Topics: more on the challenge of natural language processing (NLP); evidence for complex structure within sentences.

I. Example application: sentiment analysis

1. (a) This laptop is a great deal.
   (b) A great deal of media attention surrounded the release of the new laptop.
   (c) If you think this laptop is a great deal, I’ve got a nice bridge you might be interested in.

2. This film should be brilliant. It sounds like a great plot, the actors are first grade, and the supporting cast is good as well, and Stallone is attempting to deliver a good performance. However, it can’t hold up.

II. The importance of recognizing intentions

From Grishman (1986), pg. 157. We imagine that A is a human traveller, and B is some sort of speech-enabled automated kiosk system.

A: Do you know when the train to Boston leaves?
B: Yes.
A: I want to know when the train to Boston leaves.
B: I understand.

III. Examples of attachment ambiguity

1. “List all flights on Tuesday.”
2. “List all flights on the double.”
3. “Copy the local patient files to disk.”

IV. A highly ambiguous sentence

“I saw her duck with a telescope.”

Note: many interpretations are possible, but these do not correspond to all possible combinations of possible interpretations of the various “sub-units” of the sentence. (We will not discuss in depth theories that account for this “non-combinatorial explosion”.)

(OVER)
V. Tree representation of possible syntactic analyses, reduced form  Here, arguments of or modifiers to an item are shown in a sibling relationship with the item in question.

VI. An alternative representation with constituent labels  Other analyses are possible (and indeed, current theories vary).

NP=noun phrase; VP=verb phrase; PP=prepositional phrase.  \(N'\) (pronounced “N-bar”) is a “bare noun phrase”.  The labels just above the leaves represent parts of speech (POS); DET=determiner.