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: The way the event is temporally framed, the way the event is temporally structured

(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*
Figure 4: Tense Diagram for *Sue went to Boston yesterday*

1. Only some verbs comfortable in simple present: States (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. Repotorial, Recipe use
   (5) a. Pippen passes to Rodman, Rodman dribbles and almost
       loises it, passes to Paxtion, 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

   • Past
1. Basic uses: Event before speech time. Really the dominate 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

3 Aspect

• Progressive

The progressive temporally frames an event. – Jespersen

(8) 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

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

(9) a. * John is knowing the answer.
   b. * The jar is containing butter.
   c. Italy is bordering on Switzerland.
   d. * John is owning three condos.
   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

(10) 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 occupies obelisk the top of the hill.

3. Entailment differences: Activity versus Accomplishment (natural endpoints Figure 5)

Accomplishment

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

Activity

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

4 Formal issues

- Scope

(13) The president has always been a republican.

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

  1. Operator notation
(14)  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

(15)  a. Clive loves Sam.
    b. $\exists t [t = t^* \land \text{LOVE}(c, m) \text{ is true at } t]$ 
    c. Fido bit Benny
    d. $\exists t [t < t^* \land \text{BITE}(f, b) \land \text{LOVE}(c, m) \text{ is true at } t]$ 
    e. Sue will kick Benny.
    f. $\exists t [t > t^* \land \text{KICK}(s, b) \land \text{LOVE}(c, m) \text{ is true at } t]$
Figure 5: The classification of eventualities