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# Compounding in Context

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## Compounding and lexical innovation

- Compounding is the most frequent word formation process in English (Huddleston and Pullum 2002)
- Within compounding, compounds formed from two nouns are the most productive group (Bauer, Lieber and Plag 2013, p. 451)



## Recent additions to the OED

**trout pout:** unnaturally swollen lips resulting from the injection of excessive collagen into the lips in a cosmetic procedure intended to enhance their appearance (June 2016)



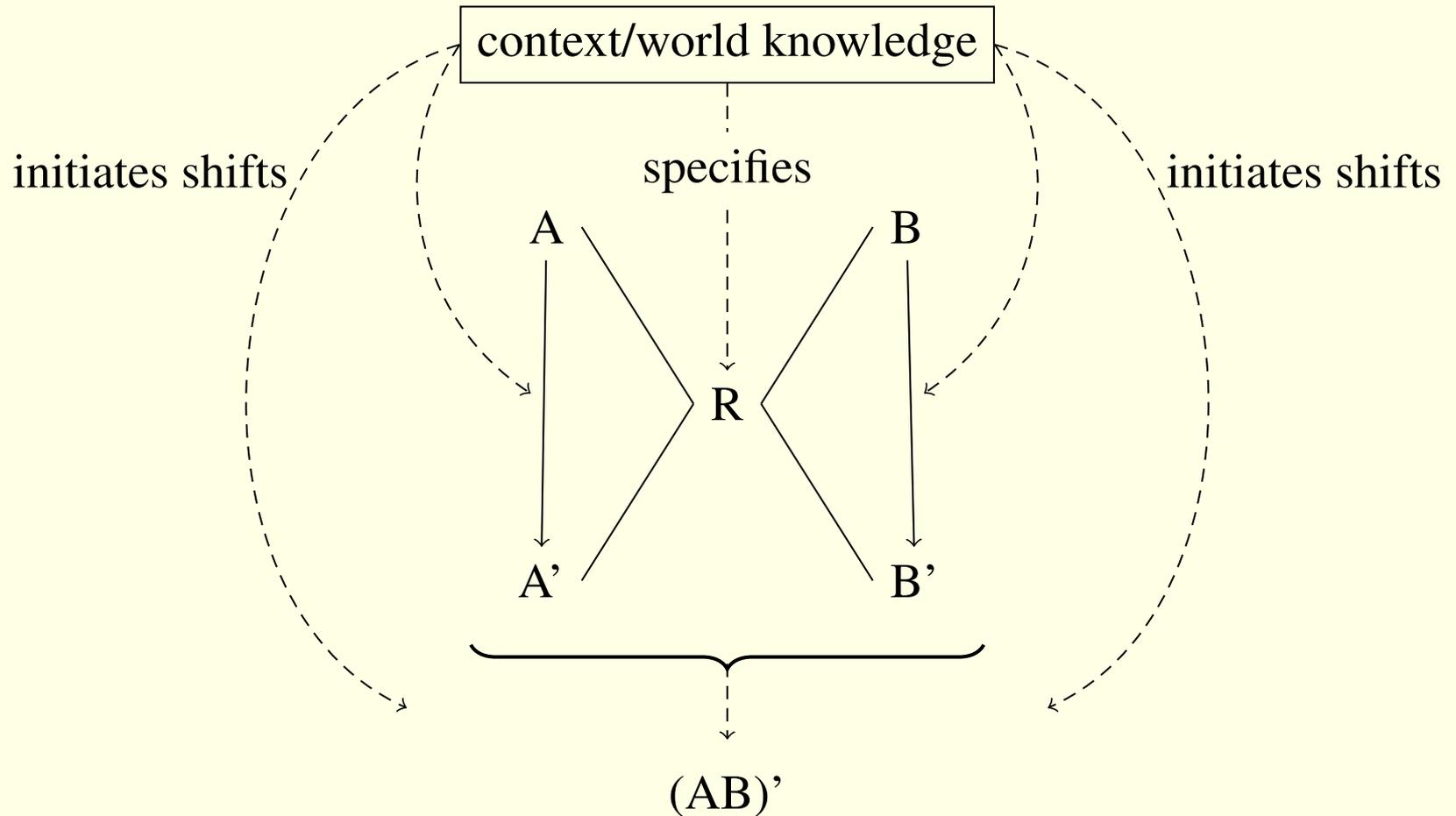
