrase that plays a part in determining the telicity of certain events, such as those in (9) and (10), is known as an **incremental theme** (Dowty 1991)
  - these noun phrases often bear the semantic role Theme, and are physically incrementally affected (or consumed) by the event described by the verb
  - the progress of the event itself can be determined by looking at the incremental theme
  - Consider an event of eating an apple:
    * the apple is the incremental theme since every subpart of the apple that is eaten corresponds to a subpart of the event of eating that apple
    * when half the apple is eaten, the event is half over; when the apple is entirely consumed, the event is over.
    * the apple is sometimes described as *measuring out* the event.
    * when the incremental theme is physically bounded (e.g., a count noun such as an apple or an ice cream cone), then the event itself is temporally bounded (i.e. telic); when the incremental theme is not physically bounded (e.g., a mass noun such as ice cream or soup), then the event itself lacks a temporal bound (i.e. atelic).

4 References

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