Midterm Review

Ling 525

March 26, 2020

1 Part one: Entailments

In part one of the midterm (and this review), each problem contains a pair of sentences. Let's call the first sentence (a) and the second (b). For each pair of sentences:

1.1. **First**, say whether sentence (a) **entails** sentence (b) or is **is entailed** by (b), or **both**, or **neither**. Saying they entail each other means you think they are logically equivalent.

1.2. If you say neither: (a) does not entail (b) and is not entailed by it), then you're done. For example, suppose we have

      a.   Every dog barked.
      b.   No dogs barked

Here neither sentence entails the other, so you say "neither sentence entails the other." and you're done

1.3. If you say (a) entails (b) or (b) entails (a) or they are equivalent, then provide a **failed cancellation** of the entailed sentence. For example, suppose we have

      a.   Sam got married.
      b.   Sam married Susan.

I claim that (b) entails (a). To defend that claim, I construct the following failed cancellation.

(1)   # Sam married Susan but he didn't get married.

This sounds contradictory, so cancellation fails to be felicitous, and that's evidence that (b) entails (a), so I've defended my claim. Suppose, just for fun, I tried the cancellation the other way, testing whether (a) entails (b):

> Sam got married but didn't marry Susan.

That's fine (no contradiction), and that means that *Sam got married* does not entail *Sam married Susan*.

If you say the two sentences entail each other, then you can cancel either one. One cancellation is sufficient.

Finally, discuss any **issues** that arose in formulating your answer. For example, (a) one or both of the sentences was ambiguous and you had to choose a reading, or (b) you had to make a specific assumption about the exact meaning of a word in (a) or (b).

Note: Some simplifications. You do not have to say whether (a) presupposes (b) or the other way around. Presuppositions are just a special class of entailments and you do not have to think about them at all for this exam. If you think something is a presupposition, then you can just write down that it's an entailment, and you don't have to discuss the special properties that make it a presupposition (we'll come back to rpesuppositions later in the class).

Also, you don't need to worry about implicatures. They are just not coming up on the exam.

2   Part one of the practice exam

2.1. (a) Tom bought either a Volvo or a Tesla

(b) Tom bought a Tesla.

2.2. (a) A Belgian pianist was given the Nobel Peace Prize.

(b) A pianist was given the Nobel Peace Prize.

2.3. (a) Not every politian is an idiot.

(b) Some politician is not an idiot.

2.4. (a) The president of General Motors is eating breakfast.

(b) There is a president of General Motors.

2.5. (a) John saw no unicorns.

(b) John saw no white unicorns.

2.6. (a) John voted for every fiscally conservative Democrat on the ballot.

(b) John voted for every Democrat on the ballot.

2.7. (a) John has washed his car.

(b) John has a car.

2.8. (a) Every cowboy knows a song.

(b) Every cowboy knows a cowboy song.

2.9. (a) John sold Frieda a white armadillo.

(b) Frieda bought a white armadillo from John.

2.10. (a) Someone called the police.

(b) Someone didn't call the police.

3 Logic section of the practice exam

Consider the truth table for $\sim q \to \sim p$:

p	q	$\sim p$	$\sim q$	$(\sim q \to \sim p)$
T	T	F	F	T
T	F	F	T	F
F	T	T	F	T
F	F	T	T	T

Answer the questions below about the following expressions.

$$(a) \quad p \to q$$
$$(b) \quad \sim p \vee q$$
$$(c) \quad p \to (p \vee q)$$
$$(d) \quad (p \to p) \vee q$$

3.1. Which of the above expressions is logically equivalent to $(\sim q \to \sim p)$?
Prove your answer by showing truth tables for all of the above expressions.

3.2. Point out any of these expressions that are tautologies or contradictions and explain why using the truth tables.

4 Translation section of the practice exam

Translate the following sentences into predicate logic of the sort introduced in Allwood, Anderson, and Dahl, and further discussed in chapters 2 & 3 of Kearns. For any ambiguous sentences, give all the readings, and paraphrase them, saying which logical translation goes with which reading. Except where indicated otherwise, translate definite NPs and proper names using single letter constants. If you have an issue about how to translate a word, please **discuss** it and justify your decision, rather than just, say, ignoring the word and losing unnecessary points. If you feel that a word is being used inconsistently and you need to give it more than one translation (such as when you translate transitive and intransitive *eat* as EAT and EAT2), please explain why.

4.1. Agnes and Bogdan disagreed.

4.2. Lila visited both Paris and London.

4.3. An angry child kicked Pete.

4.4. Don is a rich realtor.

4.5. No paintings were sold.

4.6. Sally responded to every letter from Sam.

4.7. Sam voted for no candidates I recommended.

4.8. John is annoyed with Mary.

4.9. Singapore elected a soccer player from Italy (treat *soccer-player* as a predicate).