## Recent additions to the OED

**trout pout:** unnaturally swollen lips resulting from the injection of excessive collagen into the lips in a cosmetic procedure intended to enhance their appearance (June 2016)

**bucket list:** a list of things that a person hopes to experience or achieve during his or her lifetime (September 2013)



# A model of compound semantics





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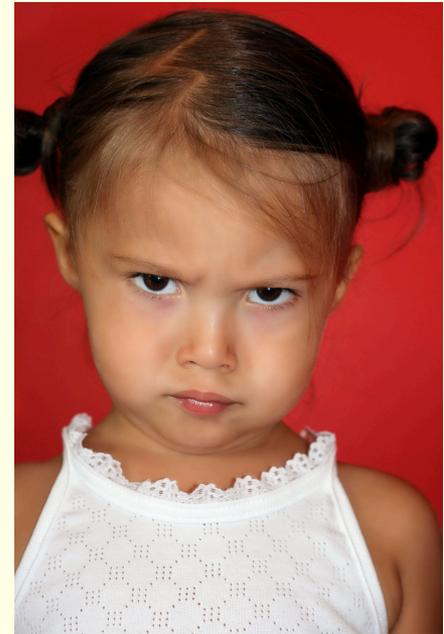
# trout pout





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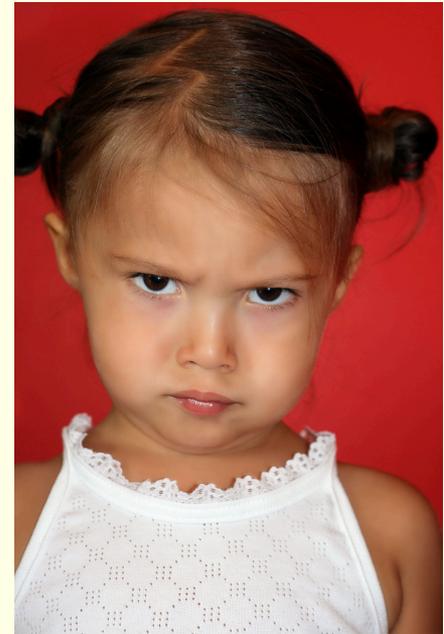
# trout pout





