

The Representation of Aspect

1: Introduction

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Course website:

http://individual.utoronto.ca/bjorkman/courses/egg2014_aspect.html

1 Introduction and outline

- This course is about **aspect**: how (and whether) it is represented syntactically, and how that representation can vary across languages.
- Some assumptions:
 - Syntactic representation is built from **lexical roots** and **features**
 - Features determine both morphological realization and semantic interpretation
- So by asking how aspect is represented syntactically, we are in fact asking:
 - What syntactic features contribute to aspectual interpretations?
 - Where do they occur in clausal syntax?
 - Do languages use different aspectual features, or project them in different positions?
 - Do these features interact with one another? (entailment, agreement, etc.)
- What unites some of the different work we'll be talking about is that it all approaches aspect from this type of featural perspective.

Rough outline of the course:

1. Introduction to viewpoint aspect and situation aspect / Aktionsart
 - Basic categories used in the literature
 - Syntactic representations
 - Puzzles raised by their independence and interdependence.
2. Similarities and differences between languages in the inventory and position of features: case studies
3. Relationships between aspect and argument licensing: aspect-driven case
4. Radical variability in feature interpretation: Ritter and Wiltschko

2 What do we mean by “aspect”?

- Many different dimensions of meaning have been described with the label “aspect”: **durative/ non-durative, telic/atelic, stative/eventive, perfective/imperfective**, etc. . .

Particular morphological contrasts?

- Traditional focus on *morphologically* contrastive aspect → grammatical aspect limited to systems like those found in Slavic languages, with derivationally related imperfective and perfective verbs.

- (1) Russian
- | | |
|-------------|--------------|
| a. pisat' | b. na-pisat' |
| write(IMPF) | PFV-write |

- Even so, always acknowledged that the same *semantic* contrasts exist in other languages.

Even in languages without any morphological distinction, telic and atelic predicates behave differently in various ways, for example in their compatibility with time-frame adverbials (e.g. *in an hour*) vs. time-span adverbials (e.g. *for an hour*).

- (2) Telic predicates: acceptable with *in five minutes*, odd with *for five minutes*
- a. The cat caught the mouse in five minutes.
b. #The cat caught the mouse for five minutes. (*note: possible with iterative reading*)
- (3) Atelic predicates: odd with *in five minutes*, acceptable with *for five minutes*
- a. #The cat chased the mouse in five minutes.
b. The cat chased the mouse for five minutes.

- Verkuyl (1972): Because aspect has syntactic effects, it should be represented syntactically even in languages where it is not expressed morphologically.

- Though note that correlations between morphology (understood broadly) and semantics are a large part of what we are trying to explain.

A single component of meaning?

- Smith (1991): Two “components” of aspectual meaning:

lexical aspect	grammatical aspect
Aktionsart	(Vendler, 1957)
situation aspect	viewpoint aspect (Smith, 1991)
inner aspect	outer aspect (Travis, 2010)

Terminological note:

In this class I will use the terms *viewpoint aspect* and *Aktionsart / situation aspect*. If I slip and just say “aspect”, please feel free to ask me to clarify.

- What does this mean?

Situation aspect / Aktionsart: Intrinsic properties of the situation itself: whether it is eventive, whether it has an intrinsic endpoint (telicity), whether it has extension in time (duration), etc.

Vendler's (1957) verb classes: States
Accomplishments
Activities
Achievements

States are distinguished from **Events** by [\pm DYNAMIC].

	[+TELIC]	[-TELIC]
[+DURATIVE]	Accomplishment	Activity
[-DURATIVE]	Achievement	(Semelfactive)

Viewpoint aspect: The perspective from which an event is seen / described.

Central contrast: imperfective/perfective. (Though see also: inceptive, progressive, completive, etc.)

- **Next up:** more thorough descriptions of both these categories.

3 Situation aspect/Aktionsart

- Vendler (1957): a useful point of reference.

States: non-dynamic

ex.: *know, believe, be tall*

Events: dynamic

<i>Accomplishment:</i>	+durative, +telic	ex. <i>wrote the letter, ate the apple</i>
<i>Activity:</i>	+durative, -telic	ex. <i>wrote letters, ate, swam</i>
<i>Achievement:</i>	-durative, +telic	ex. <i>discover, win, find, catch</i>
<i>Semelfactive:</i>	-durative, -telic	ex. <i>cough, knock, blink</i>

(Though Vendler did not include semelfactives, the class falls out of his feature set.)

- This was proposed by Vendler as a way of categorizing *verbs*.
- Verkuyl (1972) et seq.: instead a compositional property of *predicates*.
- Situation aspect, especially telicity, controlled partially by the theme / internal argument.

