

*January 15, 2004*  
*Chapter 2.4–2.6*  
*Phrasal Categories*

## *Overview*

- Last time: constituent structure, word classes
- This time: constituent structure, phrase classes
- Along the way: digressions on critical thinking and linguistic argumentation

## *Critical thinking*

- Distinguishing the model from the data  
(learning how to make and evaluate models, rather than just learning one particular model)
- Looking at the structure of argumentation
- Looking for other possibilities in the face of big claims

## *Things that syntacticians do with evidence for phrasal categories*

- Establish the general need for categorical constituent structure
- Establish an overall inventory of phrase types (for a language, or across languages)
- Decide whether particular sequences of words are constituents
- Decide which category particular sequences of words belong to
- Relate word-level categories to phrase-level categories

## *The general argument*

- ‘Unless we postulate that sentences are structured out of Phrases belonging to various categories, we cannot account for which sequences of words can appear in which positions in which types of sentence.’ (p.69)
- Why do we want to account for that?
- Arguments of this type assert that we can’t model the data without categorial constituent structure. What do they say about the domain being modeled, itself?
- How could such an argument be refuted/disproven (i.e., in what way is it vulnerable)?

*Putatively morphological evidence for a phrasal  
constituent (1/3)*

- [the Queen of England]'s crown
- \*[the Queen's of England] crown
- [the person you are enamored with]'s signature
- \*[the person's you are enamored with] signature
- [the astronomer who Kim saw's] telescope
- \*[the astronomer's who Kim saw] telescope
- [the person who is taller than me]'s shoes
- \*[the person's who is taller than me] shoes
- \*[the person who is taller than my] shoes  
(on the intended reading)

## *Putatively morphological evidence for a phrasal constituent (2/3)*

- Radford's analysis:
  - Though inflectional morphology usually attaches to words, here is a case where it attaches to phrases (particularly, noun phrases).
  - We can't describe this morphological pattern without recourse to that notion of phrase, ergo this evidence supports categorial constituent structure.

## *Putatively morphological evidence for a phrasal constituent (3/3)*

- An alternative:
  - English possessive -'s is a syntactically independent, although phonologically dependent (a type of creature called a *clitic*).
  - Distributionally, it appears at the right edge of NPs.
  - We can't describe this syntactic pattern without recourse to that notion of phrase, ergo this evidence supports categorial constituent structure.