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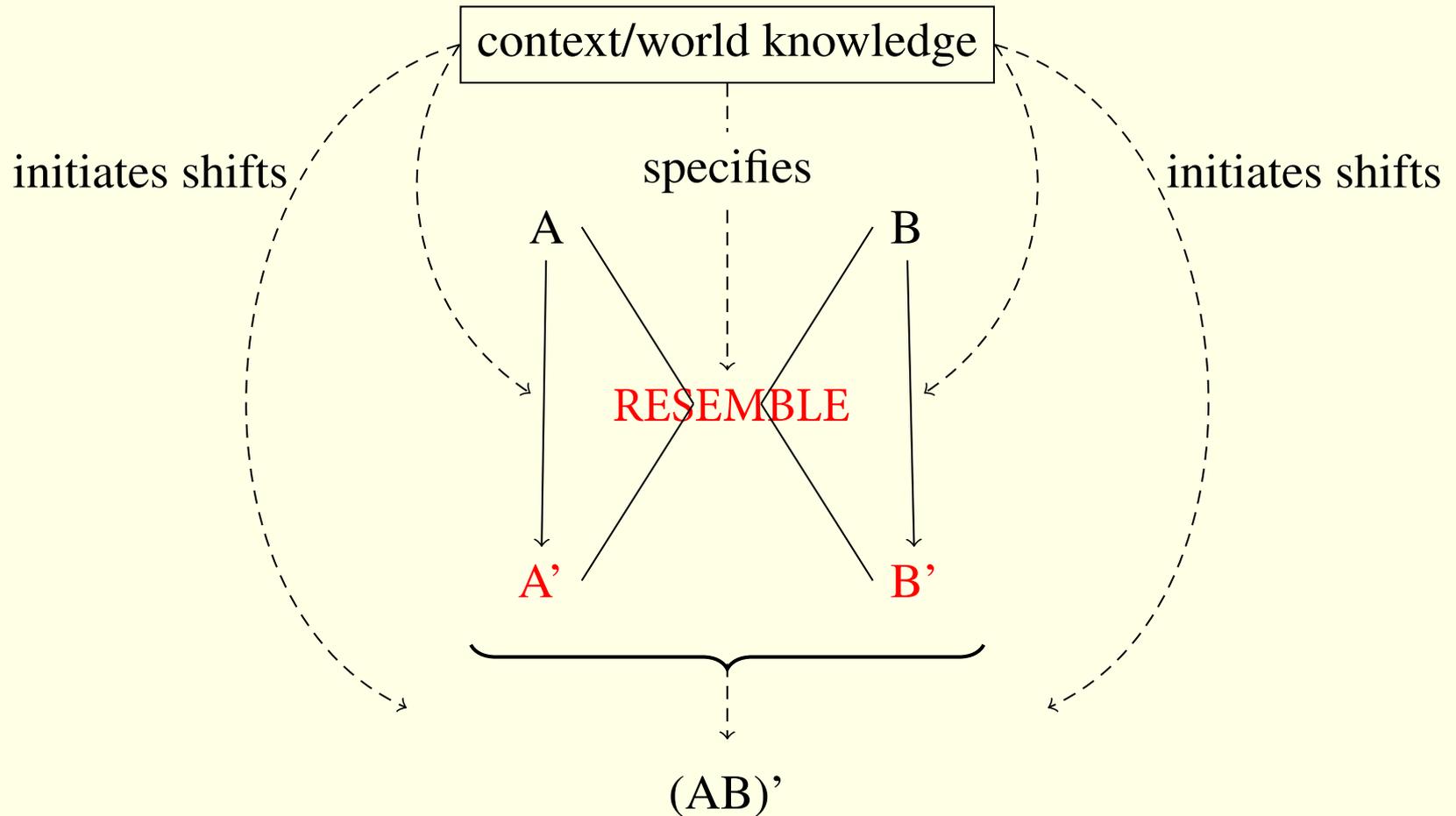
# trout pout







