**Philosophical Method Day 3: Arguments**

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| **Content:**  What Is an Argument? (10 minutes)  Parts of an Argument (25 minutes)  Argument Dissection (15 minutes) | **Method:**  1. Clip and discussion  2. Lecture  3. Paired activity |

***Instructor’s Introduction***: This lesson begins a more formal introduction to logic. Because logic is the tool for evaluating the reasoning in an argument, it only makes sense to begin by discussing in somewhat more formal terms what an argument is.

# *Goals and Key Concepts*

1. Students should understand what an argument is in the philosophical sense.
2. Students should be able to identify the parts of an argument.
3. Students should be able to distinguish arguments from non-arguments.
4. Key concepts: **argument, premises, conclusion, proposition, normal form.**

**1. What Is an Argument?**

Begin this lesson by showing the Monty Python clip, The Argument Clinic. The clip can be found here: <http://www.youtube.com/watch?v=kQFKtI6gn9Y>

After showing the clip, ask:

What are the two different concepts of “argument” presented in the skit?

The two concepts are:

1. Mere contradiction or a dispute (Yes it is… No it isn’t… Yes it is… No it isn’t…)
2. (Proposed by the customer) “A collected series of statements to establish a definite proposition.”

When we talk about arguments as used by philosophers, we are talking about an argument in the latter sense.

**2. Parts of an Argument**

Put back up on the board the “I am the teacher of this class” argument from the first day. You don’t have to put it up exactly as it was, but be sure to include a few of the premises that the students came up with. Label the premises and the conclusion.

Now begin by defining some terms for the students:

**Proposition**: A declarative sentence that has a truth value. I.e., it can be either true or false. Propositions express facts about the world that can either be true or false.

Ask the students: Are there kinds of sentences that are not propositions? Answer: Yes. Questions, commands, exclamations, etc., are all sentences that are not propositions because they lack a truth value.

**Premise**: A proposition serving as a reason for a conclusion.

**Conclusion**: A proposition that is supported or entailed by a set of premises.

The “I am the teacher of this class” argument has several premises.

Ask the students: Can there be an argument with only one premise? Answer: Yes. For example, Bill is an unmarried male. Therefore, Bill is a bachelor.

Ask the students: Can there be an argument with no premises? Answer: Yes. For example, consider an argument with no premises and the following conclusion: It is either Monday in Tokyo or it is not Monday in Tokyo.

Now we can define an argument:

**Argument**: A set of propositions where one of which (conclusion) is claimed to derive support or reason to believe from the others (premises).

The “I am the teacher of this class” argument is in **normal form**—the premises are in a vertical list with the conclusion under them separated by a line (or by the symbol ∴). Usually arguments are in English prose (ordinary language), and sometimes in other forms like math proofs. Converting an argument from English prose into normal form allows us to clearly pick out the premises and conclusion.

How can we identify the premises and conclusion of an argument in ordinary language? We are guided by indicator words. Propositions in arguments are often accompanied by words that indicate that proposition is either a premise or a conclusion.

You can have students brainstorm premise and conclusion indicators words, provided they come up with many of the words on the following lists.

**Premise Indicators:** since, because, for, in that, as, given that, for the reason that, may be inferred from, owing to, inasmuch as

**Conclusion Indicators:** therefore, consequently, thus, hence, it follows that, for this reason, we may infer, we may conclude, entails that, implies that

**3. Argument Dissection**

Have the students work in pairs. Give the students 6-8 minutes to write three arguments in ordinary language. They can make the arguments as convoluted as they would like. Direct the student that the arguments should have multiple premises and the form should be varied (e.g., the conclusion shouldn’t always come at the end, etc.)

The students then pass their completed arguments to their partners who will try to identify the premises and the conclusion. The pairs of students should then discuss whether or not the premises and conclusions were correctly identified.

**Assignment**

Find three ordinary language arguments from *different* sources (editorials, blogs, philosophy texts, etc.). Write the arguments in normal form, identifying the premises and the conclusions.