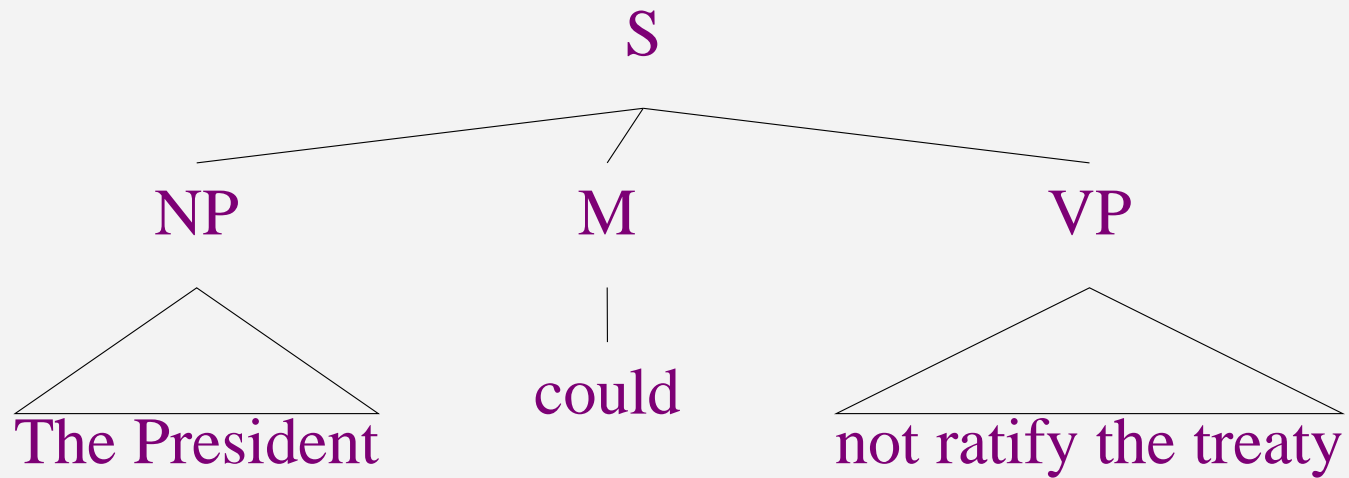
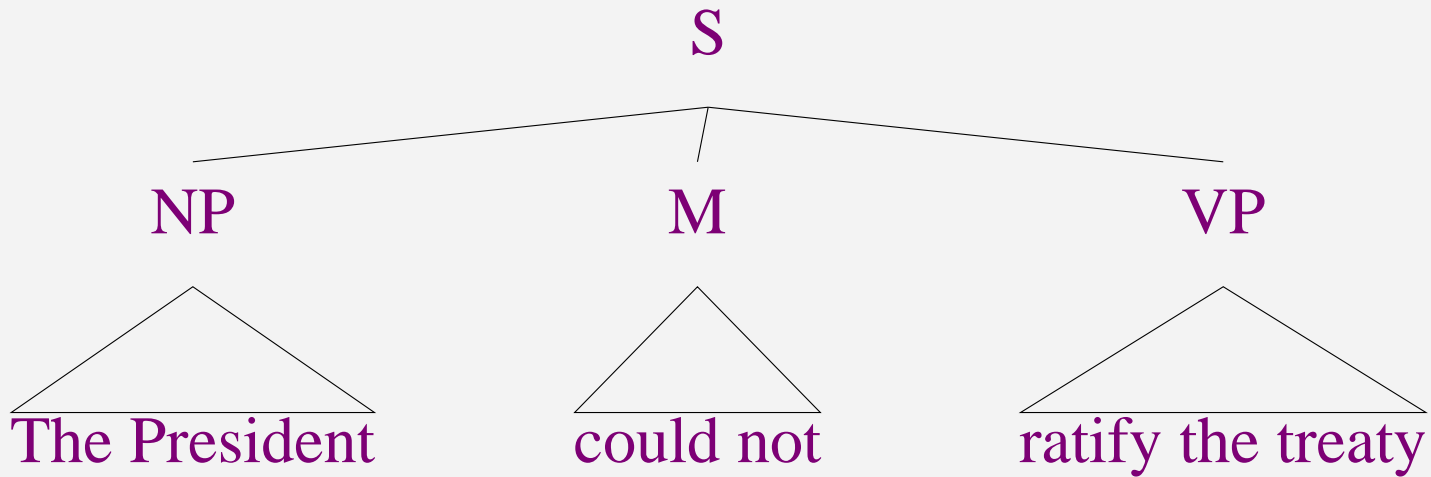
## *Semantic evidence (ambiguity again)*

- Examples of purely structural ambiguity:
  - Cats and dogs that bark bother Kim.
  - I saw the astronomer with the telescope.
  - People with children who use drugs should be locked up.
- We can account for this ambiguity by positing different groupings of the words in the sentence for the modifiers (*that bark, with the telescope, and who use drugs*) to attach to.