In English: singular and/or definite theme arguments result in telic interpretations, while plural/mass theme arguments result in atelic interpretations. The absence of an overt theme (for optionally transitive verbs) may result in either telic or atelic interpretations, depending on the verb.

- (4) a. Tony read a/the book.
b. Tony won the races.
- (5) a. Tony read books. (*plural*)
b. Tony read fiction. (*mass*)
- (6) a. Tony won. (*telic—implied that a specific event was won*)
b. Tony read. (*atelic—general activity of reading*)

- **Incremental theme** (Dowty, 1991): argument that “measures out” the event (Tenny, 1987, 1994).

- Semantic pursuit of this idea: Krifka (1992, 1998), Kratzer (2004), Rothstein (1999, 2008).

How do verbs and arguments compose to create, e.g., telic interpretations? Some representative approaches:

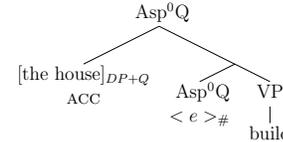
Borer (2005): situation aspect is determined *entirely* by functional structure.

- She proposes that verb roots contain no aspectual information in themselves (and so also cannot directly affect argument structure linked to telicity).

- (7) a. The fire stations sired throughout the raid.
b. The factory sired midday and everyone stopped for lunch.
c. The police sired the Porsche to a stop.
d. The police car sired up to the accident.
e. The police car sired the daylights out of me. (Clark and Clark, 1979)

- Telicity is determined by the presence of a functional head Asp^0Q , which can introduce an internal argument but requires it to be specific and definite. Asp^0Q
- This head licences accusative case. In its absence, a phrase FP assigns partitive case (morphologically null in English). External argument introduced higher.

- (8) Structure for *build the house* (telic)



- This divorces verb roots from both telicity and argument structure—but note that extant verbs are more restricted than novel derivations like *siren_v*:

- (9) a. The baby fed for an hour.
b. The mother fed her baby.
- (10) a. The baby slept for an hour.
b. *The mother slept her baby. (Clarke, 2013, p. 25)

Erteschik-Shir and Rapoport (2005): Very different approach in which situation aspect is derived entirely from lexical content (no functional contribution).

- Observe that a class of verb lexically determine a path *paths*: provide a *telos* independently of a singular definite theme or an overt path (e.g. *travel to New York*).

- (11) a. The soup cooled for an hour.
b. The soup cooled in an hour.

- If functional structure interacts with argument structure, however, and argument structure even partially determines situation aspect, the latter cannot be determined *entirely* by lexical content.

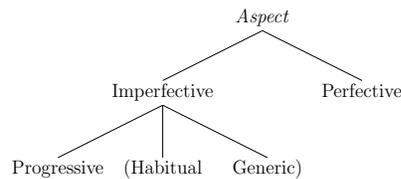
- Like Borer, however, Erteschik-Shir and Rapoport maintain the idea that situation aspect is a property of predicates, and is composed low in the tree.

What about other dimensions of situation aspect?

- Much of this literature has focused on the representation of **telicity**.
- Durativity not frequently approached from this perspective.
- The distinction between *events* and *states* often represented on v^0 , seen as introducing an *event* argument (Kratzer, 1996, 2000, a.o.; see also a featural implementation in Cowper, 1999, 2005).

4 Viewpoint aspect

- Viewpoint aspect is often described in terms of the *perspective* taken on an event.
 - *Perfective*: event viewed ‘in its entirety’, ‘as completed’, ‘without access to internal temporal structure’.
 - *Imperfective*: event viewed ‘without its endpoints’, ‘as incomplete’, ‘with attention to internal temporal structure’.



The 3-time model of temporal semantics: (Reichenbach, 1947, et seq.)

- Tense does not directly order the time of an event and the utterance/evaluation time, but instead locates an intermediate time: the “reference time” (Reichenbach, 1947) or “topic time” (Klein, 1992, 1994).

Event Time/Situation Time: The time at which the event or state holds.

Topic Time/Reference Time: The time under discussion.

Utterance Time/Evaluation Time: The time of utterance, or time with respect to which the sentence is evaluated (esp. in embedded contexts).

Tense relates the utterance time and the topic time.

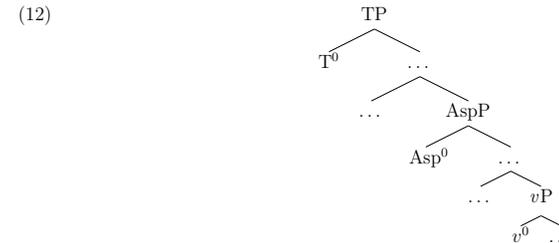
- Present: TT overlaps with UT
- Past: TT precedes UT

Aspect locates the time of an event relative to the topic time.

