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(worked with Lourence and Corby)
Semantics Midterm

1. The two sentences have different implicatures. Following the cooperative principal, we can see that response B must be relevant to the conversation. Then by flouting the maxim of ~~relevance~~, response B is implying that the person doesn't own a siamese cat. This is because if B was spoken, and it is taken that it is relevant to the conversation then it is in fact answering the question A. Then by saying they have a cat, it is implying that the cat they own is not siamese. It is entailed that they own a cat. It must also be implied that A's utterance is talking about cats, and there is sufficient context (as the siamese could have been a siamese dog or something else). Then B' was not spoken as if B' was spoken and the person really did have a cat, then he could have been more informative about the situation and said "No, I don't have a siamese, but I have a cat of breed x". However since he uttered B, it must be that the person doesn't know what type of breed his cat is. Then B is the utterance that gives the most information the speaker can (with having the correct knowledge), and thus he spoke B and not B'.

should do a
cancellation
test to show
that we are
dealing with
an
implicature
0/3

15/15
m

we being by assuming that the utterance is relevant; then what sub
maxim is being flouted: Quantity the implicature follows from this, along
the lines you describe here

4/8 2. a. $\text{Borrow}(a_e, \iota x_e. (\text{Book}(x_e) \wedge (x_e \in c_e)))$ 8/15
this is right but you need to show your work (a lexicon and the composition steps)

b.

Mother is of type $\langle e, \langle e, t \rangle \rangle$

Its denotation is $\|mother\| = \lambda x_e : \lambda y_e : ((\iota z_e : \text{Birthed}(z, x) = y))$ where $\text{Birthed}(z, x)$ returns 1 if z gave birth to x.

This contributes to the DP by giving presuppositions because it is relational.

nice

Book is of type $\langle e, t \rangle$

Its denotation is $\|book\| = \lambda x_e : \text{Book}(x)$

7/8 This contributes the normal truth conditions (whether or not there is a book) to the DP. It gives the presupposition that there exists a person that was given birth to. guess you wanted that above :)

The possible truth conditions possible between possessor and possessee are eitherer True, False, or Undefined. We get undefined by following the example of "The King of France is bald" (which is the same as "France's King is bald"). However since there is no King of France, there is no possible truth condition (it is undefined).

so what is the case where the presuppositoin for $\|mother\|$ would be undefined?

what do these nouns contribute when they compose with the possive? how do they differ there?

c.

The DP should be of type $\langle e \rangle$.

We first let $\|s\|$ be ambiguous so that it is able to handle both types for mother and book.

One way to define $\|s\|$ when it takes on mother (which is of type $\langle e, \langle e, t \rangle \rangle$) is:

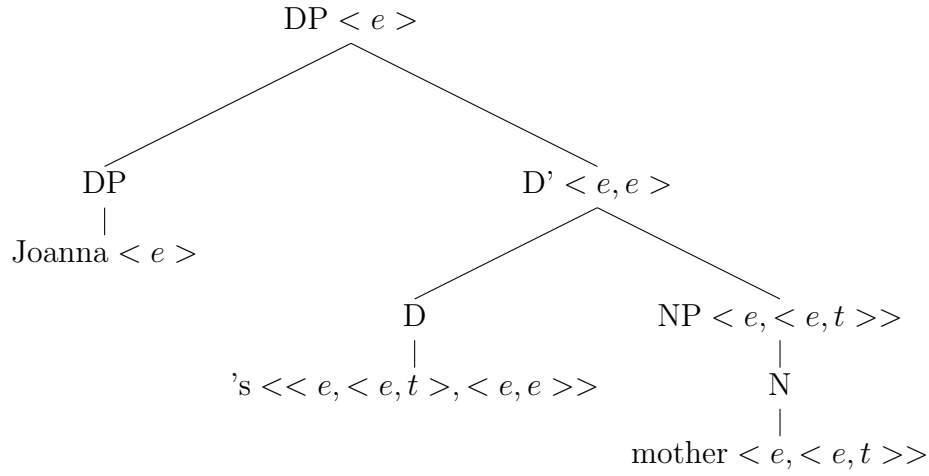
$$\|s\| = \lambda f_{\langle e, \langle e, t \rangle \rangle} . \lambda x . [\iota y : f(x)(y) = 1]$$

$$\|mother\| = \lambda x_e : \lambda y_e : ((\iota z_e : \text{Birthed}(z, x) = y))$$

good, what would the type (or even full lambda function)

$$\|book\| = \lambda x_e : \text{Book}(x)$$

6/9



~~The presupposition that are triggered are that there exists a person named Joanna.~~

a unique person who birthed Joanna, according to your denotation for POSS and how it should compose in the tree you've given

e. A doctor met Joanna's mother.