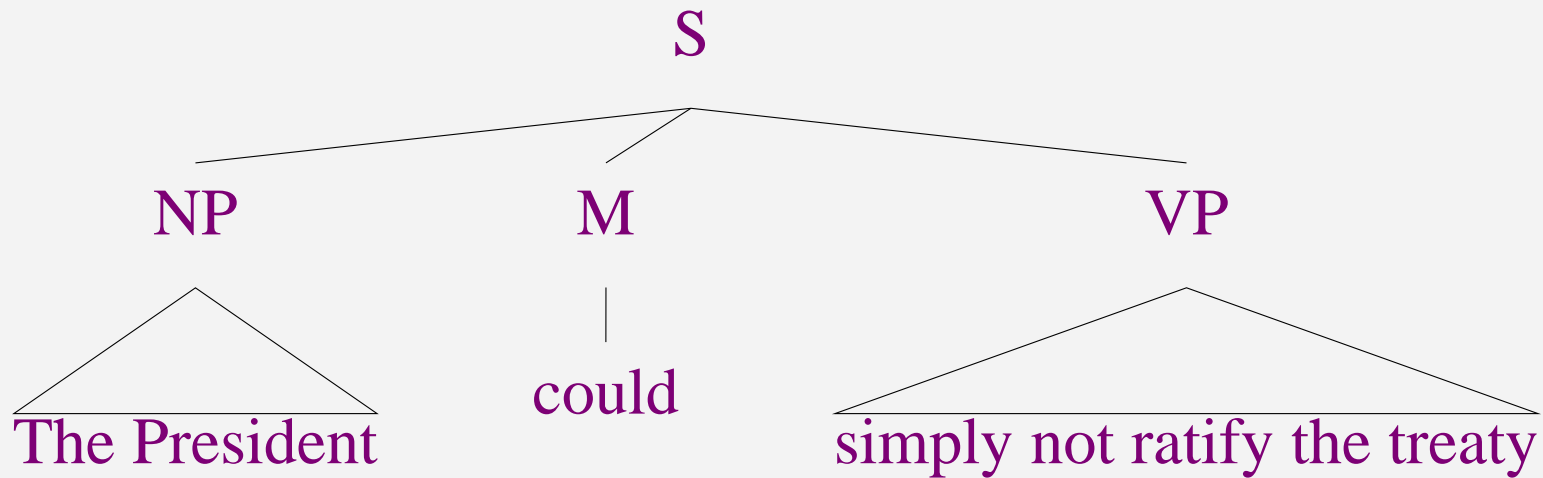
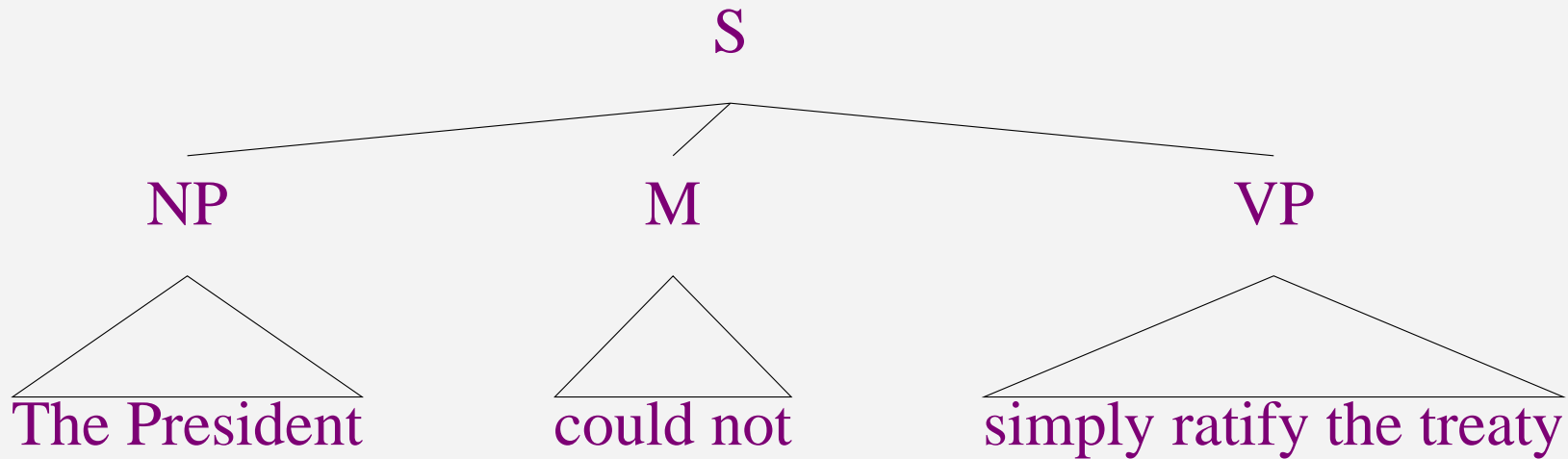
## *Semantic evidence (another kind of ambiguity)*