Perfective vs. imperfective:

- Perfective: $ET \subset TT$ (ET is contained within TT) = view ‘from the outside’
- Imperfective: $TT \subset ET$ (TT is contained within ET) = view ‘from the inside’

- This semantic view of aspect has implications for its syntactic representation: a dedicated projection Asp^0 above the predicate ($\sim vP$) but below T^0 Tenny (1987); Smith (1991); Klein (1994); Giorgi and Pianesi (1997); Kratzer (1998); Kusumoto (1999); Demirdache and Uribe-Etxebarria (2000) (among many others):



Brief aside on the perfect:

- Consensus that the perfect is not part of the basic viewpoint aspect system. (Iatridou et al., 2003; Alexiadou et al., 2003; Reed, 2011; Stowell, 2007, 2008; Pancheva, 2003; Pancheva and von Stechow, 2004, among many others)
- Much debate about the denotation of the perfect, but general agreement that it expresses anteriority of some kind:
 - Some suggest that the perfect introduces a fourth compositional time, and locates the TT prior to that (Pancheva and von Stechow, 2004), or that it involves a second layer of simple past (Stowell, 2007; Cowper, 2010).
 - Others suggest a somewhat more complex meaning for the perfect, involving the introduction of a Perfect Time *Span*, within which the TT is located (Iatridou et al., 2003; Pancheva, 2003; Reed, 2011)
- Whatever its denotation: **perfect \neq perfective**

5 Why distinguish viewpoint and situation aspect?

So far: we have seen different definitions / approaches to viewpoint aspect and situation aspect.

What we haven’t directly discussed are the reasons to distinguish them.

- First: diagnosing viewpoint aspect.
- Interaction with *when*-clauses:
 - Perfective results in a **sequenced** interpretation.
 - Imperfective results in a **simultaneous** interpretation.

- (13)
- When Sarah came in, Rachel spoke. (=began to speak)
 - When Sarah came in, Rachel was speaking. (=was already speaking)

Perfective ≠ telic, imperfective ≠ atelic: As (13a) shows, perfective aspect is compatible with atelic predicates.

What is known as the ‘imperfective paradox’ (Dowty, 1979) arises precisely from the interaction of imperfective (progressive) aspect with telic predicates:

- (14) The chicken was crossing the road when it stopped suddenly.

Perfective ≠ non-durative, imperfective ≠ durative: sequenced interpretations with durative predicates, simultaneous interpretations with instantaneous predicates (though shift to iterative):

- (15) a. When Rachel left, Sarah cursed for a full minute.
b. When Rachel left, Sarah was blinking.

More complex interaction with states: Variable interaction between viewpoint aspect and states.

- English: cannot appear in the progressive.
- Russian: do not occur with aspectual morphology (i.e. surface in default “imperfective”)
- French: can appear in either the *imparfait* or the *passé composé*. In the latter they receive inchoative (change-of-state) interpretations.

- (16) French (*from Smith, 1991, p. 255*):
- a. Tout d’un coup, j’ai compris!
All of-a stroke, I-have understand.PTCP
“All of a sudden, I understood!”
- b. A ce moment il a su la vérité
At that moment he has know.PTCPthe truth
“At that moment he knew the truth.”

- Kinande (Bantu): can appear in both imperfective and perfective verb forms. With overt imperfective morphology, they have a habitual interpretation. With perfective morphology they have an inchoative interpretation (=become). The stative interpretation requires special morphology.

- (17) Kinande (Patrick Jones, elicitation notes)
- a. n-ámá-lúh-a
1SG-PFV-be.tired-SUFF
“I get tired (now).”
- b. n-ga-luh-â
1SG-IMPF-be.tired-SUFF
“I’m always tired.” (e.g. after such-and-such event, on particular days of the week)
- c. n-yí-lúh-ire
1SG-STAT-be.tired-SUFF
“I’m tired (now).”

Conclusion: It’s very difficult to talk about any of these phenomena without distinguishing viewpoint aspect from situation aspect / aktionsart.

6 Syntactic independence of two types of aspect

- Even if viewpoint and situation aspect are interpretively distinct, they could compose at the same point in the tree. Why put them in different places?

Types of evidence:

- Viewpoint aspect is higher than the passive.

If passive is involved in argument licensing, and argument licensing is linked to telicity, then this implies that viewpoint aspect is higher than situation aspect.

- (18) The house is being built.

- (19) Hindi (Poornima, 2008)

- a. Shyam-ka ghar beech di-yaa gay-aa (th-aa)
Shyam-GEN house.M.SGsell give-M.SGgo-PFV.M.SGbe.PAST-M.3SG
“Shyam’s house has been sold off.”
- b. Shyam-ka ghar beech di-yaa jaa rah-aa h-ai
Shyam-GEN house.M.SGsell give-M.SGgo stay-IMPF.M.SGbe.PRES-3SG
“Shyam’s house is being sold off.”

