

*January 20, 2004*

*Ch 2.7–2.8*

*Words used as phrases, testing the structure*

# *Overview*

- Phrase v. word level categories
- Single-word phrases
- Preview: Heads of phrases
- Establishing the constituent structure of a sentence
- Practically speaking...

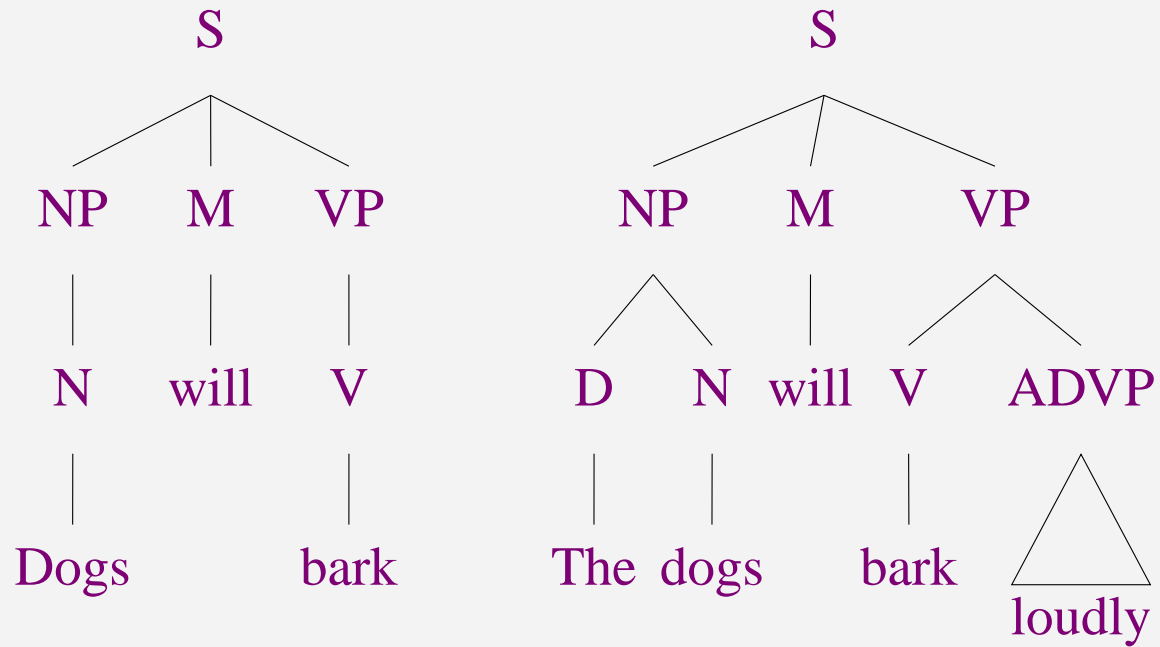
*What's the difference between a word and a phrase?*

- Two options:
  - Option #1: Phrases consist of multiple words.
  - Option #2: Their distributional potential.
- What does distributional potential mean?
- Where might the options make different predictions?
- Which definition does Radford adopt?

## *Categories as distributional potential (1/2)*

- Categories are useful for describing distributional potential if there are rules that make reference to them (we'll get there!).
- Empirically, we see that some single words behave distributionally as though they were both single words and phrases.
- We model this with non-branching constituents over the words when they are behaving as phrases.

## *Categories as distributional potential (2/2)*



## *But what is the evidence?*

- Radford gives 5 kinds of evidence that single Ns can serve as NPs:
  - Distributional
  - Preposing (a subcase of movement)
  - Sentence fragments
  - Coordination
  - Pronominalization
- Where have we seen these before?

## *Distributional*

- Single Ns can show up where whole NPs can:
  - [*Cars*]/[*Very fast cars*]/[*Those very fast cars*] can be useful.
  - Do [*cars*]/[*very fast cars*] turn you on?
  - I really enjoy [*cars*]/[*very fast cars*].
  - I'm just crazy about [*cars*]/[*very fast cars*].
- *Cars* seems to share the distributional potential of *very fast cars*.

## *Preposing*

- Single Ns can prepose:
  - Most people can't stand [*hypocrisy*].
  - [*Hypocrisy*], most people can't stand.
- Preposing is a test for constituency, but also for the status of being a COMPLETE PHRASE.



## *Coordination*

- Single Ns can coordinate with multi-word NPs:
  - Most people can't stand [*hypocrisy*] or [*the kind of glib lies that politicians tell*].
- Coordination is a test not only for constituency, but also for IDENTITY OF CATEGORY.
- Apply it carefully, however:
  - Most people can't stand [the [lies] and [hypocrisy]] which characterize today's politicians.
  - Most people can't stand [the lies] and [hypocrisy] which characterize today's politicians.