- *not* after a modal is ambiguous between sentential and constituent negation:
  - The President could not ratify the treaty.
- Adverb placement can disambiguate:
  - The President could simply not ratify the treaty.
  - The President could not simply ratify the treaty.
- The pseudocleft variants are also distinct:
  - What the President could not do was ratify the treaty.
  - What the President could do was not ratify the treaty.

## *Negation ambiguity: trees (1/2)*



## *Negation ambiguity: trees (2/2)*



## *Negation ambiguity: conclusion*

- Positing a VP constituent helps us to account for this ambiguity.
- It also helps account for the position of *simply* on the two different readings (syntactic evidence).
- The structures we posit are supported by a distributional test involve pseudo-cleft sentences.

## *Putative phonological evidence (1/2)*

- Only the sentence negation reading is available (with most modals) when the negative element *not* is contracted with *-n't*.

The President couldn't ratify the treaty.

- Note that there are exceptions:

You mustn't eat dessert first.

## *Putative phonological evidence (2/2)*

Radford: ‘[T]he rule applies to contract a negative with modifies a Modal, but not to a negative which modifies a VP. But any such account of NEGATIVE CONTRACTION presupposes that sentences have as their immediate constituents [NP M VP], and thus requires us to posit the existence of phrasal categories such as (in particular) VP...’

## *Alternative analysis*

- There is not in fact any rule which takes a negative element and contracts it.
- Rather, there are two systematically related classes of words, positive and negative auxiliaries.
- The negative auxiliaries generally have semantic representations such that the negation takes ‘narrow’ scope, i.e., just over the VP, and not over the auxiliary.
- This account has no problem with the exceptions like *mustn’t*.
- For more details, see Sag, Wasow and Bender 2003, Chapter 13.



## *Warning (1/2)*

- Linguists often fall into the trap of positing ‘arguments from lack of imagination’, which basically take the following form:

I can't see any other way to do this, and so therefore the assumptions I am making must be right.

- This error is partly due to the fact that language involves many interacting but quite different systems.
- Linguists tend to specialize in one or at most two such systems, and then assume that those are the central ones.

## *Warning (2/2)*

- The result is a tendency to try to account for too much with the tools they have to hand...
- In this case, the problem is the assumption that since *couldn't* means the same things as (certain uses of) *could not*, the former must be derived from the latter.
- Radford hedges a bit when he says ‘any such account’ leaving open the possibility of others.

## *Syntactic evidence (1/2)*

- preposing (‘topicalization’, ‘English focus movement’)
- postposing (‘extraposition’)
- sentence fragments
- cleft sentences
- adverb placement
- coordination
- shared constituent coordination (‘right node raising’)
- pro-forms
- ellipsis

## *Syntactic evidence (2/2)*

- For each kind of evidence, we will ask:
  - Does this support the general idea of constituent structure?
  - Can this be used to establish that a particular string is a constituent?
  - Can this be used to establish that a particular string is not a constituent?
  - Can this be used to establish the category of a phrase?

## *Preposing (1/2)*

- [*That kind of behavior*] I simply won't tolerate. (NP)
- I went to see *Shrek* yesterday, and [*very exciting*] it was, too. (AP)
- [*Very shortly*], this will all make sense. (ADVP)
- [*Down the hill*] Kim ran. (PP)
- [*Give in to blackmail*], I never will! (VP)
- \* *Your elder*, I can't stand sister.
- \* *A book to Kim*, Sandy gave.
- \* *Up his mother*, John rang.