First we will define our lexicon:

$$\|a\|_{\langle \langle e, t \rangle, \langle \langle e, t \rangle, t \rangle \rangle} = \lambda f_{\langle e, t \rangle} . \lambda g_{\langle e, t \rangle} . \exists x_e . (f(x) = 1 \wedge g(x) = 1)$$

$$\|doctor\|_{\langle e, t \rangle} = \lambda x_e . \text{doctor}(x)$$

$$\|met\|_{\langle e, \langle e, t \rangle \rangle} = \lambda x_e . \lambda y_e . \text{Met}(y_e, x_e)$$

$$\|Joanna\|_e = \text{Joanna}$$

$$\|s\|_{\langle \langle e, \langle e, t \rangle \rangle, \langle e, e \rangle \rangle} = \lambda f_{\langle e, \langle e, t \rangle \rangle} . \lambda x_e . \iota y_e . f(x_e)(y_e)$$

$$\|mother\|_{\langle e, \langle e, t \rangle \rangle} = \lambda x_e . \lambda y_e . (\iota z_e . \text{Birthed}(z_e, x_e) = y)$$

Now we will do the derivation:

$$\begin{aligned}
||s|| * ||mother|| &= ||[s\ mother]||_{\langle e, e \rangle} \\
&= [\lambda f_{\langle e, \langle e, t \rangle \rangle}. \lambda x_e. \iota y_e. f(x_e)(y_e)](||mother||) \\
&= [\lambda f_{\langle e, \langle e, t \rangle \rangle}. \lambda x_e. \iota y_e. f(x_e)(y_e)](\lambda x_e. \lambda y_e. (\iota z_e. Birthed(z_e, x_e) = y_e)) \\
&= \lambda x_e. \iota y_e. (\iota z_e. Birthed(z_e, x_e) = y_e) \text{ by FA}
\end{aligned}$$

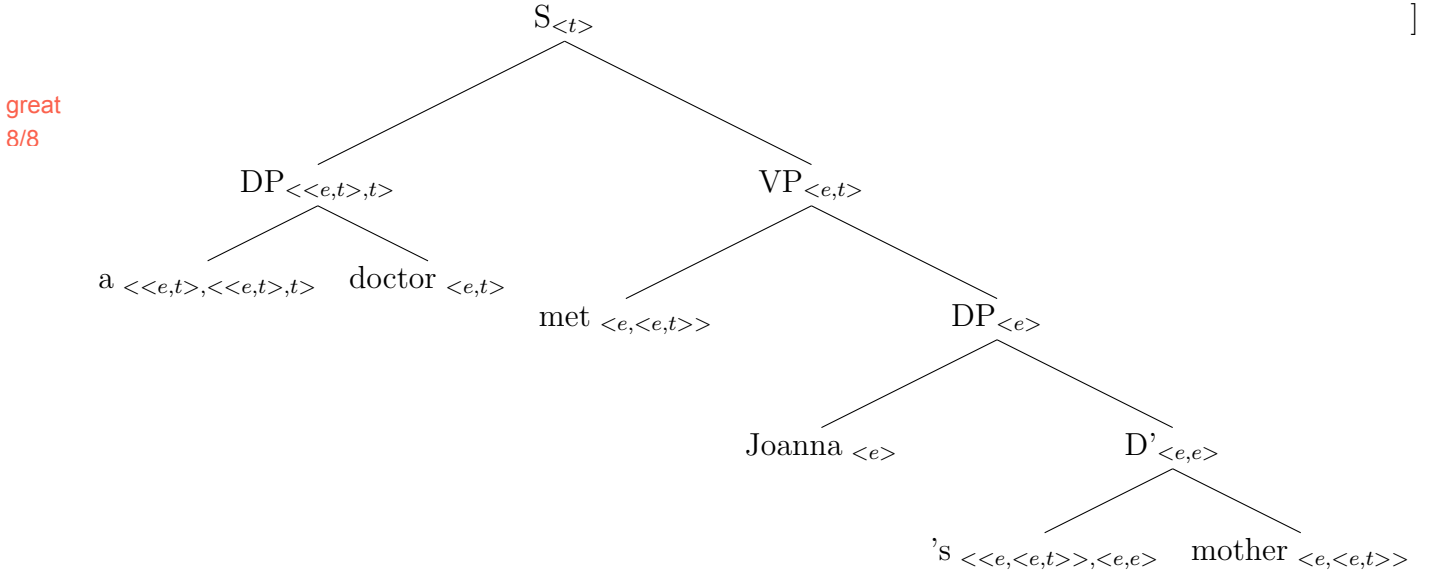
$$\begin{aligned}
||[s\ mother]|| * ||Joanna|| &= ||[s\ Mother]\ Joanna||_e \\
&= [\lambda x_e. \iota y_e. (\iota z_e. Birthed(z_e, x_e) = y_e)](||Joanna||) \\
&= \iota y_e. (\iota z_e. Birthed(z_e, Joanna) = y_e) \text{ by FA}
\end{aligned}$$

