Logic, Reasoning, and Persuasion 07; Deductive Reasoning PSet Review

1 | Explanation and Evidence

Testing for Explanation and Evidence

We can check whether some argument gives a partial **explanation** for a conclusion C or are **evidence** for the statement C by asking whether the argument is

1. (evidence) trying to **show that** the conclusion is true, or
2. (explanation) *assuming* the conclusion is true, and trying to **explain why** the conclusion is true, or explain what **makes** the conclusion true.

1.1 | Example

Suzy shoots a basketball at the hoop at the buzzer with her team down one. Because she aimed well, it goes in. Because it goes in, the crowd goes wild.
Now consider the following three arguments, from outside the stadium:

1. The ball must have gone in, because the crowd went wild.
2. The ball went in, because Suzy aimed well.
3. The ball must have gone in, because Suzy aimed well.
4. The ball went in, because Suzy is a basketball player.

1.2 | Exercise 1

All of the following can be put into the form of the implication machine. For each,

1. Put it into the form of the implication machine by identifying which statement would be P (the first premise) and which would be Q (the conclusion).
2. Identify whether P is *explaining why* Q, showing *that* Q, or both, or neither.

Sentences:

1. If I care about my privacy, then Google is collecting my data.

2. Because I care about my privacy, I don't use Google.

3. The fact that I wouldn't go into the experience machine indicates that I value something more than just experience.

4. I wouldn't go into the experience machine, because I value more than just experience.

5. You must be tired, because you're making more mistakes.

1.3 | *Exercise 2*

Here are some examples from Van Cleave. They *can't* be put directly into the form of the implication machine. But you can still identify whether it is trying to *explain why* the conclusion is true (assuming it is), or show *that* the conclusion is true. For each,

1. Informally argument map it (you can circle and number the premises and the put the numbers into the map).
2. Identify whether this is a *show that* argument or an *explain why* argument, or both, or neither.

Arguments:

1. Since Wanda doesn't have enough money in her bank account, she has not yet picked up her car from the shop.

2. Either Bob or Henry rode the bus to work today. But it wasn't Henry because I saw him riding his bike to work. Therefore, it was Bob.

3. It can't be snowing right now since it only snows when it is 32 degrees or below and right now it is 40 degrees.

4. Fracking should be allowed because, although it does involve some environmental risk, it reduces our dependence on foreign oil and there is much greater harm to the environment due to foreign oil drilling than there is due to fracking.

1.4 | *From the Homework*

1. Using generative AI is tantamount to plagiarism, since you are falsely representing the chatbot's paper as your own work [when you use AI].

2. Not using AI for math assignments puts one at a disadvantage, since most math students are using AI for assignments.

3. As technology develops, training for specialized tests will be a worse education strategy than developing general competencies, because emerging technologies will be able to do an increasing proportion of specialized tasks.

4. I won't use Google, because I want to protect my privacy.