## *Preposing (2/2)*

- Does this support the general idea of constituent structure?
- Can this be used to establish that a particular string is a constituent?
- Can this be used to establish that a particular string is not a constituent?
- Can this be used to establish the category of a phrase?

## *Postposing (1/2)*

- Kim explained [*all the terrible problems that had arisen*] to Sandy.
- Kim explained to Sandy [*all the terrible problems that had arisen.*]
- \*Kim explained the all to Sandy [*terrible problems that had arisen.*]
- A student [*who was wearing pink earmuffs*] walked in.
- A student walked in [*who was wearing pink earmuffs*].
- \*A student who was wearing walked in [*pink earmuffs*].

## *Postposing (2/2)*

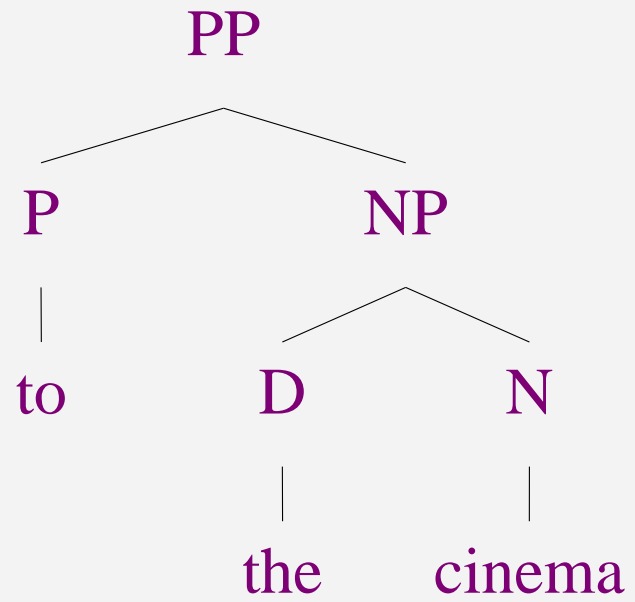
- Does this support the general idea of constituent structure?
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## *Sentence fragments (1/3)*

- Where did Kim go?
  - *Up the hill.*
  - Who were you ringing up?
  - *Up my sister.*
  - Where are you going to?
  - *To the cinema./The cinema.*
- 
- Only complete phrases can be sentence fragments.

## *Sentence fragments (2/3)*



## *Sentence fragments (3/3)*

- Does this support the general idea of constituent structure?
- Can this be used to establish that a particular string is a constituent?
- Can this be used to establish that a particular string is not a constituent?
- Can this be used to establish the category of a phrase?

## *Cleft sentences (1/2)*

- It was [*a book about syntax*] that Kim was reading.
- It is [*study for the exam*] that I urgently need to do.
- It is [*after lunch*] that they always fall asleep.
- \*It was [*book about syntax*] that Kim was reading a.
- \*It was [*Sandy a letter*] that Kim sent.
- It is [*lunch*] that they always fall asleep after.