$$\begin{aligned}
||met|| * ||[s\ mother]\ Joanna|| &= ||[met\ [s\ mother]\ Joanna]||_{\langle e, t \rangle} \\
&= [\lambda x_e. \lambda y_e. Met(y_e, x_e)](\iota y_e. (\iota z_e. Birthed(z_e, Joanna) = y_e)) \\
&= \lambda y_e. Met(y_e, \iota y_e. (\iota z_e. Birthed(z_e, Joanna) = y_e)) \text{ by FA} \\
&\quad \text{^ should be a comma?}
\end{aligned}$$

$$\begin{aligned}
||a|| * ||doctor|| &= ||[a\ doctor]||_{\langle \langle e, t \rangle, t \rangle} \\
&= [\lambda f_{\langle e, t \rangle}. \lambda g_{\langle e, t \rangle}. \exists x_e. (f(x_e) = 1 \wedge g(x_e) = 1)](||doctor||) \\
&= \lambda g_{\langle e, t \rangle}. \exists x_e. (doctor(x_e) = 1 \wedge g(x_e) = 1) \text{ by FA}
\end{aligned}$$

$$\begin{aligned}
||[a\ doctor]|| * ||[met\ [s\ mother]\ Joanna]|| &= ||[[a\ doctor]\ [met\ [s\ mother]\ Joanna]]||_t \\
&= [\lambda g_{\langle e, t \rangle}. \exists x_e. (doctor(x_e) = 1 \wedge g(x_e) = 1)](met\ Joanna's\ mother) \\
&= [\lambda g_{\langle e, t \rangle}. \exists x_e. (doctor(x_e) = 1 \wedge g(x_e) = 1)](\lambda y_e. Met(y_e, \iota y_e. (\iota z_e. Birthed(z_e, Joanna) = y_e))) \\
&= \exists x_e. (doctor(x_e) = 1 \wedge Met(x_e, \iota y_e. (\iota z_e. Birthed(z_e, Joanna) = y_e)))
\end{aligned}$$

Thus we have calculated the truth conditions and presuppositions of the phrase. A tree with types is given below to make things easier to see:



3.

a. An epithet contributes to a sentence by giving emphasis to the following word as well as changing the overall tone of the sentence. It can be used to emphasize that an action occurred or your personal opinions on a certain topic. For example consider the utterance "He broke the fucking computer!". We can consider many different contexts however I will focus on 2.

good, what happens if we move ADJ around in the sentence?

Are we dealing with the literal meaning of the word?

First consider that a group of people are throwing away their old computers. They decided to take hammers to them, however one of them refuses to break. After enough time, the computer finally cracks, and someone says the utterance above. We can see that "fucking" in this case acts as a modifier to the computer which stresses the fact that the computer did not break for the longest time. It shows the persons thoughts that he is surprised that the computer had not broke.