- Possible for time-frame/time-span adverbials to occur with different scope. Most easily seen when they co-occur.

- (20) Delphine was writing an article in a week for two days.

- Two “layers” of aspectual morphology can co-occur on a single verb.
- Travis (2010) demonstrates this for Tagalog, based on the fact that the causative morpheme intervenes between two overt aspectual prefixes:

- (21) Tagalog (Travis, 2010, p. 8)
nagtutumba

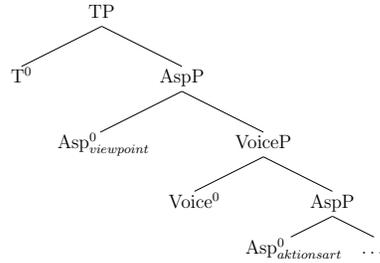
n- m- pag- RED- tumba
BEGUN TOPIC CAUS INCOMPLETE fall.down
“[someone] causes [someone] to fall down.”

- The existence of *secondary imperfectives* in various Slavic languages makes the same point: two different positions for aspectual morphology.

- (22) Russian (Tatevosov, 2011)
- | | | |
|-------------------|----------|-------------------------------|
| <i>perfective</i> | | <i>secondary imperfective</i> |
| za-pisa-t’ | ‘record’ | za-pis-yva-t’ |
| za-bi-t’ | ‘hammer’ | za-bi-va-t’ |
| ot-kry-t’ | ‘open’ | ot-kry-va-t’ |
| pro-Cita-t’ | ‘read’ | pro-cit-yva-t’ |

- How to represent this in the syntax: following Travis (2010), two distinct aspectual positions in the syntax.

(23)



Many questions remain open. Among others:

- Are we sure that these are the right positions?
- Could there be more positions within the *vP*?
- Do all languages use both positions?

And regarding the *content* of the positions:

- Are the same contrasts (telicity, eventivity, perfectivity) present in all languages?
- Even if the same contrasts are present, are they represented in the same ways?

7 Interdependence

- If viewpoint and situation aspect are totally independent of one another, then it's surprising that they interact as much as they do.
- Already canvassed different interactions between viewpoint aspect and stativity in different languages.
- Other puzzles: interactions with case, as in Finnish.

Partitive aspect in Finnish is associated with indeterminate quantity. Given the association of theme quantity with telicity, not totally surprising that partitive case results in atelic interpretations.

(24) Finnish (Kiparsky, 1998, (1))

- Ammu-i-n karhu-a / kah-ta karhu-a / karhu-j-a
shoot-PAST-1SG bear-PART / two-PART bear-PART / bear-PL-PART
"I shot at the (a) bear / at (the) two bears / at (the) bears."
- Ammu-i-n karhu-n / kaksi karhu-a / karhu-t
shoot-PAST-1SG bear-ACC / two-ACC bear-PART / bear-PL-ACC
"I shot the (a) bear / two bears / the bears"

- Harder to explain why the same partitive case results in imperfective interpretations, if imperfective \neq atelic.

(25) Finnish (Kiparsky, 1998, (11b))

- Hän avas-i ikkuna-a
He open-PAST.3SG window-PART
- 'He was opening the window.' (as John entered)
 - 'He opened the window.' (for a while)
 - 'He opened the window.' (partly)
 - 'He opened the window.' (again and again)

- More general association between oblique object case and imperfective interpretations: common in split ergative systems.

(26) Georgian (Comrie, 1978)

- Študent-ma çeril-i daçera.
student-ERG letter-ABS wrote
"The student wrote the letter."
- Študent-i çeril-s çers.
student-ABS letter-DAT writes
"The student writes the letter."

(27) Samoan (Ochs 1988, cited in Coon, 2013)

- na va?ai-a [e le tama] [le i?a]
PAST look.at-PFV ERG the boy the fish
"The boy spotted the fish."
- na va?ai [le tama] [i le i?a]
PAST look.at-PFV the boy OBL the fish
"The boy looked at the fish."

(28) Warrungu (Tsunoda 1981, cited in Coon, 2013)

- pama-ngku yuri nyaka-n.
man-ERG kangaroo(ABS) see-NONFUT
"A man saw (found, etc.) a kangaroo."
- pama yuri-wu naka-kali-n.
man(ABS) kangaroo-DAT see-*kali*-NONFUT
"A man was (or is) looking for a kangaroo."

- If viewpoint aspect is outside the argument structure domain (i.e. outside *vP*), why is it involved in these kinds of alternations?

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