Midterm 2019

Ling 525

April 9, 2019

1 Part one: Entailments, contradictions, contradictories, presuppositions

In part one of the midterm, each problem contains a pair of sentences. Let's call the first sentence S1 and the second S2. For each pair of sentences:

1.1. **First**, if S1 and S2 are **contraries** or **contradictories**, say so. Remember they might be neither. If you say they are contraries, but not contradictories, explain why. If you say they are contraries or contradictories, and provided any necessary explanation, you're done with this pair of sentences.

1.2. **Second**, if you're not done, say whether sentence S1 **entails** sentence S2 or is **logically equivalent** to the second, or **neither**. If you say neither (S1 does not entail S2 and is not equivalent to it), then you need to describe some circumstances in which S1 is true and S2 is false;

1.3. **Third,** if you said S1 entails S2, also say if S1 **presupposes** S2; if you claim S1 **presupposes** S2, you need to demonstrate that.

2 Part One

2.1. (a) Tom likes apples or oranges.
(b) Tom likes oranges.

2.2. (a) Tom noticed that Sue was eating French fries
(b) Sue was eating French fries.

2.3. (a) A nearly spherical asteroid collided with the earth.
(b) An asteroid collided with the earth.

2.4. (a) The first president of the university was a woman.
(b) The university had a president.

2.5. (a) No children were seen at the wedding.
(b) No male children were seen at the wedding.

2.6. (a) Every cowboy knows a cowboy song.
(b) Every cowboy knows a song.

2.7. (a) Not every cowboy knows a cowboy song.
(b) Some cowboy does not know a cowboy song.

2.8. (a) Some cowboy knows a cowboy song.
(b) No cowboy knows a cowboy song.

2.9. (a) The towel is completely dry.
(b) The towel is soaked.

2.10. (a) Some wedding guest yelled "Mazeltov!" when the glass was broken.
(b) Some wedding guest didn't yell "Mazeltov!" when the glass was broken.

3 Entailment vs. Implicature

In part two of the midterm, each problem contains a pair of sentences. Let's call the first sentence S1 and the second S2. For each pair of sentences determine

whether sentence S2 **is an entailment** or **an implicature** of S1.

In each case the answer is one or other. In each case, state whether you have decided S2 is an entailment or an implicature. In each case, use a cancellation or reinforcement test to determine whether S2 is an implicature of S1. You **must** produce a sentence that attempts to cancel or reinforce S2. Try to produce as natural a sequence of sentences as you can. That is, S1, followed by your cancellation or reinforcement sentence, should sound as much as possible like a normal pair of sentences uttered by one speaker. Of course, if the test fails, your test sentence won't sound natural despite your best efforts, but in order for your test to be convincing, you have to tried to make your test sentence sound natural. State whether cancellation/reinforcement has succeeded or failed, and state what conclusion you draw from that fact. Note: do **not** just say: S2 can't be cancelled. That is a zero-credit response.

Finally, if you decide S2 is an implicature, state what Gricean Maxim is responsible for it.

3.1. (a) Some children ate their cookies at once.
(b) Some children did not eat their cookies at once.

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3.2. (a) I realized that the house they were talking about was my house.
(b) The house they were talking about was my house.

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3.3. (a) I followed the suspect into a three-room bungalow a block from the beach.
(b) The three-room bungalow was not my house.

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4 Logic & Truth Tables

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

p	q	$\sim p$	$\sim q$	$(\sim q \rightarrow \sim p)$
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.

$$
\begin{array}{ll}
(a) & p \rightarrow q \\
(b) & \sim p \vee q \\
(c) & p \rightarrow (p \vee q) \\
(d) & (p \rightarrow p) \vee q
\end{array}
$$

4.1. Which of the above expressions is logically equivalent to $(\sim q \rightarrow \sim p)$? Prove your answer by showing truth tables for all of the above expressions. (Note: You do not necessarily need to use up all the columns in the empty truth tables below; part of your task is to decide how many columns are needed.)

(a) $p \rightarrow q$

p	q				
T	T				
T	F				
F	T				
F	F				

(b) $\sim p \vee q$

p	q				
T	T				
T	F				
F	T				
F	F				

(c) $p \rightarrow (p \vee q)$

p	q				
T	T				
T	F				
F	T				
F	F				

(d) $(p \rightarrow p) \vee q$

p	q				
T	T				
T	F				
F	T				
F	F				

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

5 Translation

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.

If a sentence is ambiguous, you only need to translate one reading, but please make it clear what reading you are translating. If you decide to treat something as an adjunct, please write a sentence explaining why. Please remember no noun modifiers should be treated as adjuncts.

Please treat Proper Names the same way we have treated them in all our assignments; in other words, do **not** translate them as predicates. Please remember it isn't only people who have names. Please treat all **definite NPs** the same way you translate proper names. Please translate all indefinites using $\exists$. If you don't know what a proper name, a definite or indefinite NP or a predicate is, you've got some reading to do. Hint: If you do the translations below and you never see the need to use $\exists$, you don't know what an indefinite is).

5.1. Agnes complimented Bogdan.

5.2. Both Paris and London are in Europe.

5.3. A Belgian astronaut visited the moon.

5.4. A happy dog chased Brandon.

5.5. No pictures of Napoleon were bought.

5.6. Hilda wrote to every representative from LA.

5.7. Every candidate that I liked lost.

5.8. Every statistician uses a p-value table. (treat *p-value table* as a predicate).

5.9. No children with disabilities enrolled in the contest. (treat *disabilities* the same way you treat proper nouns).