PHI 1101

Reasoning and Critical thinking

09/12/2017

Recognizing arguments

Critical thinking: The systematic evaluation or formulation of beliefs, or statements, by rational standards.

Problem with the way we think…

Self-interested thinking: Accepting a claim solely on the grounds that it advances, or coincides with our interests (helps us save face).

ex: "Because I am a university student I believe that tuition should be free!"

Group thinking: We are all members of many groups (political parties, social classes, religions, etc.) and all of these groups, intentionally or not, exert pressure on our views.

Peer pressure: Pressure from one's peers to believe or do the things the group does.

Problems with what we think...

Objective truth: truth about the world, about the way the world is regardless of what we may believe about it.

Subjective relativism: The view that the truth depends solely on what someone believes; truth is relative to persons. Not all people will have the same truth. Truth is what each individual believes it to be.

Social relativism: The view that the truth is relative to societies or groups. Also known as cultural relativism- Different cultures believe different things. Who are we to say other societies are wrong?

Basic toolbox of critical thinking

Statement + Premise + Conclusion = Argument

- Statement: A simple sentence that has just one meaning, for it expresses one thought. It is either an affirmation or a negation/denial depending whether it asserts if something is the case or not. (It will have a direct answer). An argument needs at least 2 statements.
- Premise: A statement given in support of another statement; a claim put forth as a reason for a conclusion.
- Conclusion: A statement that premises are meant to support; a claim meant to be supported by reasons offered in the argument.
- Argument: Group of statements in which some of them (the premise or premises) are intended to support another of them (the conclusion). A set of claims, one of which is meant to be supported by another.

Premise and conclusion in action:

"I got food poisoning the last two times I ate at that restaurant. I want to avoid that restaurant from here on in."

*Inference: The process of moving from a premise or premises in an argument to a conclusion.

Two types of inference indicators:

1. Premise indicators - Followed by a premise
    a. Examples: Because, since, in view of the fact, given that, for, for the reason that, due to the fact that, seeing as, or the reason is that.
        i. “We should go back to Joe’s Diner, **because** we had fun there last week.”
2. Conclusion indicators -Followed by a conclusion.
    a. Examples : Therefore, thus, so, consequently, it follows that, we can conclude that, ergo, this entails, or hence.
        i. “The quiz is tomorrow, **so** we should study.”

How do we recognize an argument?

- Look for a conclusion, and supporting premises.
- Look for ‘inference indicators’

Enthymemes: Arguments with missing aspects. Where more interpretation is needed by the listener, or assessor. Arguments that have implicit (or hidden) premises or implicit (or hidden) conclusions.
Example #1 (hidden premise): “You're a student so you must be short on cash”
Correct format: “You’re a student. **Students are always short on cash.** So you must be short on cash”
Example #2 (hidden conclusion): “The last piece of cake is gone. There are only two of us here, and i didn't take it.”
Correct format: “The last piece of cake is gone. There are only two of us here, and I didn’t take it. **Therefore, you took the last piece of cake.”**

Simple and complex arguments

Simple: A simple argument only has one inference. A simple argument only has one conclusion.
Examples:

1. “Since your not having a good time, therefore we should leave.”
2. “If you have scars on your body then you've been abducted my aliens. You obviously have do have scars on your body. Therefore, you have been abducted by space aliens

Complex: A complex argument is distinguished from a simple argument because it has what is known as an **intermediate conclusion**. An intermediate conclusion is a statement that has a dual purpose: On one hand, it serves as a conclusion for what comes before, and on the other hand it serves as a premise in a continuing chain of reasoning.
Examples”

1. “You're a student. So, you're probably broke. So you likely don't have money for beer.”

Arguments **VS** Explanations

Explanation: An explanation tells us why something happened. The function of an explanation is to try to show why or how something is the way it is, whereas an argument provides a reason or reasons for a claim (I’m not trying to convince you of this, I’m explaining how I know, or why he did it).

Ex: " I already know Adam stole the money because Jane told me that Steve told her so."