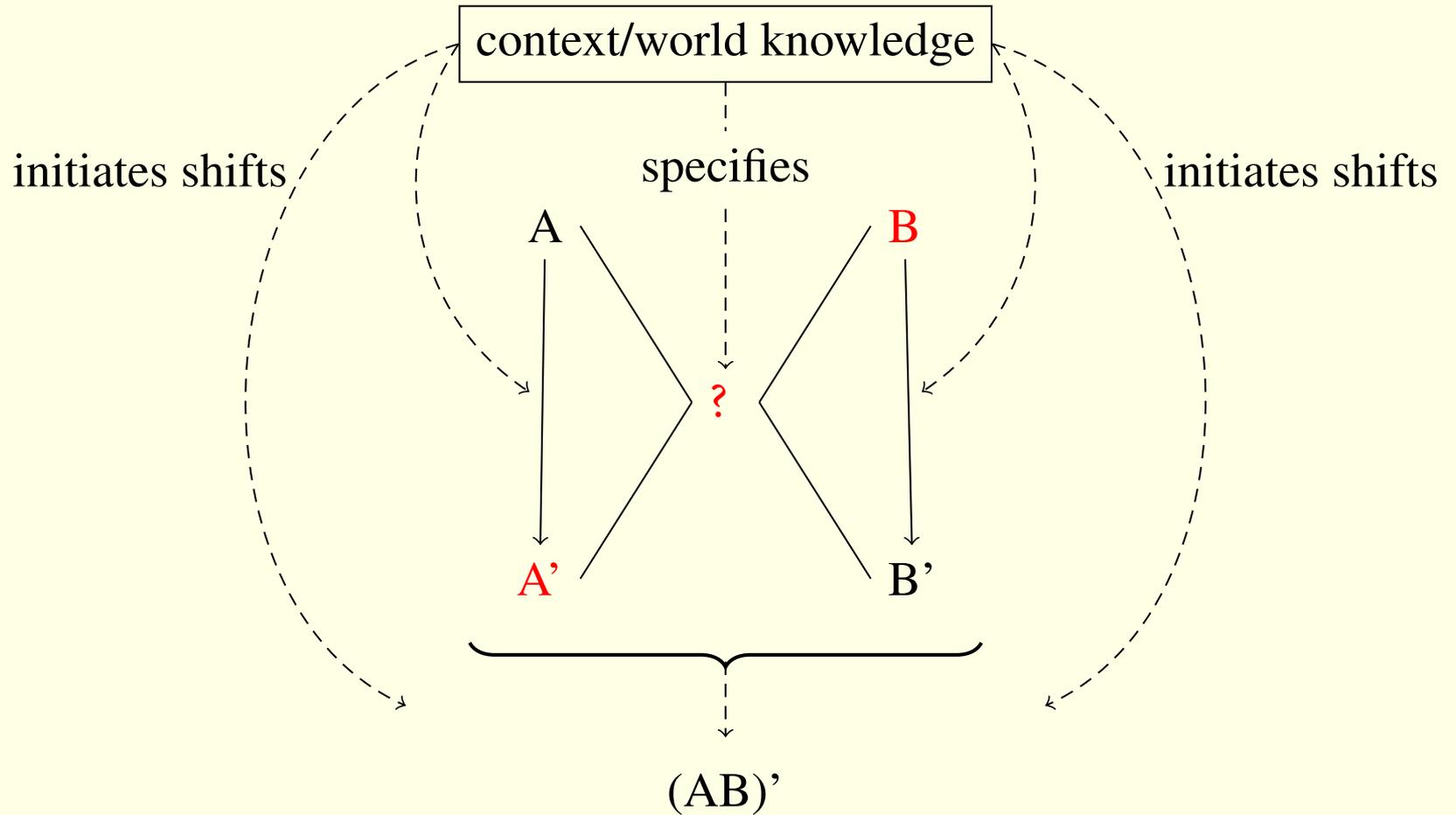
# trout pout







# bucket list





# Historical development of words

word formation pattern

neologism coined

institutionalisation

idiomatisation



# Historical development of words

The moment a word is used any vagueness that there may be in its linguistic structure is removed

Bauer, Lieber and Plag 2013 p.30



# How are compounds disambiguated?

Lexical semantics e.g. *polo umpire*

Situation of use e.g. *john man*

Encyclopaedic knowledge e.g. *transition team*

Linguistic context: the focus of this study



# Finding novel compounds

- All noun-noun strings occurring within a sentence extracted from the prose fiction section of the British National Corpus
- Sample reduced to items that occurred only once in the whole corpus, and not at all in ukWaC, a much larger corpus of more than 2 billion words
- Random selection of 80 novel compounds examined in their sentential context



# Hypothesis

Compounds can often be disambiguated on the basis of the immediate sentence, usually through disambiguation of the head noun.





