Figure 1: Tense Diagram for Sue went to Boston

Tense and Aspects
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1 Tense

• Tense: Time with respect to speech time

  (1)  a. Past: Sue went to Boston. (Figure 1)
       b. Present Unnatural: Sue goes to Boston. (Figure 2)
       c. Future Sue will go to Boston. (Figure 3)

• Aspect: Different way of viewing or framing the event

  (2)  a. Progressive: John is drawing a circle
       b. Perfect: John has drawn the circle.

2 Tense

• Present
Figure 2: Tense Diagram for *Sue goes to Boston*

Figure 3: Tense Diagram for *Sue will go to Boston*
1. Only some verbs comfortable in simple present: Verbs describing a state (statives) (Figure 5)

(3)  
   a. John knits a sweater. [odd....]  
   b. John loves Mary.  
   c. John knows the answer.  
   d. John has a two car garage.

2. Futurate use

(4)  
   a. Speck dies tomorrow.  
   b. ? I eat breakfast tomorrow.  
   c. I eat breakfast tomorrow at 3 PM.  
   d. They announce the winner this week.  
   e. ? The winner is announced this week.  
   f. They will win tomorrow.  
   g. ! They win tomorrow. [game rigged]

3. Reportorial, Recipe use

(5)  
   a. Pippen passes to Rodman, Rodman dribbles and almost loses it, passes to Paxton, Paxton dishes it to Jordan, Jordan soars up to the basket. Basket! And a foul!  
   b. Now I add two eggs, stir, and put the whole mess into the oven.

Figure 4: Tense Diagram for Sue went to Boston yesterday
• Past

1. Basic uses: Event before speech time. Really the dominant default form to be used for this

(6)

Bush won the election. (neutral)
Bush has won the election. (newsworthy)
Bush wins the election. (recent past, very recent past, reporter use)
Bush is winning the election. (not yet a fact)
Bush was winning the election. (speaking of a past time when it was not yet a fact)

2. In conditionals: tenseless use

(7)  a. If the Bulls won their next three games they would be seeded 2nd in the playoffs.
    b. ? If the Bulls won their next three games they will be seeded 2nd in the playoffs.
    c. If the Bulls win their next three games they would be seeded 2nd in the playoffs.
    d. If the Bulls win their next three games they will be seeded 2nd in the playoffs.

• Future: Various competing possibilities

1. Futurate present: Speck dies tomorrow.
2. Is going to: John is going to read that book.
3. Is to: Speck is to die tomorrow
4. Will: John will read that book. Speech act: prediction

• The function of tense: Not just to mark when something happened. Also marks: Finiteness

1. A finite sentence can express a proposition, which is something having a truth value

(8)  a. John walked.
    b. John will walk.
c. John walks.

2. what all the sentences in (8) have in common: Finiteness (+ Finite in INFL)

3. Sentences that can’t be used to express something with a truth value

(9) a. John’s running
    b. John to run
    c. John’s having run
    d. For John to run
    e. that John ran

4. What they all have in common (except [e]) is finiteness

5. Roughly right: Syntactically finiteness marks that a sentence can be used to make an assertion

6. Refinements, quibbles

(a) Natural language has ways to “nominalize” even finite clauses. “Nominalizing” doesn’t necessarily mean turning something into a noun. It means turning it into something nounlike, which an have further properties: For example, nominalized clauses can be subjects of sentences:

(10) a. That john ran astonished me.
    b. For John to run would astonish me.
    c. John’s running astonished me.

(b) So finiteness means non-nominalness. (and there are syntactic devices that even overrule finiteness like attaching that).

(c) Assertability isn’t quite the right criterion for full-final-clausiness (we will call the property we’re after: being usable for speech acts)

(11) a. Is John running?
    b. Who is running?
    c. Run, John. [maybe not finite, but complete, and neither true nor false]
    d. I now pronounce you man and wife.

Notice: None of these examples have truth values either. Assertability and having a truth value go together; (if something
is asserted it has a truth value). But neither concept captures the full range of complete speech acts.
7. Nevertheless, there is something right about the idea that tense doesn’t just mark when something happened.

3 Aspect

• Progressive

The progressive temporally frames an event. – Jespersen

(12) a. John was knitting a sweater. [implicit time point in middle event]
b. When I walked in, John was knitting a sweater.
c. Entailment: event not yet completed at that time, in progress

\[
\text{John was knitting a sweater} \\
\not\rightarrow \\
\text{John knitted a sweater}
\]

1. Not compatible with every verb: Bad with states, especially permanent states (see Figure 5)

(13) a. * John is knowing the answer.
b. * The jar is containing butter.
c. Italy is bordering on Switzerland.
d. * John is owning three condons.
e. * John is having a two-car garage.
f. John is having one of his headaches.
g. John is having a fit.

2. coercion of some states to events: For some verbs the progressive gives a sense of temporariness

(14) a. The Leeches are living in Rome
b. The Leeches live in Rome.
c. The obelisk is occupying the top of the hill.
d. The obelisk occupies the top of the hill.
3. Entailment differences: Activity versus Accomplishment [natural endpoints Figure 5]

**Accomplishment**

(15) a. John was knitting a sweater.
    b. John knitted a sweater.

**Activity**

(16) a. John was running.
    b. John ran.

