

ASPECT-BASED THEORY (1):
Aspectual universals of temporal anaphora (Bittner 2006)

1 GRAMMATICAL TOLERANCE OF TEMPORAL ANAPHORA

Table 1. Grammatical systems for temporal anaphora

	<u>Location wrt topic time</u>	<u>Update of topic time</u>
English	<i>tense</i> inflection or auxiliary (-PST, -PRS, FUT)	<i>tense</i> inflection or auxiliary
Mohawk	<i>aspect</i> inflection (-EVT, -STA, -DUR)	<i>aspect</i> inflection
Yukatek	<i>aspect-mood</i> preverb (PRF, PRG, DES, EXP, ...)	<i>centering</i> clitic
Kalaallisut	<i>mood-centering</i> inflection (-IND, -IRR, -OPT, -FCT _T , ...)	dependent <i>mood-centering</i> infl.

Table 2. Tense and aspect marking in English

<u>Tense</u>	<u>Event-predicate</u>	<u>State-predicate</u>
Past (PST)	he <i>fell</i> asleep he <i>went</i> out	he <i>was</i> asleep he <i>had</i> gone out he <i>had</i> to go out
Present (PRS)	—	he <i>is</i> asleep he <i>has</i> gone out he <i>has</i> to go out
Future (FUT)	he will <i>fall</i> asleep he will <i>go</i> out	he will <i>be</i> asleep he will <i>have</i> gone out he will <i>have</i> to go out

Table 3. Mood and aspect marking in Kalaallisut (glosses only)

<u>Mood</u>	<u>Event-predicate</u>	<u>State-predicate</u>
Fact	be.asleep- <i>begin</i> -IND.IV-3s	go.out- <i>prf</i> -IND.IV-3s
Non-fact	—	go.out-(<i>be</i>)not-IRR-3s
Requests:		
wish	be.asleep- <i>begin</i> -OPT-3s !	go.out- <i>intend</i> -OPT-3s !
command	be.asleep- <i>begin</i> -IMP.2s !	go.out- <i>intend</i> -IMP.2s !
question	be.asleep- <i>begin</i> -QUE.3s ?	go.out- <i>prf</i> -QUE.3s ?
Circumstances:		
fact about \top	be.asleep- <i>begin</i> -FCT _T -3s _T	go.out- <i>prf</i> -FCT _T -3s _T
fact about \perp	be.asleep- <i>begin</i> -FCT _⊥ -3s _⊥	go.out- <i>prf</i> -FCT _⊥ -3s _⊥
non-fact about \top	be.asleep- <i>begin</i> -NON _T -3s _T	go.out- <i>prf</i> -NON _T -3s _T
hypothesis abt. \top	be.asleep- <i>begin</i> -HYP _T -3s _T	go.out- <i>prf</i> -HYP _T -3s _T
hypothesis abt. \perp	be.asleep- <i>begin</i> -HYP _⊥ -3s _⊥	go.out- <i>prf</i> -HYP _⊥ -3s _⊥
habit of \top	be.asleep- <i>begin</i> -HAB _T -3s _T	go.out- <i>prf</i> -HAB _T -3s _T
habit of \perp	be.asleep- <i>begin</i> -HAB _⊥ -3s _⊥	go.out- <i>prf</i> -HAB _⊥ -3s _⊥
elaboration of \top	be.asleep- <i>begin</i> -ELA _T -3s _T	go.out- <i>prf</i> -ELA _T -3s _T
elaboration of \perp	be.asleep- <i>begin</i> -ELA _⊥ -3s _⊥	go.out- <i>prf</i> -ELA _⊥ -3s _⊥

2 UNIVERSALS OF TEMPORAL ANAPHORA

- *Events vs. states*

L. Aspect-based location wrt topical period (v. 1: Hinrichs 1981)

In the topical modality,
 • a *state* is current during the topical period
 • an *event* occurs within the topical period

U. Aspect-based temporal update (v. 1: Webber 1988)

If a verb evokes an episode *a* and updates the topic time to $\top t$, then:
 • $\top t$ is the time of *a* in the topical modality, if *a* is a *state*
 • $\top t$ is the result time of *a* in the topical modality, if *a* is an *event*

(1) *Events*: Temporal location (L) & update (U).