## acid cap

- It fires an explosive **acid cap**
- It **fires** an **explosive acid cap**
- cap = detonator, detonating device
- Head is disambiguated



## property sword

- Here was Gabriel's chance to leave his wooden perch and to stand stage-centre with a huge **property sword** as tall as himself.
- Here was Gabriel's chance to leave his wooden perch and to stand **stage-centre** with a huge **property sword** as tall as himself.
- property = props
- Modifier is disambiguated



## hardboard affair

- He'd stopped in front of the side door, a flimsy **hardboard affair** with a Yale lock, distinguished by a fist-sized hole to the side of the metal keyhole.
- He'd stopped in front of the side **door**, a flimsy **hardboard affair** with a Yale lock, distinguished by a fist-sized hole to the side of the metal keyhole.
- affair = door
- Head is disambiguated



# chocolate shadows

- It was one of those old photographs whose dark **chocolate shadows** are balanced by the creamy richness of the light surfaces.
- It was one of those **old photographs** whose dark **chocolate shadows** are balanced by the creamy richness of the light surfaces.
- chocolate = sepia
- Modifier is disambiguated



# Testing the hypothesis

- **Prediction 1:** Novel English compounds do not have a clear default interpretation out of context, so people will vary widely in the meanings they assign to them.
- **Prediction 2:** In written English, the immediate sentence containing a novel compound often contains enough contextual information for the intended meaning of the compound to become clear.



# Testing the hypothesis

- From sample, selected compounds for which both constituents occurred at least 500 times in BNC
- Asked participants to give free paraphrases for the compound context free and in the context of the immediate sentence
- Excluded paraphrases if the participant didn't 'know' either of the nouns



# Coding the data

- Six teams of 4-6 students coded the paraphrases for 'dream fleet' using a constant comparative method
- I looked at sets of paraphrases where at least 4 of the teams agreed they should be grouped together
- I noticed that these readings could be defined in terms of the senses of the constituents
- I refined the categories using this criterion



# dream fleet

- Dream

- dream (during sleep)
- mental state
- goal
- ideal

- Fleet

- vehicles
- people
- group
- brief





# dream fleet

- Dream

- dream (during sleep)
- mental state
- goal
- ideal

- Fleet

- vehicles
- people
- group
- brief

Group of dreams

*A series of dreams that follow on from each other*



# dream fleet

- Dream

- dream (during sleep)
- mental state
- goal
- ideal

- Fleet

- vehicles
- people
- group
- brief

Group of goals

*A sensation of which one person's goals and dreams all come rushing into perspective*



