


Non-Intersective  
Adjectives as  
Intersective  
Non-Adjectives



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# Structure of the talk

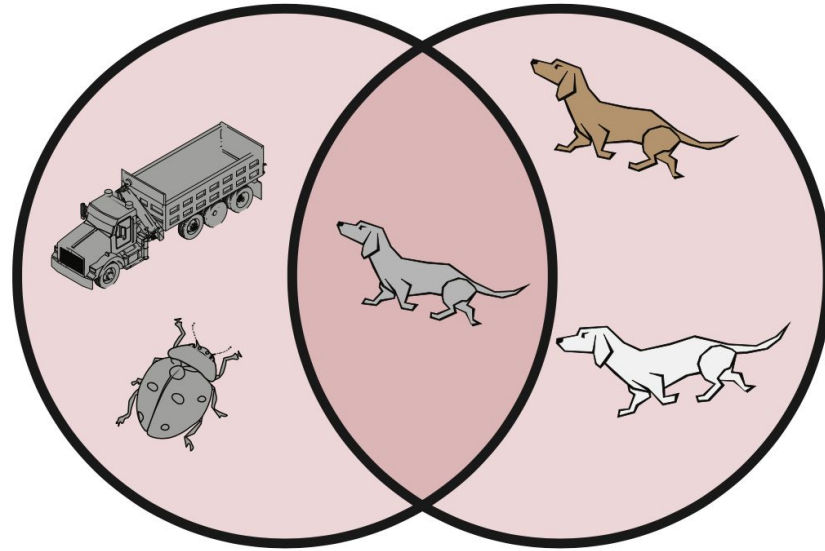
- Background
- The proposed model
- How the model helps explain distribution
- *Fake* as a counterexample
- Conclusions



# Background

# Background: Adjectives

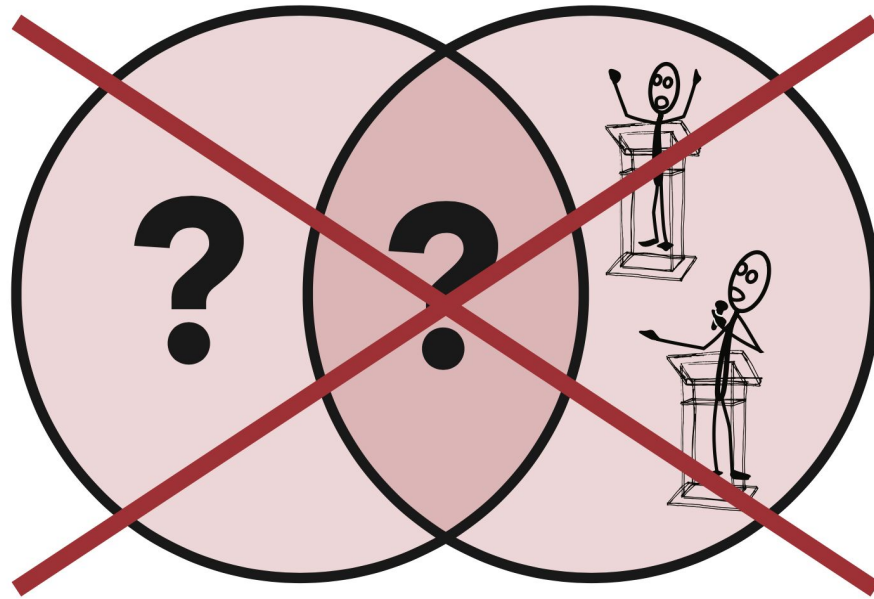
# Background: Adjectives



**gray dog**

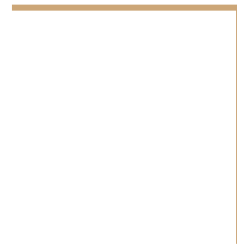
Background: Non-intersective adjectives

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*former mayor*

# The Model





# SCNM model

- Set-complement noun modifiers
- SCNMs contribute meaning through intersection with the complement of the noun set

# How do SCNMs combine with nouns syntactically?

- Don't appear predicatively, so need to look prenominally for basic form
- N/N
- As with adjectives, single-word SCNMs seem to be of category  $N/_R N$ , while multi-word SCNMs seem to be of category  $N/_L N$  as predicted by the  $X/_L X$  default

# How do SCNMs combine with nouns semantically?

- Contribute meaning through intersection with the complement of the noun set
- Example: *former*
  - Takes in a set  $X$  and returns the intersection of the complement of  $X$  ( $X^c$ ) with the set of things that were in  $X$  at some earlier time  $i$
  - Intersection with the complement necessary to exclude current mayor
- Pragmatics interlude
- Direct compositionality

# How do we know that *former* must exclude current members semantically? (Could it be pragmatics?)

- Applying the in-fact test
- *\*Bob is the former mayor—in fact, he's the current mayor!*
- (Compare with *Sally ate some of the cookies—in fact, she ate all of them!*)
- Exclusion of current members seems to be semantic rather than pragmatic

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- Pragmatics interlude
- Direct compositionality
  - Set of things that were in  $X$  at earlier time  $i$  is dependent on identity of  $X$ , but this method of SCNMs combining with nouns is straightforward in a direct-compositional approach because the SCNM and noun are adjacent

# Are SCNMs adjectives?

- *\*Please welcome your former—and happy—mayor*
- *Please welcome your former—and future—mayor*
- Cannot conjoin with adjectives, so seem not to be adjectives
- Unclear how the noun *mayor* would be treated by something like *former and happy*—would the *former and happy mayor* set include current mayors?