<p><i>E:</i></p> <p>Today... ...when I came home</p> <p>...Anne went out.</p> <p>John soon... ...fell asleep.</p>	<p> </p> <p>•</p> <p> </p> <p>•</p> <p> </p> <p> </p> <p>•</p> <p> </p>	<ul style="list-style-type: none"> • $\top e_0$: speech event $t_1 \subseteq e_0$-day • e_1: e_0-agt comes home t_2: e_1-result time • e_2: Anne goes out t_3: e_2-result time • t_3': brief period after e_2 • e_3: John falls asleep t_4: e_3-result time
<p><i>K:</i></p> <p><i>Ullu-mi...</i> day-LOC...</p> <p>...angirlar-a-ma ...come.home-FCT\top-1s</p> <p>...<i>Aani ani-vu-q</i> ...Aani go.out-IND.IV-3s</p> <p><i>Juuna irniinnaq...</i> Juuna soon ...</p> <p>...<i>sini-lir-pu-q.</i> ...asleep-begin-IND.IV-3sg</p>	<p>•</p> <p> </p> <p>•</p> <p> </p> <p>•</p> <p> </p> <p>•</p>	<ul style="list-style-type: none"> • $\top e_0$: speech event $t_1' \subseteq e_0$-day • e_1: e_0-agt comes home t_2: e_1-result time • e_2: Aani goes out t_3': brief period after e_2 • e_3: John falls asleep

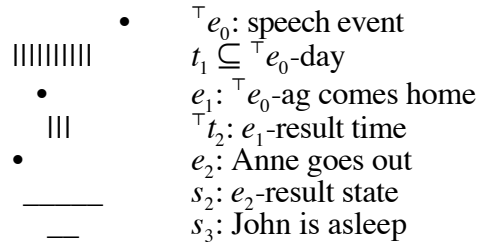
R. Aspect-based reality presuppositions (v. 1)

In a $\top w$ -real speech event $\top e$, the speaker may report:
 • a *state* *s* as a fact, iff *s*-onset precedes the time of $\top e$ in $\top w$
 • an *event* *e* as a fact, iff *e* precedes the time of $\top e$ in $\top w$

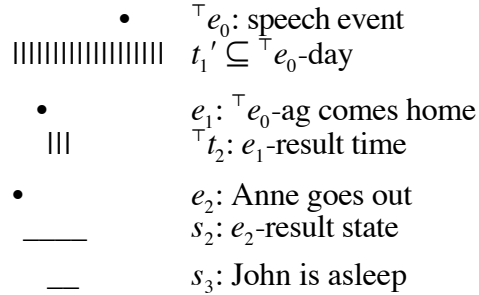
<p>(2) <i>Transitivity failure</i> (Moens & Steedman 1988)</p> <p>When John left, Sue burst into tears. When Sue burst into tears, her mother got upset. ≠ When John left, Sue's mother got upset.</p>	<p><i>Model</i> (MB)</p> <p>• </p> <p>• </p> <p>•</p>
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(3) *States*: Temporal location (**L**)

E: Today...
 ...when I came home
 ...Anne **had** (already) gone out.
 John **was** asleep.

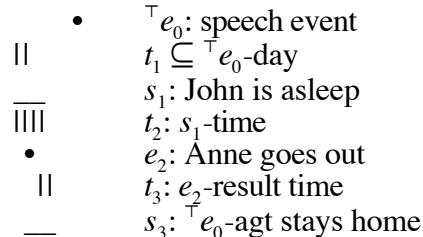


K: *Ullu-mi...*
 day-LOC...
 ...*angirlar-a-ma*
 ...come.home-FCT_T-1s
 ...*Aani ani-sima-vu-q.*
 ...Aani go.out-prf-IND.IV-3s
Juuna sinip-pu-q.
 Juuna asleep-IND.IV-3s

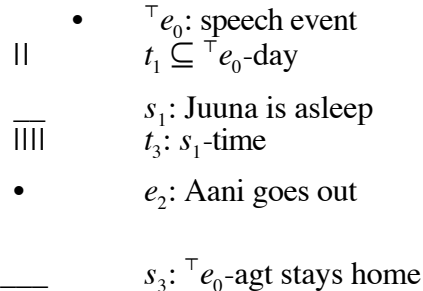


(4) *States*: Temporal update (**U**)

E: Today...
 ...when John **was** asleep,
 ...Aani went out.
 I stayed at home.



