

# Today

- Reading presentations Wednesday
- HW3 due Friday
  - Please sign up for times to meet with Kensy or me
  - Google Scholar
- Parallel or serial processing?

# Serial or parallel?

- In the second-by-second processing of a sentence, do people construct

– just one single best guess

- Saves on memory
- Possibly faster when you get it right

– a set of possible best guesses

- More robust to ambiguity
- Less taxing and possibly faster when best guess is wrong

~~– all possible guesses~~

(garden path effects)

# Distinguishing evidence?

- You could tell if people are constructing multiple parses in parallel in the following way:
  - People's processing slows down when a particular interpretation is less plausible
  - You have people process ambiguous sentences
  - You manipulate how plausible the second most likely interpretation is
  - If it affects people's processing, then this means that they're maintaining it in parallel with the most likely interpretation

# But there's a problem

- It's possible to get the same effect with serial models
  - People might only pick one interpretation, but while they usually pick the most likely interpretation, they occasionally pick a less likely one (this would be a probabilistic serial approach)
  - In this case, an average increased processing difficulty would be due to the trials in which people picked the less likely interpretation

# Another way to tell

- In serial models, the preferences for the different interpretations are complementary
  - For sentences where one interpretation is very likely to be chosen, any other interpretation will be very unlikely to be chosen
- In a parallel model, this isn't necessarily the case
  - If the parallel interpretations aren't in competition (in some parallel models they are), then their probabilities don't have to sum to 1.

# Some psycholinguistics

- The report that the dictator described the country was not evaluated until later.  
Sentence complement (SC)

- The report that the dictator described was not evaluated until later.  
Relative clause (RC)

- The report that the dictator bombed the country was not evaluated until later.  
Sentence complement (SC)

# So

- In fact, it appears that when one interpretation becomes more or less probable, this doesn't affect the likelihood of other interpretations
  - This is in line with the parallel interpretations approach