# Explaining Distribution



# How do SCNMs distribute?

- Do not appear predicatively



# How would SCNMs contribute meaning predicatively?

- If *\*The mayor is former* were well-formed, we can approximate its meaning by saying that it returns true iff the individual identified by *the mayor* is in the former-mayor set
- Why look to the former-mayor set (rather than the former set)?
  - *Former* needs a noun in order to denote a set
  - With *happy*, if *The mayor is happy* returns true, the mayor must be in both the happy set and the happy-mayor set
- Footnote: Would this violate direct compositionality?
  - It might at first seem that looking at the former-mayor set would violate direct compositionality since typically we would expect that  $[[\text{the mayor}]]$  (an individual) combines with  $[[\text{is former}]]$  (a function characterizing a set) to form the sentence; if this were the case, *is former* would not be able to refer to the  $[[\text{mayor}]]$  set because  $[[\text{is former}]]$  is combining with an individual, not a set. However, it would seem that we can solve this issue through function composition. Evaluating whether the mayor is in the former-mayor set (or the happy-mayor set) in evaluating the sentence does not seem to violate direct compositionality because we can function-compose  $[[\text{is former}]]$  (of category  $S/_L \text{ NP}$ ) with a type-lifted  $[[\text{mayor}]]$  (of category  $\text{NP}/_L (\text{NP}/_R \text{ N})$ ), and then have  $[[\text{mayor is former}]]$  (of category  $S/_L (\text{NP}/_R \text{ N})$ ) take  $[[\text{the}]]$  (of category  $\text{NP}/_R \text{ N}$ ) as an argument to make a sentence.

# Inherent contradiction

- Basic sentences involving predicative SCNMs would by definition return false
- Not the case with adjectives
- Doesn't make much sense for a language to develop a structure whose basic form always returns the same truth value
- SCNMs' characteristic of contributing meaning through intersection with the complement of the noun set helps explain why SCNMs do not appear predicatively



*Fake as a*  
Counterexample



# What about *fake*?

- *The gun is fake*
- *Fake* can appear predicatively
- Overview: This doesn't seem to actually work as a counterexample
  - In order to get the varied prenominal readings of *fake* we seem to need two homophonous forms of the word; this homophony then allows *fake* to appear predicatively without positing a predicative SCNM

# Two versions of *fake* prenominally

- *The fake painting*
  - forged painting
  - non-painting
- Non-painting can be explained by SCNM, forged painting cannot
- Must posit adjective phrase
- *Fake*<sub>adj</sub>
  - Adjective phrase of category  $S[A]_L$  NP that characterizes the set of items such that a) a feature of that item is misleading, and b) a person could be tricked into believing that that feature was different from how it is in reality
  - Can use mod rule to get *fake*<sub>adj-mod</sub> prenominally
- *Fake*<sub>SCNM</sub>
  - SCNM of type  $N/R$  N; this version is a function that takes in a set  $X$  and outputs the intersection of  $X^C$  with the set of things that a person might think are in  $X$

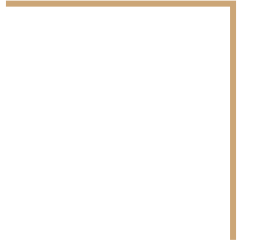
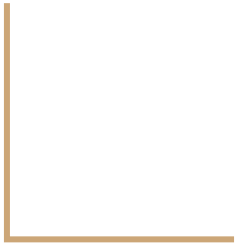
# What happens predicatively?

- Now a sentence like *The painting is fake* can give the forgery reading
  - *Fake*<sub>adj</sub>
  - Returns true iff the painting is in the set of items such that a) a feature of that item is misleading, and b) a person could be tricked into believing that that feature was different from how it is in reality
- It can also give the non-painting reading (and the non-gun reading)!
  - Also *fake*<sub>adj</sub>
  - Same truth conditions
  - If the object that the listener assigned to [[the painting]] (or [[the gun]]) before combining the noun phrase with [[is fake]] is not actually a painting (or gun), that would certainly qualify as being a misleading feature of the object
- We can get the full range of meanings of the predicative *fake* without having an SCNM appear predicatively

# *Fake* and the SCNM model

- The SCNM model seems to neatly explain the varied meanings of *fake*, and it may in fact be necessary machinery to do so

# Conclusions





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- The model neatly explains how *fake* gets its various prenominal readings, as well as why *fake* can appear predicatively
- SCNM model as a simple, effective, and wide-ranging method for treating so-called non-intersective adjectives

# References and acknowledgements

Jacobson, P. I. (2014). *Compositional semantics: An introduction to the syntax/semantics interface*. Oxford University Press.

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