# dream fleet

- Dream

- dream (during sleep)
- mental state
- goal
- ideal

- Fleet

- vehicles
- people
- group
- brief

Ideal things

*someone's desirable or dreamt about fleet or group of things*



# dream fleet

- Dream

- dream (during sleep)
- mental state
- goal
- ideal

- Fleet

- vehicles
- people
- group
- brief

Ideal vehicles

*top parade of cars*



# dream fleet

- Dream

- dream (during sleep)
- mental state
- goal
- ideal

- Fleet

- vehicles
- people
- group
- brief

Ideal people

*another word for dream team*



# dream fleet

- Dream

- dream (during sleep)
- **mental state**
- goal
- ideal

- Fleet

- vehicles
- people
- group
- **brief**

Brief mental state

*imagination gone quickly*

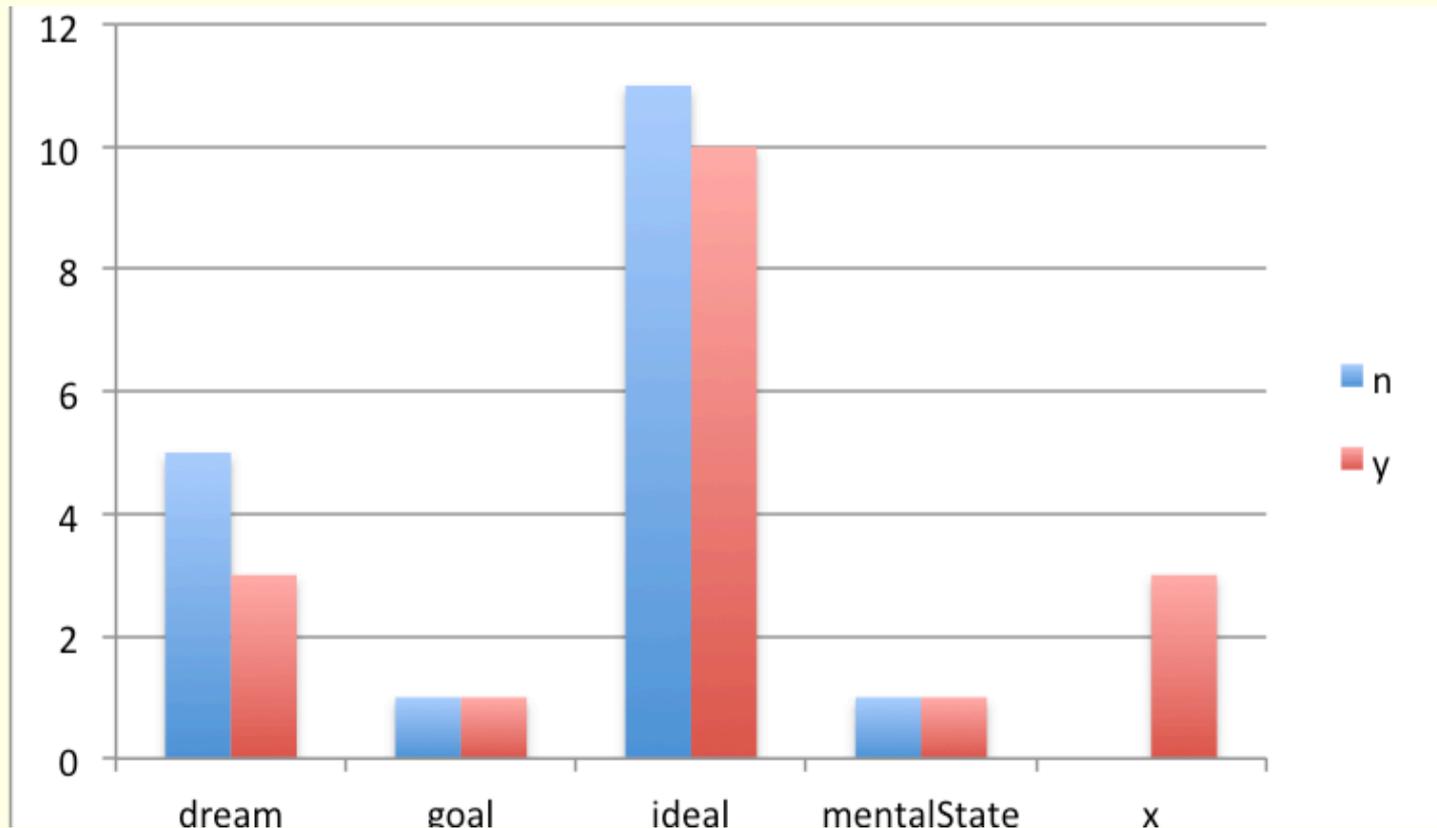


## dream fleet

- Does the sentential context help to narrow down the options?