4. The Perfect

- Present Perfect:

  1. Incompatibility with past adverbials

     (17) a. Have you read the paper today/this week
         b. # Have you read the paper yesterday/Wednesday/last week?
         c. I am going to see Ferdinand this morning.[there is some part of this morning in the future.]
         d. I saw Ferdinand this morning.[there is some part of this morning in the past, okay in the afternoon]
         e. I have seen Ferdinand this morning. [it’s still morning]
         f. The mail arrived an hour ago.
         g. # The mail has arrived an hour ago.

     These are called **Frame Adverbials** because they don’t tell you the exact time or duration of an event; they give you a frame in which it must have occurred

  2. Present Perfect: Event whose result still has significance, exerts its effect (so-called resultant-state reading)

     (18) a. Jill won’t need that checkout job NOW. She’s won the lottery! [Effect: She’s now rich.]
         b. Henry can’t dance the lambada. He’s pulled a tendon. [Effect: He’s still injured.]
         c. Karen has broken into our files. So now we’ll we have to whack him. [Effect: She now knows our secrets]
d. I have seen your dog. [Dog lost: I now know where he is]
e. Russia has invaded Poland. [Hot news. Implication too: Poland still occupied. But there’s another reading....]

3. Statives again are different: Continuing state reading

(19) a. I have stayed in today.
   b. I have loved her (for many years).
   c. The door has been open (for ten minutes) [notice how incomplete this sounds without the for-phrase, and how the continuing state reading goes away.

4. The result/state still holds....

Now
past --------------------------------|_______________future
    [Event --------------------------------]
Result of Event
[------------- State ---------------]

5. Where the frame on frame adverbials goes....

Now
past --------------------------------|_______________future
    [Event --------------------------------]
Frame

A relationship between two time intervals: Now and the event frame....

6. The Existential assertion reading: different properties than those before

(20) a. I have been to Russia (three times)
    b. I have eaten grasshoppers. (once in my youth)
    c. The door has been open.
    d. Russia has (often) invaded Poland.

NO frame overlapping present... But IF a frame adverbial is supplied:

(21) Russia has invaded Poland (only once) in the 20th century. [now, in the 21st century, anomalous]
• Perfect vs Simple Past. Novelty/familiarity effects.

(22) a. Fred shot Bill. He then went to sleep.
   b. Fred has shot Bill. # He then went to sleep.
   c. Fred has shot Bill. # He has then gone to sleep. [Pres Perf
      ALWAYS incompatible with then]
   d. Fred has shot Bill. He has now gone to sleep. [Much better,
      still kinf odd]

[Conclusion: then is a kind of temporal pronoun (a time later than
the salient past time). Pres. Perf doesn’t provide a time antecedent.
Simple past does]

• Pres. perf Doesn’t provide a reference time that can be referred back
to in discourse:

(23) a. I never met a man I din’t like. [at th time of meeting]
   b. I have never met a man I havenm’t liked. [at some point in
      our acquaintance]

• The past tense can be used to refer to a specific past time

(24) a. Did you see Cats?
   b. No but I have since.[the time we’re talking about]
   c. Have you seen Cats?

• Analogy to definite and indefinite

(25) a. Have you ridden the bike?
   b. No, but I’ve ridden a different bike?
   c. Have you ridden a bike?

• Continueing the analogy: Interaction with negation:

(26) a. Tom didnt read a book. [over the time period we’re talking
    about: no books. ¬∃]
   b. Tom didn’t read the book.[a speicifc book b]

(27) a. Tom hasn’t read Moby Dick. [ever, ¬∃]
   b. Tom didn’t read Moby Dick.[with a speicifc time period, last
      week.]
5 Formal issues

- Scope

(28) The president has always been a republican.

- Tense and modality are different: Different analysis. No possible worlds.

1. Operator notation

(29) a. Clive loves Sam.
    b. Pres LOVE(c, m)
    c. Fido bit Benny
    d. Past BITE(f, b)
    e. Sue will kick Benny.
    f. Fut KICK(s, b)

2. Quantified notation

(30) a. Clive loves Sam.
    b. \[\exists t : \text{overlaps}(t, t^*)\] LOVE(c, m, t)
    c. Fido bit Benny
    d. \[\exists t : t < t^*\] BITE(f, b, t)
    e. Sue will kick Benny.
    f. \[\exists t : t > t^*\] KICK(s, b, t)

3. But we’re not capturing our facts about the definiteness and indefiniteness of past and present perfect:

(31) a. Clive read Moby Dick
    b. \[\text{the}t : (t < t^*)\] READ(c, mb, t)
    c. Clive has read Moby Dick.
    d. \[\exists t : t < t^*\] READ(c, mb, t)

4. Our formal representation gives no explanation of any of the following facts we’ve noted:

(a) Why the present tense most isn’t used (only for statives does the representation seem right)

(b) Why frame adverbials with present perfect must overlap present

(c) Why the continuing state readings are in complementary distribution with frame adverbials

John will leave.

\[ \begin{array}{c}
\text{S} \\
past \ldots | \text{John leaves} \\
E, R \\
future
\end{array} \]

John has left

\[ \begin{array}{c}
\text{E} \\
past \ldots | \text{John leaves} \\
R, S \\
future
\end{array} \]

John left

\[ \begin{array}{c}
\text{R} \\
past \ldots | \text{John leaves} \\
S \\
future
\end{array} \]

Rule: Frame adverbials modify R!

John got there by noon but Molly had left at 10:30.

\[ \begin{array}{c}
\text{E} \\
past \ldots | \text{Tom arrives} \\
R, S \\
10:30 \\
future
\end{array} \]
Figure 5: The classification of eventualities