K: *Ullu-mi...*
 day-LOC...
 ...*Juuna sini-mm-at*
 ...Juuna be.asleep-FCT_T-3s_⊥
 ...*Aani ani-vu-q.*
 ...Aani go.out-IND.IV-3s
Uanga angirlar-sima-innar-pu-nga.
 me come.home-prf-**V**-IND.IV-1s



• *Three more aspect-based generalizations*

(5) Stalnaker 1968 on speech acts:

“When I speak I presuppose that others know I am speaking... This fact, too, can be exploited in the conversation, as when Daniels says *I am bald*, taking it for granted that his audience can figure out who is being said to be bald. I mention this COMMONPLACE way [MB *emph.*] that assertions change the context in order to make it clear that the context on which assertion has its ESSENTIAL effect is not defined by what is presupposed before the speaker begins to speak, but will include any information which the speaker assumes his audience can infer from the performance of the speech act.” (p. 323)

(^T*e*) Start-up update: Speech event

i-reality: ^T*w*_{*i*} • ^T*e*₀: *e*₀-agent speaks up
 | ^T*t*₀: *e*₀-time (instant) in ^T*w*_{*i*}

APPENDIX: OVERVIEW OF ASPECT-BASED UNIVERSALS

D (temporal defaults)

reality $\top w_i$

—	$\top s_0$
	$\top \vartheta_{wi} \text{BEG}_{wi} s$
•	$\top e_0$
	$\top \vartheta_{wi} e_0$
••	$\top ee_0$
	$\top \{\vartheta_{wi} e: e \in ee_0\}$
...— —...	$\text{Ran } \top h^\sigma w_i$
... ...	$\top \{\vartheta_{wi} \text{BEG}_{wi} s: s \in \text{Ran } \top h^\sigma w_i\}$
...• •...	$\text{Ran } \top h^\varepsilon w_i$
... ...	$\top \{\vartheta_{wi} e: e \in \text{Ran } \top h^\varepsilon w_i\}$
...•• ••...	$\text{Ran } \top h^{\varepsilon\varepsilon} w_i$
... ...	$\top \{\vartheta_{wi} {}^1ee: ee \in \text{Ran } \top h^{\varepsilon\varepsilon} w_i\}$

R (reality)

$\top w_i$:

•	$\top e_0$ (<i>perspective pt.</i>)
•	$\text{BEG}_{wi} s$ (<i>s-onset</i>)
•	e
•	1ee (<i>ee-stage 1</i>)
—	${}^1h^\sigma w_i$ (<i>h^σ-episode 1</i>)
•	${}^1h^\varepsilon w_i$ (<i>h^ε-episode 1</i>)
••	${}^1h^{\varepsilon\varepsilon} w_i$ (<i>$h^{\varepsilon\varepsilon}$-episode 1</i>)

L' (loc wrt \top instant)

w_i : | $\top t$ (event-time)

—	s
—	$\text{RES}_{wi} e$
—	$\text{RES}_{wi} {}^1ee$
...— —...	$\text{Ran } h^\sigma w_i$
...• •...	$\text{Ran } h^\varepsilon w_i$
...•• ••...	$\text{Ran } h^{\varepsilon\varepsilon} w_i$

L (loc wrt \top period)

|| $\top t$ (state-time)

—	s
•	e
•	1ee
...— —...	$\text{Ran } h^\sigma w_i$
...• •...	$\text{Ran } h^\varepsilon w_i$
...•• ••...	$\text{Ran } h^{\varepsilon\varepsilon} w_i$

L'' (loc wrt \top kind.of.time)

...|| ||... $\text{Ran } \top k^\tau w_i$

...— —...	$\text{Ran } h^\sigma w_i$
...• •...	$\text{Ran } h^\varepsilon w_i$
...•• ••...	$\text{Ran } h^{\varepsilon\varepsilon} w_i$

U (temporal update)

•	e
	$\top \vartheta_{wi} \text{RES}_{wi} e$
—	s
	$\top \vartheta_{wi} s$
•••	ee
	$\vartheta_{wi} \text{RES}_{wi} {}^1ee$
...— —...	$\text{Ran } h^\sigma w_i$
... ...	$\top \{\vartheta_{wi} s: s \in \text{Ran } h^\sigma w_i\}$
...• •...	$\text{Ran } h^\varepsilon w_i$
... ...	$\top \{\vartheta_{wi} \text{RES}_{wi} e: e \in \text{Ran } h^\varepsilon w_i\}$
...•• ••...	$\text{Ran } h^{\varepsilon\varepsilon} w_i$
... ...	$\top \{\vartheta_{wi} \text{RES}_{wi} {}^1ee: ee \in \text{Ran } h^{\varepsilon\varepsilon} w_i\}$