

February 5, 2004

Ch 3.7–3.8

More on categories

Pseudo-guest lecture: Binding theory

Overview

- Conflating categories
- Decomposing categories (features)
- Conference talk on binding theory and eye-tracking
- Midterm 1

Conflating categories

- We saw that some further kinds of words (particle, subordinating conjunctions) could be assimilated to one of our existing categories (preposition).
- Could any of the existing categories be conflated?
- Adjectives and adverbs?
- Adjectives and determiners?

Advectives?

- Similarities:
 - Semantic
 - Morphological
 - Syntactic

Morphological similarities

- Many adverbs are simply adjectives+ly. – Examples? Counterexamples?
- Adverbs don't have a morphological comparative form of their own, instead use adjective base + er. – Examples? Counterexamples?
- Some adverbs (and more generally) some dialects systematically allow the same form in both adjective and adverb positions. – Examples? Counterexamples?

Syntactic similarities

- Premodifiers – examples?
- Complements – examples?

Syntactic difference

- So what's the difference between adjectives and adverbs?
- → Distribution
- That is, the difference in form (when it occurs) correlates with a difference in position.
- This is in fact a case of *complementary distribution*
- Similar to case of allomorphs of the English plural morpheme spelled -s.
- NB: This complementary distribution means that tests like coordination or distribution are going to fail.

Costs and benefits of advective analysis

- Which model is better?

Costs and benefits of advective analysis

- Reduce the number of categories by one
- Need to add a mechanism for adding the adverb inflection when it's required.
- Need to add a mechanism for keeping forms that are strictly one or the other out of certain positions. – Examples?
- How might we do that?

Adjectives and Determiners: Differences

- Morphological – Examples?
- Syntactic – Examples?
- Semantic – Examples?

Syntactic differences

- Both adjectives and determiners precede nouns.
The big dog slept.
- If both are present, the determiner must go first.
*Big the dog slept.

Syntactic differences (2/2)

- Adjectives stack, determiners (mostly) don't.

The big red ugly dog slept.

*The this that dog slept.

The one dog slept.

- Adjectives can be used predicatively, determiners can't.

The dog is red.

*The dog is the.

Semantic differences

- Function:
 - Adjectives describe properties of the nouns they modify.
 - Determiners serve to ‘pick out’ particular members of the class of things denoted by the noun.
- Selectional restrictions:
 - Some adjectives-noun combinations give pragmatic ill-formedness. – Examples?
 - Some determiner-noun are also ill-formed, but these look more syntactic or semantic (count v. mass, singular v. plural).

Conflating categories – summary

- Adjectives and adverbs are similar.
- Adjectives and determiners are not.
- It may be worthwhile to conflate adjectives and adverbs into one category.

Decomposing categories

- Categories provide a classification of words and phrases, which in turn allows the statement of general syntactic rules.
- Could we write a grammar without categories?
- Is one classification enough? (I.e., might we want to be able to talk sometimes about more or less fine-grained categories?)

Features

- So far, categories have been *primitives*.
- From now on, take categories to be *bundles of features*.
- This allows us to talk about classes at varying degrees of generality.
- ... and even cross-cutting classes.
- *Underspecification*: Giving values for only some features, defining a larger class.

Proposed features

- The features in this model are all *binary*: That is, they all have two possible values: + and –.
- Two binary features can distinguish four categories:

	+N	–N
+V	A	V
–V	N	P

Proposed natural classes

- What do each of these share?
 - +N: Nouns and adjectives
 - +V: Verbs and adjectives
 - –N: Verbs and prepositions
 - –V: Nouns and prepositions

Subcategories: Auxiliary verbs

- Going the other way, we can use features to define classes that are more fine-grained than what we started with.
- Radford proposes to group modals and auxiliaries into the category verb, but distinguish them with two new features: $\pm M$ and $\pm AUX$
- $\pm AUX$ is only appropriate for elements that are already $[+V, -N]$.
- $\pm M$ is only appropriate for elements that are already $[+AUX]$.

Three kinds of verbs

- [+V,−N,−AUX]: Non-auxiliary verbs *eat, sleep, ...*
- [+V,−N,+AUX,−M]: Non-modal auxiliaries *be, do, have ...*
- [+V,−N,+AUX,+M]: Modals *can, will must ...*

Tests for subcategories of verbs

+AUX :

- Inversion
- Negation
- Tag questions

+M :

- Take 'bare' VP complement
- Cannot appear after *to* or another modal
- Have no past participle form
- Have no *ing* form

Mid-level verb categories

- What do all [+V,−N] words have in common?
- What do all [+V,−N,−AUX] words have in common?
- What do all [+V,−N,+AUX] words have in common?

Other subcategories

- Adverbs, adjectives
- Transitive, intransitive, ditransitive verbs
- Singular/plural nouns
- Others?

Features and phrases

- So far, we've just looked at word-level categories.
- Radford suggests decomposing phrase-level categories in an analogous way: [+VP, -NP] for VP etc.
- Another possibility: \pm Phrase

Features: Summary

- What is the point of features?
- Will we actually see much more of them in this book?
- If categories are bundles of features, what does it mean to claim that the set of categories is universal?