Midterm exam

Chris Potts, Ling 130a/230a: Introduction to semantics and pragmatics, Winter 2024

Distributed Feb 13; due Feb 20

Notes and reminders

- This is due on Feb 20, by 10:30 am Pacific. No late work will be accepted.
- You must submit your work electronically via Canvas.
- No collaboration of any kind is permitted. You are, though, free to use your notes and any other reference materials you like.
- Please submit questions on the Ed forum or to the staff email address. Questions sent to individual instructors probably won't be answered in a timely enough fashion to be useful.
- As a general rule, we will not give feedback on interim answers that students have written. We are happy to talk openly and freely about the practice midterm available from the Section tab of the course website.

1 Adjective entailments [2 points]

Consider the adjective *boring* as in phrases like *boring lecture* and *boring rollercoaster*. (Note: these are just two examples; you will need to consider additional examples in formulating your response.) For each of the meaning classes *intersective*, *subsective*, *non-subsective*, and *privative*, consider whether *boring* belongs in that class. If it doesn't, provide a brief (1–2 sentence) argument for that conclusion, with at least one example from English. If it does, summarize your evidence in support of that conclusion (1–2 sentences).

2 Novel compounds [2 points]

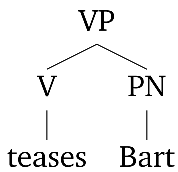
In Levin et al.'s free-response comprehension experiment, the participant response distribution for *beer bean* was as follows:

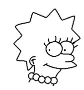
Metarelation	Count
purpose	9
taste	2
made of	1

Is this expected under their account? Say why or why not. In writing your answer, make sure to (1) classify the modifier, the head, and the compound itself as artifact or natural kind, and (2) make meaningful use of the relevant core hypothesis from their paper. (3–4 sentences should suffice.)

3 Compositional analysis [2 points]

For each of the top (root) nodes in the following trees, provide (i) the name of the rule you used to derive that meaning from its constituent parts, according to the handout ‘Semantic composition’, and (ii) the meaning itself after all the allowable substitutions from function applications. Thus, for example, given the tree on the left, either answer at right would be complete and accurate:

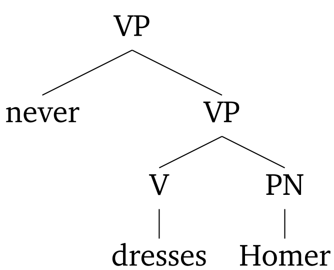


Rule (TV) derives {  ,  }

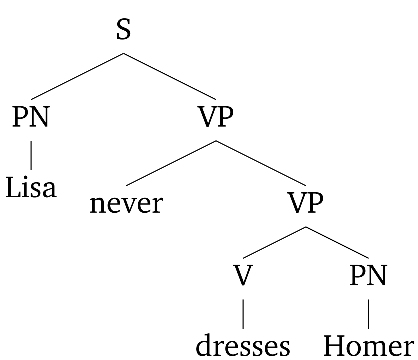
For the purposes of this question, we extend the semantic grammar from the ‘Semantic composition’ handout with the following entry for the transitive verb *dresses*:

$$[\![\textit{dresses}]\!] = \lambda y\ (\{y\})$$

3.1



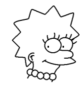
3.2



4 Proper names as QPs [2 points]

Rule S in our semantic grammar stands out as the only binary rule that doesn't use function application. We can make it look more like the rest by assuming that proper names have meanings like the following:

$$[\![Lisa_Q]\!] = \lambda X\Big(\mathsf{T} \text{ if }$$



$$\in X,\ \text{else } \mathsf{F}\Big)$$

For the top node in the following tree, provide (i) the name of the rule you used to derive that meaning from its constituent parts, according to the handout 'Semantic composition', and (ii) the meaning itself after all the allowable substitutions from function applications.

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[S [QP Lisa_Q] [VP [V skateboards]]]
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5 Quantifier entailment [2 points]

In the context of our semantic grammar, we can say that a determiner D entails a determiner D' if and only if, whenever $D(A)(B) = \mathsf{T}$, it holds that $D'(A)(B) = \mathsf{T}$, for all sets A and B. Does $[\![every]\!]$ entail $[\![some]\!]$ in this sense? Either prove that this entailment relation holds or prove that it does not hold by presenting a counterexample and articulating why it is a counterexample. The meanings for $[\![every]\!]$ and $[\![some]\!]$ are given in (4) and (5) of the 'Quantifier propreties' handout.

6 Intersective? [2 points]

Consider our old hypothetical quantificational determiner *somenon*:

$$[\![somenon]\!] = \lambda X\Big(\lambda Y\Big(\mathsf{T} \text{ if } ((U - X) \cap Y) \neq \emptyset,\ \text{else } \mathsf{F}\Big)\Big)$$

Is this hypothetical determiner intersective (in the sense of our theory of quantificational determiners)? Either show that it is intersective or present a counterexample and explain why it is a counterexample.

7 Monotonicity [2 points]

Here is our usual definition of the quantificational determiner $[\![most]\!]$:

$$[\![most]\!] = \lambda X\Big(\lambda Y\Big(\mathsf{T} \text{ if } |X \cap Y| > |X - Y|, \text{ else } \mathsf{F}\Big)\Big)$$

Diagnose the first (restriction) argument as upward, downward, or nonmonotone, and explain why this holds using $[\![most]\!]$. (Note: this isn't a question about your intuitions, but rather about what we are predicting with $[\![most]\!]$.)