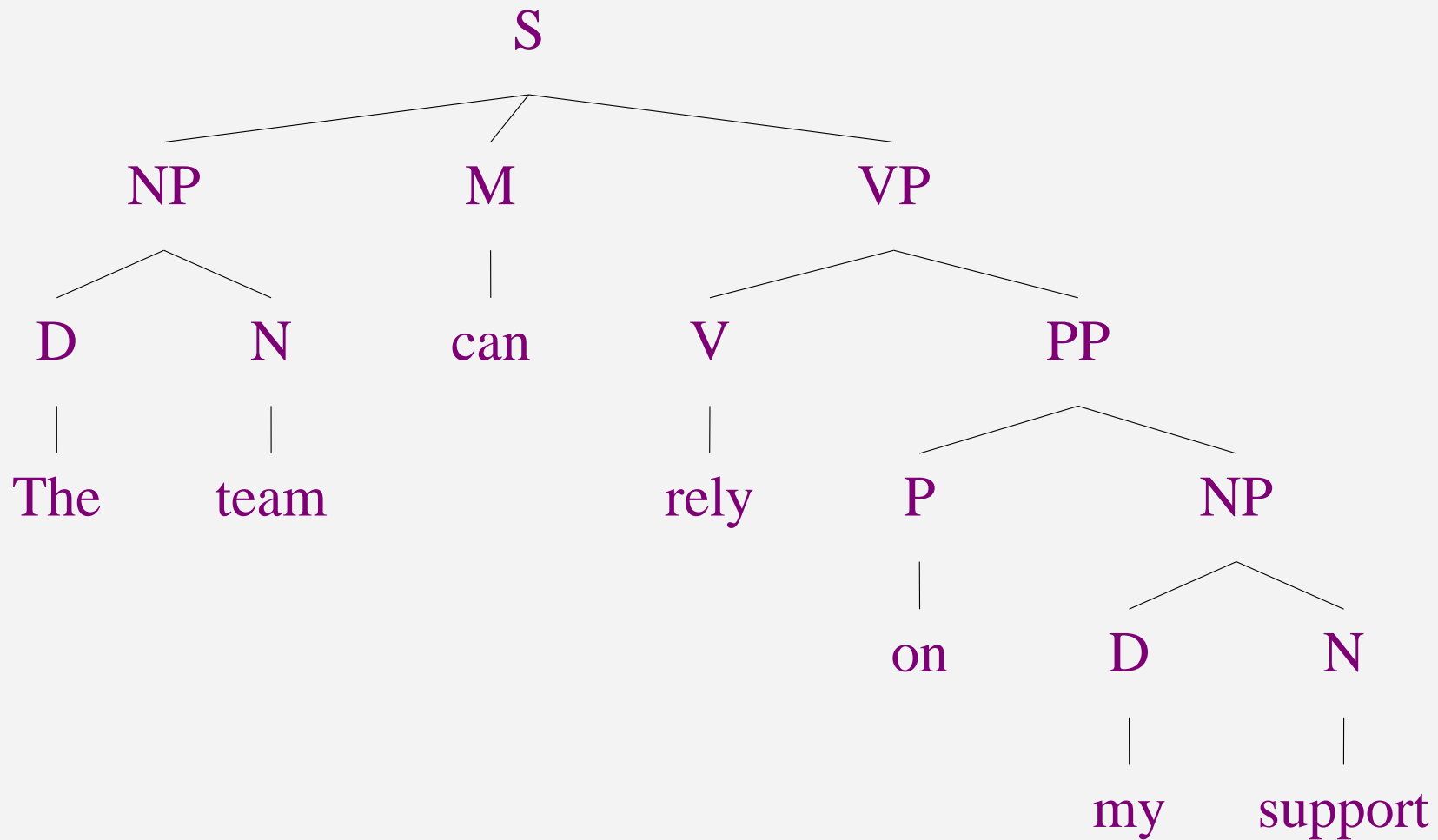
## *Cleft sentences (2/2)*

- Does this support the general idea of constituent structure?
- Can this be used to establish that a particular string is a constituent?
- Can this be used to establish that a particular string is not a constituent?
- Can this be used to establish the category of a phrase?

## *Adverb placement (1/4)*

- *Certainly/\*completely*, the team can rely on my support.
- \*The *certainly/completely* team can rely on my support.
- The team *certainly/\*completely* can rely on my support.
- The team can *certainly/completely* rely on my support.
- The team can rely *completely/\*certainly* on my support.
- \*The team can rely on *certainly/completely* my support.
- \*The team can rely on my *certainly/completely* support.
- The team can rely on my support *completely/certainly*.

