

# **Tense and Aspect**

November 5, 2004

# Tense

- Grammatical expression of the time of the situation described, relative to some other time (e.g., moment of speech)



*George admires Adolf.*

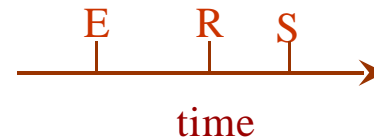
*George admired Jesus.*

# Reichenbach

- Tensed utterances introduce references to 3 ‘time points’
  - Speech Time: S
  - Event Time: E
  - Reference Time: R

*<sub>S</sub>I had [mailed the letter]<sub>E</sub> [when John came & told me the news]<sub>R</sub>*

$E < R < S$



- The concept of ‘time point’ is an abstraction -- it can map to an interval
- Three temporal relations are defined on these time points
  - at, before, after
- 13 different relations are possible

# Reichenbachian Tense Analysis

Relation			
E<R<S	Anterior past	Past perfect	I had slept
E=R<S	Simple past	Simple past	I slept
E<S= R	<b>E&gt;R&lt;S</b> Anterior present	Present perfect	I have slept
S= R= E	Simple present	Simple present	I sleep
S= R<E	Posterior present	Simple future	I will sleep
			<i>Je vais dormir</i>
S<R=E	Simple future	Simple future	I will sleep
S<R<E	<b>E&lt;R&gt;S</b> Posterior future		<i>Je dormirai</i>
			I shall be going to sleep

- Tense is determined by relation between R and S
  - R=S, R<S, R>S
- Aspect is determined by relation between E and R
  - E=R, E < R, E > R
- Relation of E relative to S not crucial
  - Represent R<S=E as **E>R<S**
- Only 7 out of 13 relations are realized in English
  - 6 different forms, simple future being ambiguous
  - Progressive no different from simple tenses
    - But I was eating a peach ≠> I ate a peach

# Tense as Operator: Prior

E<R<S	Anterior past	PPp	Past perfect	I had slept
E=R<S	Simple past	Pp	Simple past	I slept
R<E<S				
R<S=E	Posterior past	PFp		I would sleep
R<S<E				
E<S=R	Anterior present	Pp	Present perfect	I have slept
S=R=E	Simple present	p	Simple present	I sleep
S=R<E	Posterior present	Fp	Simple future	I will sleep <i>Je vais dormir</i>
S<E<R				
S=E<R	Anterior future	FPp	Future perfect	I will have slept
E<S<R				
S<R=E	Simple future	Fp	Simple future	I will sleep <i>Je dormirai</i>
S<R<E	Posterior future	FFp		I shall be going to sleep

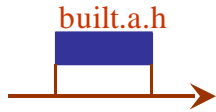
- Free iteration captures many more tenses,
  - *I would have slept*  
*PFPφ*
- But also expresses many non-NL tenses
  - *PPPPφ [It was the case]<sup>4</sup> John had slept*  
*slept*

# Aspect

- Two Varieties
  - Grammatical Aspect
    - Distinguishes viewpoint on event
  - Lexical Aspect
    - Distinguishes types of events (situations)(eventualities)
    - Also called Aktionsarten

# Grammatical Aspect

- Perfective – focus on situation as a whole
  - John built a house



- Imperfective – focus on internal phases of situation
  - John was building a house

was building.a.h



# Aktionsarten

- **STATIVES** *know, sit, be clever, be happy, killing, accident*
  - can refer to state itself (ingressive) *John knows* , or to entry into a state (inceptive) *John realizes*
  - \**John is knowing Bill, \*Know the answer, \*What John did was know the answer*
- **ACTIVITIES** *walk, run, talk, march, paint*
  - if it occurs in period t, a part of it (also an activity) must occur for every/most sub-periods of t
  - X is Ving entails that X has Ved
  - *John ran for an hour, \*John ran in an hour*
- **ACCOMPLISHMENTS** *build, cook, destroy*
  - culminate (telic)
  - x Vs for an hour does not entail x Vs for all times in that hour
  - X is Ving does not entail that X has Ved.
  - *John booked a flight in an hour, John stopped building a house*
- **ACHIEVEMENTS** *notice, win, blink, find, reach*
  - instantaneous accomplishments
  - \**John dies for an hour, \*John wins for an hour, \*John stopped reaching New York*

	Telic	Dynamic	Durative	E.g.
Stative	-	-	+	know, have
Activity	-	+	+	walk, paint
Accomplishment	+	+	+	destroy, build
Achievement	+	+	-	notice, win

# Different types of tense systems across languages

- Using verbal inflection:
  - Languages with a two-way contrast:
    - English: Past (before the moment of speaking) vs. Nonpast  
past *-ed*: *She worked hard.*  
nonpast (unmarked): *We admire her. I will leave tomorrow.*
    - Dyirbal (Australian language): Future vs. nonfuture:  
future *-ñ*: *bani-ñ* ‘will come’  
nofuture *-ñu*: *bani-ñu* ‘came, is coming’
  - Languages with a three-way distinction:
    - Catalan, Lithuanian: Past vs. Present vs. Future  
(Cat.) past: *treball-à.* (Lit.) *Dirb-au.* ‘I worked’  
present: *treball-a.* *Dirb-u.* ‘I work’  
future: *treball-arà.* *Dirb-*  
*siu.* ‘I will work’

