

Semantics: Tutorial Four

Francis Bond <bond@ieee.org>

1. Find at least one example each of words with positive and negative sentiment from your story.

- Do this ahead of class
- Note the entire sentence

In the morning the captain returned; he was angry and unhappy, but said nothing. (negative, negative)

Fred is my best friend after all. (positive)

2. Which of the following arguments is **valid**?

- (a) If it rains, the ground gets wet. It is raining. Therefore, the ground gets wet.
- (b) If it rains, the ground gets wet. The ground is wet. Therefore, it must have rained.
- (c) If it rains, the ground gets wet. It is sunny. Therefore, the ground is wet.

3. Which statement must be **true**?

- (a) All dogs are mammals.
- (b) Some dogs are reptiles.
- (c) All mammals are dogs.

4. In logic, "**or**" (inclusive) means:

- (a) One or the other, but not both.
- (b) Either one or both.
- (c) Neither one nor the other.

5. Are the following quantifiers:

- (i) **Symmetrical or asymmetrical?** (Symmetrical means switching subject and predicate does not change truth; asymmetrical means it does.)
- (ii) How do they behave with entailments?
 - (iib) In the **left argument** (the restrictor): is the quantifier upward or downward entailing? (Upward entailment means moving from a subset to a superset preserves truth; downward entailment means moving from a superset to a subset preserves truth.)
 - (iic) In the **right argument** (the scope): is the quantifier upward or downward entailing? (Again, upward entailment means weakening the predicate preserves truth; downward entailment means strengthening it preserves truth.)

- (1) *most*
- (2) *many* (*cardinal*)
- (3) *few* (*cardinal*)
- (4) *every*
- (5) *at least two*
- (6) *exactly two*