

**Tense, Aspect, Mood and Evidentiality**

**Lecture 2:**

**How telicity creates time**

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# What is ontology?

- Ontology is said to be the study of “what there is” or “what exists”
- It is not about the existence of specific things such as the Loch Ness monster...
- ...but rather it is concerned with the question of what basic kinds of entities – ontological categories -- we have to recognize...
- ...and what their nature is



# What is temporal ontology?

- Temporal ontology is the study of those abstract entities that are somehow linked up with time such as

events

states

actions

activities

habits



# Terminological problem: what should these entities be called?

- Proposals:
  - “situations” (Comrie and others)
  - “eventualities” (Bach)
- In neither case, the proposed meaning corresponds to normal English usage
- In fact, no attested language seems to have a word in everyday language that covers both events and states
- This suggests that they do not form a natural class
- More about this later!



# Temporal ontology and semantics of TAME

- The coupling between temporal ontology and TAME rests on the observation that sentences seem to be “about” temporal entities...
- ...and that, furthermore, the choice of a TAME form may depend on the temporal location of these entities, and their relationship to other temporal entities



# Classification of temporal entities

- Many scholars have attempted classifications of temporal entities
- The first one was probably Aristotle...
- ...but the most well-known classification was done by the Hungarian-American scholar Zeno Vendler.



# About Zeno Vendler (1921 –2004)

- Born and raised in Hungary, where he learned to speak both Hungarian and German.
- He studied there until he began to train as a Jesuit priest in Maastricht.
- Later went to Harvard University to study philosophy, and earned his doctorate in 1959 with a dissertation entitled "Facts and Laws".
- Worked (inter alia) at the University of Calgary, Rice University and the University of California, San Diego.



# Vendler's time schemata

Time schema	Example
states	sleep
activities	work, run, write
accomplishments	run a mile, write a letter
achievements	reach the top, die

**Vendler associated time schemata with verbs (although he really meant verb phrases)**



# Stative vs. dynamic

- States are opposed to the three other types which are all **dynamic**
- ... which means that they involve change in one way or another



# Vendler's test for states

- States do not combine with the progressive ("continuous tenses")

I start with the well-known difference between verbs that possess continuous tenses and verbs that do not. The question, "What are you doing?" might be answered by "I am running (or writing, working, and so on)," but not by "I am knowing (or loving, recognizing, and so on)."<sup>3</sup> On the other hand, the appropriate question and answer, "Do you know . . .?" "Yes, I do," have no counterparts like "Do you run?" "Yes, I do."<sup>4</sup>



# Activities vs. accomplishments

First let us focus our attention on the group of verbs that admit continuous tenses. There is a marked cleavage within the group itself. If I say that someone is running or pushing a cart, my statement does not imply any assumption as to how long that running or pushing will go on; he might stop the next moment or he might keep running or pushing for half an hour. On the other hand, if I say of a person that he is running a mile or of someone else that he is drawing a circle, then I do claim that the first one will keep running till he has covered the mile and that the second will keep drawing till he has drawn the circle. If they do not complete their activities, my statement will turn out to be false.<sup>5</sup> Thus we see that while running or pushing a cart has no set terminal point, running a mile and drawing a circle do have a “climax,” which has to be reached if the action is to be what it is claimed to be. In other words, if someone stops running a mile, he did not run a mile; if one stops drawing a circle, he did not draw a circle. But the man who stops running did run, and he who stops pushing the cart did push it. Running a mile and drawing a circle have to be finished, while it does not make sense to talk of finishing running or pushing a cart.

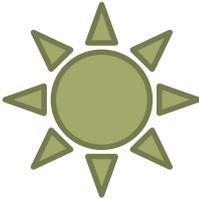
- Activities:
  - *I am running*  
entails  
*I have run*
- Accomplishments:
  - *I am drawing a circle*  
does not entail  
*I have drawn a circle*



# Telicity

- The difference between activities and accomplishments lies in the property of **telicity**
- The Greek word τέλος (telos) means 'end', 'purpose', or 'goal'
- An accomplishment has to reach a 'telos' to be completed
- An activity is not associated with such a 'telos'
- (Slightly misleading definition: the telic process "comes to a natural end, beyond which it cannot continue".)

# Telicity illustrated



*rotate*



*bounce into a hole*

**Activity**  
**(atelic)**

**Accomplishment**  
**(telic)**

# Telicity tests

- **Activities:**

- *I am running*  
entails  
*I have run*

- **Accomplishments:**

- *I am drawing a circle*  
does not entail  
*I have drawn a circle*

- **Activities:**

- *I ran for half an hour*

- **Accomplishments:**

- *I drew the circle in two minutes*
- *It took me two minutes to draw the circle*



# Accomplishments vs. achievements

- Achievements differ from accomplishments by being **punctual**
- This is a somewhat vague criterion...
- ...and the distinction is controversial



# An excursus: mass vs. count

- Nouns can be
  - Mass nouns: milk, water, gold, iron, uranium
  - Count nouns: dog, horse, chair, table, tree