## *Pronominalization*

- The pro-NP *it* can replace a single N:
  - Most people can't stand [*hypocrisy*]/[*it*].
- Alternatively: The N *hypocrisy* has the same distribution as the pro-form *it*, which we have already seen has the same distribution as NPs.

## *What about other Ns?*

- Can all Ns function as NPs?
- Think of examples, and test them with the 5 tests:
  - Distribution
  - Preposing
  - Sentence fragments
  - Coordination
  - Pronominalization
- How might you describe which Ns can and can't serve as NPs?

## *Preview: Heads of phrases*

- Last time, we argued that most of the tests for constituency can only show constituency, and not category membership.
- Even the ones that show category membership (distribution, coordination, and to some extent ellipsis and a few others) don't give us category labels.
- So what makes an NP and NP? What's 'nouny' about it?

## *The nouniness of NPs (1/5)*

- Here's a sentence frame that allows NPs and not other categories:
  - Kim gave [*books*] to Sandy.
  - Kim gave [*a book*] to Sandy.
  - Kim gave [*an expensive book*] to Sandy.
  - Kim gave [*a book about gardening*] to Sandy.
  - Kim gave [*my book*] to Sandy.
  - Kim gave [*three books*] to Sandy.

## *The nouniness of NPs (2/5)*

- Here's some non-NPs that don't fit there:
  - \*Kim gave [*a*] to Sandy.
  - \*Kim gave [*an expensive*] to Sandy.
  - \*Kim gave [*expensive*] to Sandy.
  - \*Kim gave [*about gardening*] to Sandy.
  - \*Kim gave [*my*] to Sandy.
  - \*Kim gave [*enjoy books*] to Sandy.
  - \*Kim gave [*often*] to Sandy.
  - \*Kim gave [*Sandy enjoys books*] to Sandy.

## *The nouniness of NPs (3/5)*

- What do all the good examples have in common?
  - Kim gave [*books*] to Sandy.
  - Kim gave [*a book*] to Sandy.
  - Kim gave [*an expensive book*] to Sandy.
  - Kim gave [*a book about gardening*] to Sandy.
  - Kim gave [*my book*] to Sandy.
  - Kim gave [*three books*] to Sandy.

## *The nouniness of NPs (4/5)*

- Do any of the bad examples share that property?
  - \*Kim gave [*a*] to Sandy.
  - \*Kim gave [*an expensive*] to Sandy.
  - \*Kim gave [*expensive*] to Sandy.
  - \*Kim gave [*about gardening*] to Sandy.
  - \*Kim gave [*my*] to Sandy.
  - \*Kim gave [*enjoy books*] to Sandy.
  - \*Kim gave [*often*] to Sandy.
  - \*Kim gave [*Sandy enjoys books*] to Sandy.



## *The nouniness of NPs (5/5)*

- We call these phrases NPs (and not RPs or SPs or ZPs) because they are centered on or headed by a N.
- They may contain other dependents (specifiers, complements, modifiers) of that N, but all of these are optional (in the general case).
- This is the flip side of the same distributional evidence we saw earlier for saying that some Ns can function as NPs.

## *Vs used as VPs*

- Radford gives distributional evidence that certain Vs can be used as VPs:
  - John may [*leave*]/[*leave home*].
- Provide other kinds of evidence that single Vs can be used as VPs.
- Can all single Vs be used as VPs?
- How might you characterize which Vs can and can't?

*For reference: Our constituency tests (p.90)*

- Distribution (establishes equivalence classes)
- Movement: Preposing, postposing (complete phrases only)
- Sentence fragment (complete phrases only)
- Allowing S and VP adverbs inside constituent (establishes S or VP category membership)
- Ordinary coordination (establishes equivalence classes)
- Shared constituent coordination
- Pronominalization
- Ellipsis (establishes VP category membership)

## *Establishing the structure of a pair of sentences*

- Here are the sentences:
  - Drunks would get off the bus.
  - Drunks would put off the customers.
- We'll work left to right, first on one then on the other.

## *Drunks would get off the bus (1/5)*

- Does *drunks* form a constituent with anything else?
- Because constituents are contiguous, it would have to include the next word.
- Possibilities are:
  - Drunks would
  - Drunks would get
  - Drunks would get off
  - Drunks would get off the
  - Drunks would get off the bus.
- Are any of these strings constituents OF THIS SENTENCE?