# Different types of tense systems across languages

- A much richer distinction:
  - ChiBemba (Bantu language):

For past:

- Remote past (before yesterday) *Ba-àlí-bomb-ele* ‘they worked’
- Removed past (yesterday) *Ba-àlíí-bomba* ‘they worked’
- Near past (earlier today) *Ba-àcí-bomba* ‘they worked’
- Immediate past (just happened) *Ba-á-bomba* ‘they worked’

For future:

- Immediate future (very soon) *Ba-áláá-bomba* ‘they’ll work’
- Near future (later today) *Ba-léé-bomba* ‘they’ll work’
- Removed future (tomorrow) *Ba-kà-bomba* ‘they’ll work’
- Remote future (after tomorrow) *Ba-ká-bomba* ‘they’ll work’

# Aspect

- Internal temporal organization of the situation described by an event.
- Most common:
  - **Perfective:** Situation viewed as a bounded whole.
  - **Imperfective:** Looking inside the temporal boundaries of the situation.
    - **Habitual**
    - **Progressive**
- Other related aspectual distinctions:
  - **Iterative:** The action is repeated.
  - **Inceptive:** The action is began.
  - **Inchoative:** Entering into a state.

# Different types of aspect systems across languages

- Some languages use auxiliaries and particles associated with the verb:

## English:

- **Perfective:** *have* + Past Participle                      *I have eaten.*
- **Progressive:** *be* + Present Participle                      *I am eating.*
- **Habitual:** *use to* + Base form                      *I used to sing.*

## Catalan:

- **Habitual:** *soler* + Infinitive  
*Sol parlar.*                      ‘She generally talks.’  
*Solia cantar.*                      ‘She used to talk’
- **Iterative:** *anar*<sub>(past)</sub> (‘to go’)+ Present Part  
*Va tornant*                      ‘She keeps coming back’  
*go<sub>past</sub> coming\_back*

# Different types of aspect systems across languages

- Other languages use a derivational component:

Russian: by means of a system of verbal prefixes

- **Imperfective**: simple verbs    *Ja ?citál*    ‘I was reading’
- **Perfective**: prefixed verbs    *Ja pro?citál*    ‘I (did) read’

Finnish: by means of the case of the object

- **Perfective**: *Hän luki kirj**an***<sub>(acc.)</sub> ‘He read the book’
- **Imperfective**: *Hän luki kirj**aa***<sub>(part.)</sub> ‘He was reading the book’.

Basic meaning: only part of the object being referred to is affected by the situation.

# Tense and Aspect

- Aspect and Tense generally cross-classify:
  - Russian:
    - Present:
      - Only imperfective: *?citáju*                      *'I read'*
    - Past:
      - Imperfective:                      *Ja ?cítál*                      *'I was reading'*
      - Perfective:                      *Ja pro?cítál*                      *'I (did) read'*
    - Future:
      - Imperfective:                      ??
      - Perfective:                      *Ja pro?citáju*                      *'I shall read'*

# Tense and Aspect

## – Basque:

- Present:

- Imperfect (Gerund + Present tense auxiliary) *ekartzen du* ‘he is bringing it’
- Perfect (Past Participle + Present tense aux.) *ekarri du* ‘he has brought it’

- Past:

- Imperfect (Gerund + Past tense aux.) *ekartzen zuen* ‘he brought, used to bring’
- Perfect (Past Participle + Past tense aux.) *ekarri zuen* ‘he brought, had brought’

- Future:

- Simple (Future Participle + Pres. tense aux.) *ekarriko du* ‘he will bring it’
- Past Future (Future Participle + Past tense aux.) *ekarriko zuen* ‘he would bring’

# An interesting case

- Tense and Aspect in 2 different creoles, evolved independently from each other:

	<b>Hawaiian Creole</b>	<b>Haitian Creole</b>
<b>Base Form</b> (he walks, he walked)	<i>He walk</i>	<i>Li maché</i>
<b>Progressive</b> he is walking, he was walking	<i>He stay walk</i>	<i>L'ap maché</i> ( <i>Li ap maché</i> )
<b>Perfective</b> he has walked, he had walked	<i>He bin walk</i>	<i>Li té maché</i>
<b>Perfective Progressive</b> (he has/had been walking)	<i>He bin stay walk</i>	<i>Li t'ap maché</i> ( <i>Li té ap maché</i> )
<b>Irreal</b> (he would walk, he will walk)	<i>He go walk</i>	<i>L'av maché</i>
<b>Irreal Progressive</b> (he would/will be walking)	<i>He go stay walk</i>	<i>L'av ap maché</i> ( <i>Li av ap maché</i> )
<b>Irreal Perfective</b> (he would/will have walked)	<i>He bin go walk</i>	<i>Li t'av maché</i> ( <i>Li té av maché</i> )
<b>Irreal perfective Progressive</b> he would/will have been walking	<i>He bin go stay walk</i>	<i>Li t'av ap maché</i> ( <i>Li té av maché</i> )