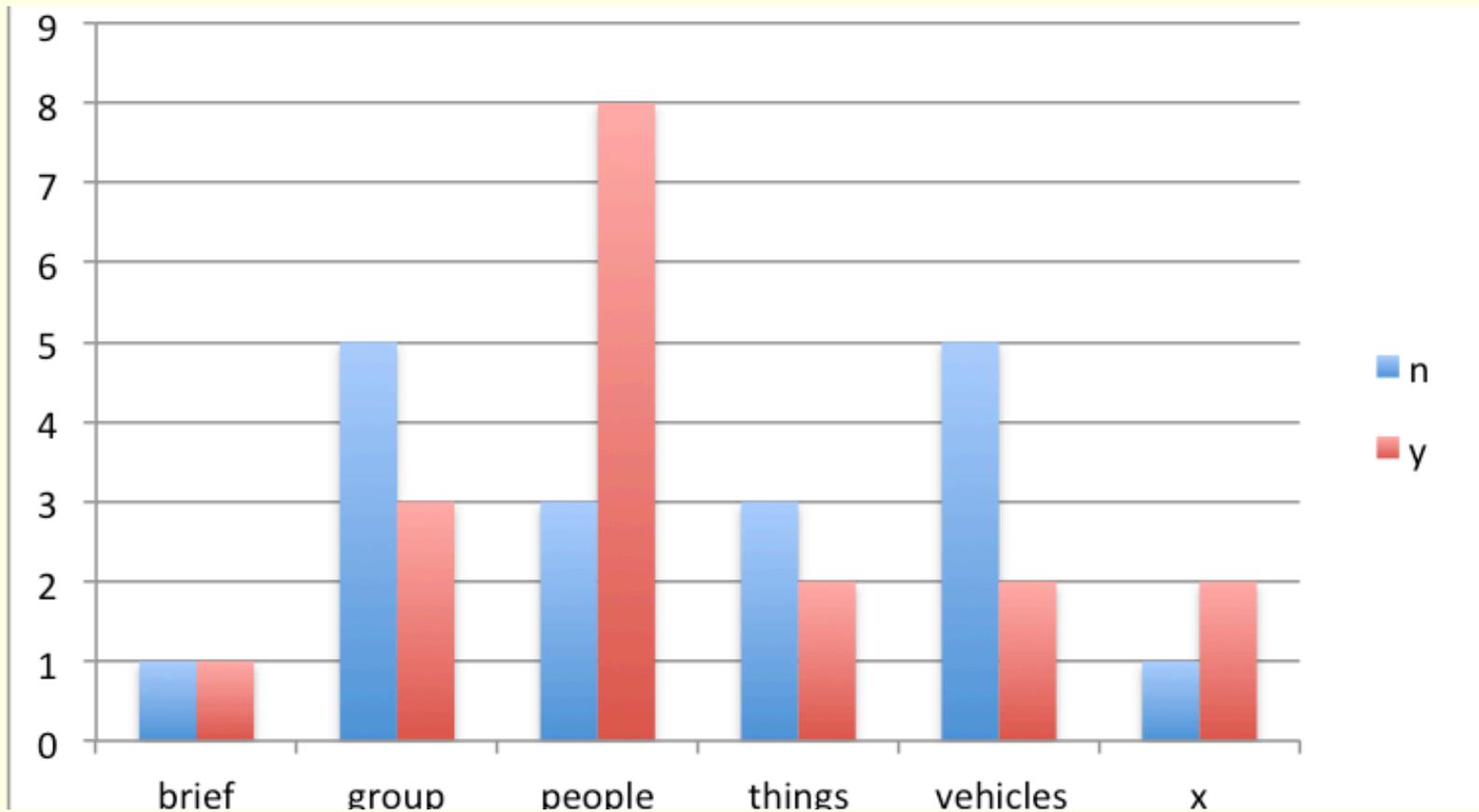
# dream fleet: modifier (dream)