good

10/11

Next consider that a 2 brothers are sitting outside. One is on his laptop trying to complete an essay due in 30 minutes. The other is goofing around and knocks the laptop off the table onto the concrete below, shattering it. The boy writing the essay then gets very angry and runs to tell his mom what happened, which is when the utterance is spoken. Then we can see that the epithet in this case adds to stress the anger of speaker as well as stress how important the computer was to him. The utterance shows that the speaker needed the computer and is now angry that the computer doesn't work. Despite having the same utterance, this context changes how "fucking" modified the overall sentence while still emphasizing the same word. implicatures are pragmatic because they do not depend on the specific linguistic form; I think you meant presuppositional (which is also pragmatic); but is it one of these or something else? Needed do come cancellation and projections tests to try to get a handle on this

b. The contribution is both an implicature and pragmatical. Continuing off of what was described in part b, now consider the utterance: "Alfonso broke the computer". By changing the placement of the word "fucking", we change the implicatures that arise from the utterance. "Fucking Alfonso broke the computer" implies that the speaker has some sort of disdain for Alfonso. "Alfonso fucking broke the computer" implies that the speaker cannot believe that the computer has been broken. "Alfonso broke the fucking computer" implies that the computer was important in some way, and that the speaker is surprised that it is the computer that is broken (as opposed to the printer). We can see that the implicatures that arise are all different based solely on where "fucking" is placed in the sentence. Then we can see that the epithet can directly modify a word and the implicatures that can arise. Then we can see that epithets also work at the level of pragmatics. We can see this from the examples I gave in part b. It changes how the sentence is perceived overall, the same way that something like tone or body language does. However, these things are hard to semantically represent.

c.

We can define:

$$\begin{aligned} ||ADJ||_{\langle \langle e, t \rangle, \langle e, t \rangle \rangle} &= \lambda f_{\langle e, t \rangle}. \lambda x_e. (f(x) \wedge ADJ(x)) \text{ good} \\ ||computer||_{\langle e, t \rangle} &= \lambda x_e. Computer(x) \end{aligned}$$

$$\begin{aligned} \text{then we get: } ||ADJ Computer|| &= [\lambda f_{\langle e, t \rangle}. \lambda x_e. (f(x) \wedge ADJ(x))](computer) \\ &= \lambda x_e. (Computer(x) \wedge ADJ(x)) \end{aligned}$$

$$\begin{aligned} \text{and } ||the ADJ Computer|| &= [\lambda f_{\langle e, t \rangle} : \exists ! x. x \in C_c \wedge f(x) = 1]. (\iota x. x \in C_c \wedge f(x) = 1)] ((\lambda x_e. (Computer(x) \wedge ADJ(x))) \\ &= \exists ! x. x \in C_c \wedge (Computer(x) \wedge ADJ(x)). (\iota x. x \in C_c \wedge (Computer(x) \wedge ADJ(x))) \end{aligned}$$

We can then use an adjectival epithet such as "fucking" to get

$$\begin{aligned} ||the fucking computer||^c &= \exists ! x. x \in C_c \wedge (Computer(x) \wedge Fucking(x)). (\iota x. x \in C_c \wedge (Computer(x) \wedge Fucking(x))) \text{ good} \end{aligned}$$

However, the problem with this formalization is that it is unclear what $Fucking(x)$ actually represents. This is because adjectival epithets do not have concrete truth conditions that other adjectives (such as "red" or "blue") have. It is undefined what makes something a $Fucking(x)$. We know that it is used to stress the word, but it is unclear how it is actually modifying the word or whole sentence. The problem is that epithets work at a high level, the same level that works with tone and body language, and to semantically represent these things is very difficult if not impossible. great

d. There are very large differences between the meanings of expressive adjectives. All of them emphasize the next word however, the way they modify them is different. For example consider "fucking brilliant" and "fucking idiotic", in the first case it is implying that what the person did was brilliant, but went above expectations. The second case implies that what the person did was stupid beyond what is normally considered stupid. It is subjective to the speaker. As the boundaries on what is "fucking brilliant" vs. "brilliant" are based on context as well as a person's own beliefs. However "fucking" is a more special case, as with "damn" as they add emphasis, but it is very vague as to how much they emphasize (it is very related to the context). This makes it hard to capture the meaning of these. Other words however, might be easier to capture meaning. For example "brilliant" or "idiotic" will modify the next word. In the case of brilliant, we can say that the next word must have characteristics of brilliance in respect to the speaker's definition of brilliance. That is, someone might say that person A is a "brilliant person", but someone else could disagree. It is based on how the speaker defines brilliance. Then in our lexicon, if we had definitions for every single person for every single adjectival epithet in every single context, it might be possible to extract the actual meaning. However, this is not very likely, so it remains hard to capture these meanings.

what exactly do they contribute though? emotional valence, intensity etc?