VS

Argument: Group of statements in which some of them (the premise or premises) are intended to support another of them (the conclusion). A set of claims, one of which is meant to be supported by another.

If we encounter an explanation within an arguments then treat it as making just one claim. In other words, an explanation can either be a premise or conclusion.

Other types of statements:

- Conditionals
  - "If… then…"
    - "If I study hard, then I'll pass PHI 1101:
- Disjunctive Sentence or Statements
  - "Either… or…"
    - "Either I'll pass PHI 1101 or I'll fail it."
- Unless
  - "There will be no baseball tomorrow unless the sun is shining."

9/14/2017

Analyzing arguments

The method to be used in this course is:To put the argument into standard form (putting the premises in numerical order and a horizontal line separating them from the conclusion) and next step is to draw a diagram for the argument (demonstrating if the premises are independent or dependent).

A simple trick is to try and determine what the conclusion is first, as well as any inference indicators (words that create the process of moving from premise to premise or premise to conclusion)

The method begins by trying to figure out what the conclusion is first.

Simple argument:

1. Identify what the conclusion is

Complex argument:

1. Identify what the final conclusion is
2. Along with the intermediate conclusion or conclusions

Two possibilities of argument structure: Multiple premises can support a conclusion in one of two ways: Separately or together

- ❏ Independent premises each lend some support to the conclusion, on their own.
- ❏ Dependent premises must be combined in order to support the conclusion.

Example of independant premises:

"Jake is a philosopher. And Jake studies hard. Therefore Jake is smart"

Standard form:

1. Jake is a philosopher.
2. Jake studies hard.

---

3. Jake is smart.

Next we draw a diagram:

1. 2.

3.

Example of dependant premises:

“I'm taller than Rahul. Rahul is taller than you. I must be taller than you”

Standard form:

1. I’m taller than Rahul.
2. Rahul is taller than you.

---

3. I must be taller than you.

Next we draw a diagram:

1. 2.

3.

Combining independent and dependent premises:

“Jake is a philosopher. All philosophers are geeks. And Jake has a chewbacca plush hat. Jake is a geek.”

Standard form:

1. Jake is a philosopher.
2. All philosophers are geeks.
3. Jake has a chewbacca plush hat.

---

4. Jake is a geek.

Next we draw a diagram: 1 and 2 are dependent, however 3 is not.

1. 2. 3.

4.

3 Types of Nondeductive Arguments

1.Inductive Generalizations:

Most often with inductive generalizations, we start with premises about individual members of a group and reason to conclusion about the group as a whole (movement from sample size to the general).

- ➔ Begin with observations about a member of a group, and end with a generalization about all of them.
- ➔ Allows us to make general claims, despite having to look at every single member of a class or group in order to make a general statement that is probably true.
- ➔ *Ex:* "I've owned 2 Dell computers, and both sucked. I'm starting to think all Dell computers are crap."
- ➔ Usually have this form "X per cent of the observed members of a group A have property P." "Therefore, X per cent of all members of group A probably have property P."
- ➔ There can either be "successful or "unsuccessful" based on the sample sized used.

2. Statistical Syllogism

The movement is from the general to the particular. Occurs when we have good but incomplete knowledge of some group of people or things. And based on that, we reach a conclusion about a member of the group (mouvement from general to particular).

- ➔ Ex: "80% of professors at the University of Ottawa are bilingual. So your biology prof is probably bilingual."
- ➔ They all follow this pattern:
  - ◆ Premise 1: A proportion X of the group M have characteristic P.
  - ◆ Premise 2: Individual S is a member of group M.
  - ◆ Conclusion: Individual S probably has characteristic P.
- ➔ Ex: "Most people who attend university are free thinkers. Erika attends university. Thus Erica is probably a free thinker."
- ➔ To analyse a statistical syllogism, we need to be able to identify:
  - ◆ The individual being examined
  - ◆ Group to which that individual is said to belong
  - ◆ Characteristic being attributed
  - ◆ Proportion of the group said to have had that characteristic
  - ◆ Source the info

3. Plausibility Arguments:

Premises work together to build a case for the conclusion being plausible or reasonable.