## *Adverb placement (2/4)*



## *Adverb placement (3/4)*

- *certainly* attaches to S.
- *completely* attaches to VP.



## *Adverb placement (4/4)*

- Does this support the general idea of constituent structure?
- Can this be used to establish that a particular string is a constituent?
- Can this be used to establish that a particular string is not a constituent?
- Can this be used to establish the category of a phrase?

## *Coordination (1/3)*

- Kim has *a cat* and *a dog*.
- I met your *mother* and *father*.
- Is Sandy *in the kitchen* or *in the bathroom*?
- Pat speaks *very slowly* but *very articulately*.
- The exhibition contained no *drawing by da Vinci* or *painting by Picasso*.
- There are arguments *for* and *against* this position.

## *Coordination (2/3)*

- \*Kim wrote *a letter* and *to Sandy*.
- \*John rang *up his mother* and *up his sister*.
- Kim sent *Sandy a letter* and *Pat a postcard*.
- cf.\**Sandy a letter, Kim sent*.

## *Coordination (3/3)*

- Does this support the general idea of constituent structure?
- Can this be used to establish that a particular string is a constituent?
- Can this be used to establish that a particular string is not a constituent?
- Can this be used to establish the category of a phrase?

## *Shared constituent coordination (1/2)*

- Kim walked (and Sandy ran) [*up the hill*].
- Kim denied — but Sandy admitted — [*complicity in the crime*].
- <sup>@</sup>Rubber Ducky I'm awfully fond of, Rubber Ducky I'd like a whole pond of, [*you*]!
- \*Kim rang (and Sandy picked) *up Pat's cousin*.
- \*Kim will (and Sandy ate) *paste*.
- <sup>@</sup>\*I have asked, so do not be surprised when Don (that's the carpenter's name) to go into every room in this building to make sure bookshelves, filing cabinets etc are indeed secured properly.

## *Shared constituent coordination (2/2)*

- Does this support the general idea of constituent structure?
- Can this be used to establish that a particular string is a constituent?
- Can this be used to establish that a particular string is not a constituent?
- Can this be used to establish the category of a phrase?

## *Pro-forms (1/2)*

- Kim went [<sub>PP</sub> to Paris], but I have never been *there*.
- Kim introduced me to [<sub>NP</sub> the man by the door], but I didn't like *him*.
- Kim might [<sub>VP</sub> go home], and *so* might Sandy.
- Many people consider syntax [<sub>AP</sub> extremely difficult], but Kim never found it *so*.
- [<sub>S</sub> Pat will be late again], I just know *it*.
  
- Distinguish type of constituent which can serve as the antecedent and syntactic type of the pro-form itself.

## *Pro-forms (2/2)*

- Does this support the general idea of constituent structure?
- Can this be used to establish that a particular string is a constituent?
- Can this be used to establish that a particular string is not a constituent?
- Can this be used to establish the category of a phrase?



## *Ellipsis (1/2)*

- Kim said they won't *wash the dishes*, but I bet they will \_\_ .
- They may *come home early*, but then again they may not \_\_ .
- Sandy wants to *close the shop*, but I don't want to \_\_ .
- Pat won't put the vodka into the drink, but Sandy will (put (the (vodka (into (the (drink)))))).
- Kim is *in the kitchen*, but Sandy isn't \_\_ .
- Kim isn't *a doctor/happy*, but Sandy is \_\_ .
- I thought there was *a unicorn in the garden*, but there wasn't \_\_ .

## *Ellipsis (2/2)*

- Does this support the general idea of constituent structure?
- Can this be used to establish that a particular string is a constituent?
- Can this be used to establish that a particular string is not a constituent?
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## *Summary*

- Critical thinking
- Argumentation in syntax
- Evidence for constituent structure
- Evidence for categories of phrases
- Next time:
  - Words used as phrases
  - Establishing constituent structure in particular instances