## *Drunks would get off the bus (2/5)*

- How about *would*?
- We already ruled out *Drunks would* as a constituent here.
- So, the possibilities are:
  - would get
  - would get off
  - would get off the
  - would get off the bus
- Are any of these strings constituents of this sentence?

## *Drunks would get off the bus (3/5)*

- How about *get*?
- The possibilities:
  - get off
  - get off the
  - get off the bus
- Are any of these constituents of this sentence?

## *Drunks would get off the bus (4/5)*

- How about *off*?
- The possibilities:
  - off the
  - off the bus
- Are any of these constituents of this sentence?



## *Drunks would get off the bus (5/5)*

- How about *the: the bus*?
- What do we know so far?
- Are there any other constituents we should test?
- Any other tests we should apply?

*Drunks would put off the customers (1/4)*

- Are there any constituents we can borrow from the first sentence?
- Why or why not?
- Test them just to make sure...

## *Drunks would put off the customers (2/4)*

- Let's look at *put* in this sentence:
  - put off
  - put off the
  - put off the customers
- Are any of these strings constituents of this sentence?

*Drunks would put off the customers (3/4)*

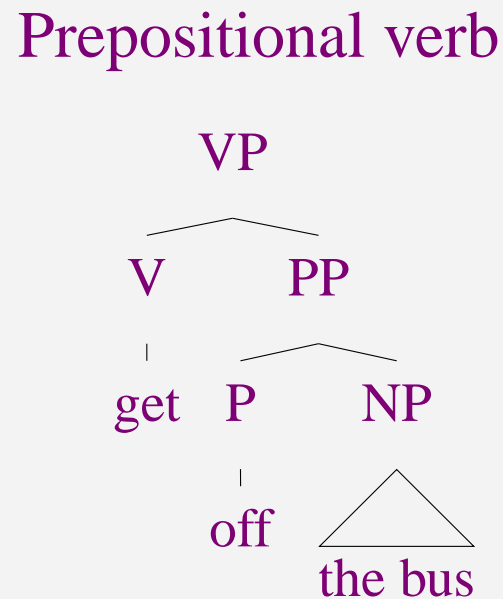
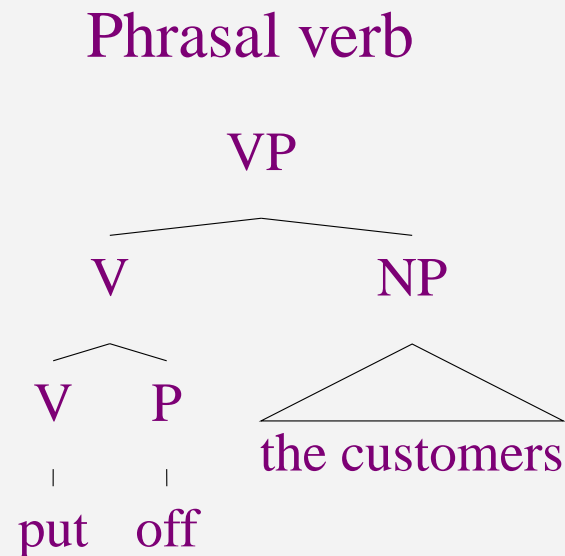
- For good measure, what about *off*
  - off the
  - off the customers
- Are any of these strings constituents of this sentence?

## *Drunks would put off the customers (4/4)*

- What do we know so far?
- Are there any other constituents we should test?
- Any other tests we should apply?

## *Phrasal verbs v. prepositional verbs*

- The difference between these two examples turns on the differences between phrasal verbs and prepositional verbs.
- Proposed constituent structures:



## *Phrasal verbs v. prepositional verbs: Differences*

- Phrasal verbs tend to be more idiosyncratic in their meaning:
  - !Drunks would put on the customers.
  - Drunks would get on the bus.
- Ordering possibilities:
  - Drunks would put the customers off.
  - \*Drunks would get the bus off.

## *Practically speaking...*

- When you go to draw a tree for a sentence, there are two ways to go about it:
  1. Look at similar examples in the book, and use them as models.
  2. Painstakingly argue for the constituency status and label of each constituent you posit.
- Option #2 amounts to building or arguing for a model.
- Option #1 amounts to applying the model.
- There's a time and a place for each, and I'll try to make it clear which is which.



## *Summary*

- Phrase v. word level categories
- Single-word phrases
- Preview: Heads of phrases
- Establishing the constituent structure of a sentence
- Practically speaking...

## *Next time*

- Models and modeling
- Our model so far
- (Preview: Phrase structure rules)
- Practice drawing trees
- Evidence for categorial constituent structure
- Practice applying the tests
- Where and why the tests leak