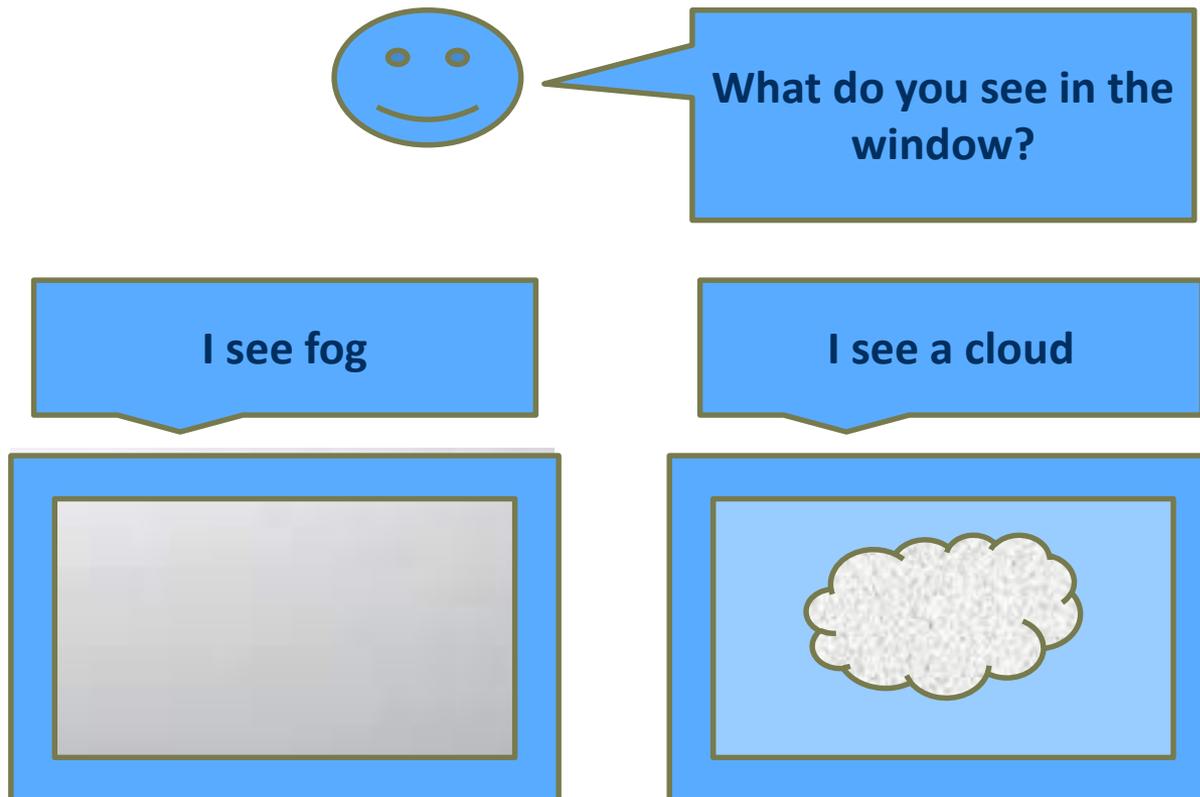
# Quantized vs. Non-quantized

- Noun phrases can be “quantized” or “non-quantized”:
  - John bought beer (non-quantized mass noun)
  - John bought a bottle of beer (quantized mass noun)
  - John bought oranges (non-quantized plural count noun)
  - John bought five oranges (quantized plural count noun)
  - John bought an orange (quantized singular count noun)
  - \*John bought orange
- Count nouns are inherently quantized



# Quantized NPs refer to delimited individuals

- A quantized noun phrase refers to a delimited individual object



# Analogy to telicity

- Accomplishments (telic entities) are delimited individual objects



- ...and thus correspond to count nouns
- Activities rather correspond to mass nouns, lacking a delimitation



# Analogy to telicity

- Compare:
  - Someone was killed last night – telic
  - A killing took place last night – count nominalization
  
  - People were dancing last night – atelic
  - Dancing took place last night – mass nominalization



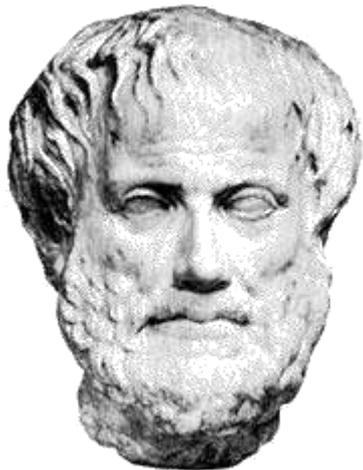
# The ubiquitous line metaphor for time

- Theories of temporal reference almost universally model time as a line (or technically a vector)
- and temporal entities such as events or states are characterized by their location on such a line.



# What is primary, time or what happens in time?

Time does not exist without change!



"But neither does time exist without change; for when the state of our own minds does not change at all, or we have not noticed its changing, we do not realize that time has elapsed, any more than those who are fabled to sleep among the heroes in Sardinia do when they are awakened; for they connect the earlier 'now' with the later and make them one, cutting out the interval because of their failure to notice it. So, just as, if the 'now' were not different but one and the same, there would not have been time, so too when its difference escapes our notice the interval does not seem to be time. If, then, the non-realization of the existence of time happens to us when we do not distinguish any change, but the soul seems to stay in one indivisible state, and when we perceive and distinguish we say time has elapsed, evidently time is not independent of movement and change."

...or at least, time without change cannot be perceived or measured

Physics, Book IV



Stockholm University

# Change is necessary for our understanding of time

- It is not necessary to take a stand on the question of the ultimate nature of time, what is important here is what makes most sense in describing language and the cognitive processes underlying it.
- It does seem that Aristotle was right insofar as change is essential in how we experience time – and not only for perceiving that time has elapsed, but also for measuring how much time has elapsed.



# Change is necessary for our understanding of time

- What happens if we take this seriously?
- Instead of a temporal semantics starting from the traditional conception of time as a line stretching from the past into the future where we place “eventualities” -- states, processes, and events...
  - ... we construct or create time by building structures consisting of static representations of the world which are connected to each other by events, seen as transformations of one static representation into another.

