

**PHI 106 CRITICAL THINKING**

**TOPIC 9:**

Deductive and Inductive Arguments:

The conclusion of a sound deductive argument necessarily follows from its premises: as long as the premises are true, the conclusion is true; it cannot be false—and there is no question about it. So even if you “don’t agree” with the conclusion, you have to accept it. However, in the case of an inductive argument, it’s a matter of strength rather than logical necessity: the degree to which you accept the conclusion of an inductive argument depends on the strength of the argument.

Another way of saying this is that in the case of a deductive argument, the conclusion makes explicit what’s already implicitly contained in the premises; it merely articulates the logical implications of the premises. So, in a sense, a deductive argument tells us nothing new about the matter. In the case of an inductive argument, however, the conclusion goes beyond the information of the premises; it articulates new knowledge. In a way, deductive argument is convergent thinking, whereas inductive argument is divergent thinking.

Perhaps now is a good time to emphasize, then, that when you’re evaluating an argument, whether you agree or disagree with the conclusion is irrelevant; you can’t accept an argument just because you agree with the conclusion, and you can’t reject an argument just because you don’t agree with the conclusion.

Quite apart from the logical necessity of this, if you’re going to just accept or reject a conclusion according to what you want to believe, regardless of the support, what’s the point of having an argument in the first place?

If you're going to ignore the evidence, the reasons, the reasoning, what's the point—in thinking about anything? Just believe what you want, just do what you want! See, that's the beauty of all this argument stuff: it's not “just a matter of opinion”—there are clear rules of reasoning that will lead you to clear, defensible, opinions.

When you're dealing with arguments, it's important not to direct your attention to the conclusion, but rather to the reasoning, to the premises and their relation to the conclusion.

When you construct an argument, don't start with the conclusion you want: start with the evidence, the reasons, and go where they lead. Ask yourself what conclusions, if any, can be drawn from what you know. If you can't draw any conclusions, then find out more, increase your knowledge—and in the meantime, suspend your judgment. Similarly, when you evaluate an argument, examine the premises and their relation to the conclusion, not the conclusion.

Inductive argument is not so easily classified, but we'll consider generalizations, analogies, general principles, and causal reasoning. Generalization involves making a general claim based on specific evidence because of quantitative force (reasoning from an adequately sized study sample to the general case or from the frequency of past or present occurrences to present or future occurrences) or from qualitative similarities (reasoning from a representative study sample to the general case).

It's always important to anticipate objections (often called rebuttals) to the argument at hand, whether you're evaluating an argument or constructing it. Objections—to validity, truth, relevance, or sufficiency—may indicate that the argument should be modified (corrected or strengthened), accepted with reservations, or rejected. All of which is good to know before you invest too much in it—before you go through too much of your life accepting its conclusion!

(From Peg Tittle's Critical Thinking Textbook)