# dream fleet: head (fleet)



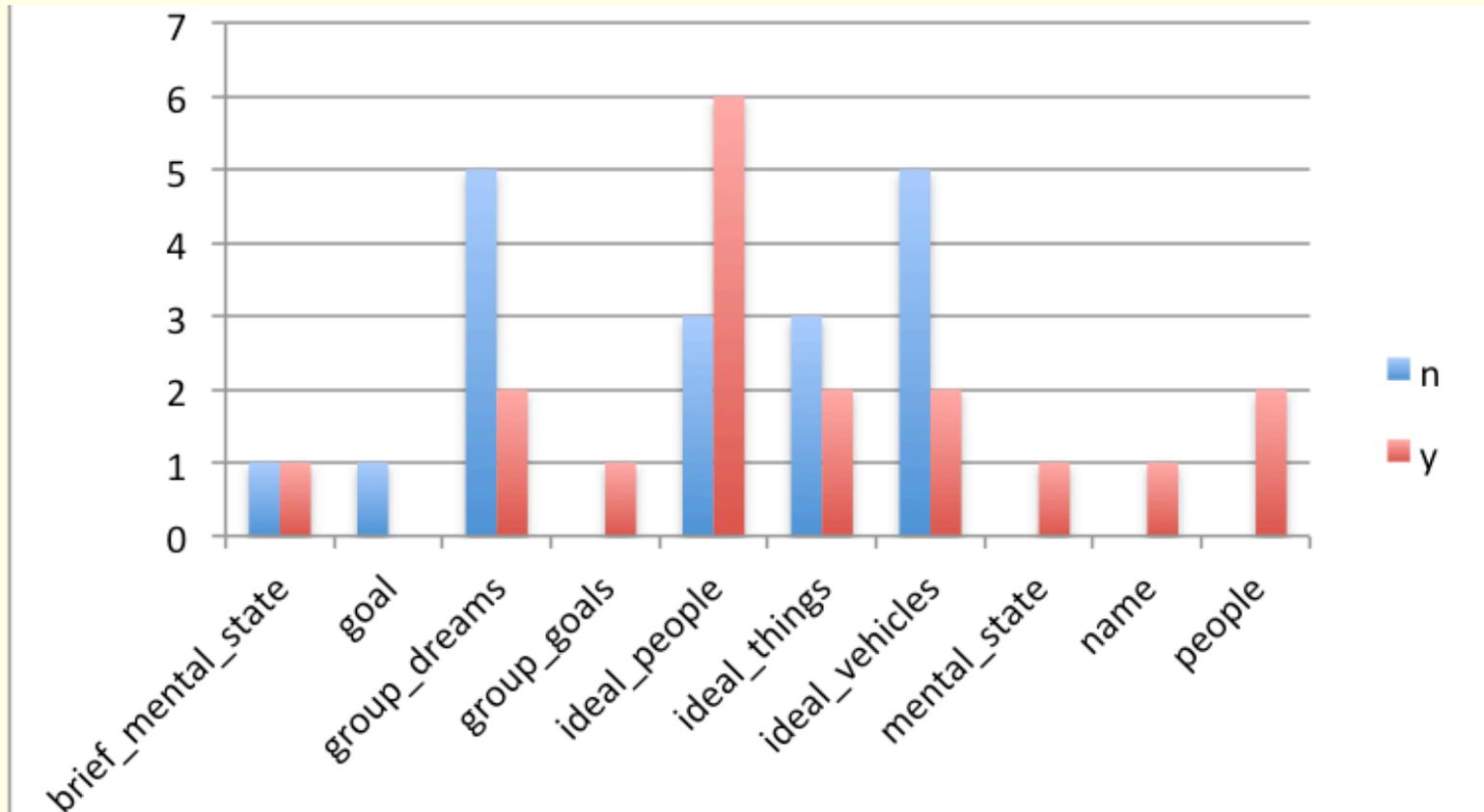


## dream fleet

- In the sickroom or with Diniz, Nicholas never threw doubt on the arrival of Katelina's **dream fleet** .



# dream fleet





# Questions

- What happens with other compounds?
- Are there statistically significant patterns in the interpretation of novel compounds in and out of context?
- Is world knowledge more important than linguistic context?
- To what extent do language users accommodate vagueness in compound formation?



# References

- Bauer, Laurie, Rochelle Lieber, and Ingo Plag. 2013. *The Oxford reference guide to English morphology*. Oxford: Oxford University Press.
- Bell, Melanie J. and Martin Schäfer. 2013. Semantic transparency: challenges for distributional semantics. *Proceedings of the IWCS 2013 workshop: Towards a formal distributional semantics*.
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Thank you!