Introducing Arguments

by Sophia

WHAT'S COVERED

Philosophy uses argumentation to attain truth. To learn how to evaluate arguments, we must first define *argument*.

This tutorial examines argumentation and its role in philosophy, in two parts:

1. What is an Argument?

In philosophy, arguments provide justification for proposed positions. When successful, an argument provides a reason (or reasons) to believe that something is true. Aristotle provided the following example of a simple argument:

All men are mortal.

Socrates is a man.

Therefore, Socrates is mortal.

Think of the argument as an equation. The first two statements (both of which are called premises) combine to yield the third (the conclusion). Hence, if we know the two **premises**, we also know the **conclusion**. A premise is a statement presented in an argument for acceptance or rejection without support, but that is intended to support a conclusion.

As we will see, the argument above provides justification for thinking that Socrates is mortal. To do so, it must accomplish two things. Every argument makes both a **factual claim** and an **inferential claim**. A factual claim is a

claim that some fact (or facts) corresponds to reality, while an inferential claim is a claim that the premises support the conclusion.

Note that we are currently defining what makes *an argument*, not what makes a *good* argument. It is important to understand that *claiming* that a fact corresponds to reality does not guarantee that it does ("Socrates was a fire-breathing lizard who ravaged the streets of Tokyo" is a factual claim), and claiming that premises support a conclusion does not mean that they do. These two claims must be evaluated to determine the success of an argument, as will be discussed below. An **argument** is defined as a group of statements containing both a factual claim or claims and an inferential claim or claims.

An argument must contain both types of claims, and all groups of statements that contain both types of claims are arguments. Regarding the statements provided above, in order for them to form an argument, they (together) must make a factual claim or claims.

TERMS TO KNOW

Premise

A statement presented in an argument for acceptance or rejection without support, but that is intended to support a conclusion

Conclusion

A statement that is intended to be supported by the premises of an argument

Factual Claim

A claim that some fact (or facts) corresponds to reality

Inferential Claim

A claim that the premises support the conclusion

Argument

A group of statements containing both a factual claim or claims and an inferential claim or claims

1a. Aristotle's Argument Example

TRY IT

See if you can find the factual claims in Aristotle's argument from above:

> *All men are mortal.*
>
> *Socrates is a man.*
>
> *Therefore, Socrates is mortal.*

Factual claims are submitted as true but without support. The argument itself (i.e., the three sentences provided above) includes no reasons to support the claims made in it.

The two factual claims in this argument are “All men are mortal” and “Socrates is a man”. Notice that they are presented as givens with no support or reason to believe them. However, “Socrates is mortal” is *not* a factual claim. Why not? Think in terms of support. Does Aristotle's argument (just those three sentences, not your beliefs) provide any reason to believe that “All men are mortal” is true? It is simply an assertion about the way the world is.

The same can be said about “Socrates is a man.” However, we *are* provided with a reason to believe that Socrates is mortal: it follows from the two claims which precede it. In an argument, a factual claim is the same as a premise.

TRY IT

See if you can find the inferential claim in Aristotle's argument from above.

Although a premise is the same as a factual claim, a conclusion is not the same as an inferential claim. Why not? Look at the definition of an inferential claim. Since the inferential claim links the premises and the conclusion, it cannot be synonymous with either.

In this argument, the inferential claim is the word *therefore*. An inferential claim is the assertion that the premises support the conclusion. That’s what *therefore* does in this argument. It tells you that an inference is being made, that something has been supported rather than simply presented. However, not every argument uses *therefore*. It's best to think of the parts of an argument in terms of how they support (the premises) and supported (the conclusion). The inferential claim asserts that such support is available.

All men are mortal.	**Premise/Factual Claim**
Socrates is a man.	**Premise/Factual Claim**
Therefore,	**Inferential Claim**
Socrates is mortal.	**Conclusion**

1b. Dog and Crocodile Argument Example

TRY IT

Identify the factual and inferential claims in the following argument by first identifying the premises and the conclusion:

> *No dogs are crocodiles because all dogs are mammals and no crocodiles are mammals.*

Note that the conclusion is not always at the end. Also consider the following: Does “because” indicate that something is support*ed* or support*ing*?

In the argument above, “all dogs are mammals” and “no crocodiles are mammals” are the premises and

are, therefore, factual claims. The conclusion is “no dogs are crocodiles”, since it follows from the two premises. What is the inferential claim? In this argument, it is *implicit*. The word “because” indicates that the latter two statements are premises that support the prior statement. As a result, the inferential claim would be something like, “the fact that no dogs are crocodiles follows from the facts that all dogs are mammals and no crocodiles are mammals.” It is important to understand that not every argument will include inferential indicators. Readers must recognize what supports what.

All dogs are mammals.	**Premise/Factual Claim**
No crocodiles are mammals.	**Premise/Factual Claim**
No dogs are crocodiles.	**Conclusion**
The fact that no dogs are crocodiles follows from the facts that all dogs are mammals and no crocodiles are mammals.	**Inferential Claim**

2. The Basics of Evaluation

As mentioned above, every argument makes both a factual and an inferential claim. It must do both of these things *well* in order to succeed (i.e., to provide reason to believe the conclusion). This means that we must evaluate both the factual and inferential claims, separately. The inferential claim must be evaluated first, for two reasons: 1) it is the fastest way to evaluate an argument; 2) if the inference is bad, the facts don't matter.

Consider the following argument:

> *There are 21,354,751 people in Ohio. Therefore, there are more than 10,000,000 people in Ohio.*

It is simple to check the inference—that 21,354,751 is greater than 10,000,000—but checking the fact would require more research. We’d have to determine whether there are truly 21,354,751 people in Ohio, a time-consuming task. However, there is a much more important reason to check the inference first. Suppose someone made the following argument:

> *Kim Kardashian wore a purple hat today. Therefore, there will be a blizzard in the Northeast tomorrow.*

Suppose you lived in the Northeast, and were planning your activities for the next few days. If someone made this argument to you, would you check the color of Kim Kardashian’s hat to see whether you need to change your plans? Probably not, *because if the inference is bad, the facts do not matter*. Even if the hat claim is true (i.e., Kim Kardashian wore a purple hat today), it provides no reason to believe the conclusion (i.e., that there will be a blizzard). The inferential claim of the argument must be evaluated first.

When evaluating an inference, the question is *never* “Are the premises true?” Instead, questions of inference ask, “Assuming the premises are true, do they support the conclusion?” Consider this argument:

All reptiles are dinosaurs.

Hamsters are reptiles.

Therefore, turtles are dinosaurs.

Obviously, there is something wrong with this argument. However, let's check the inference. We ask, "Assuming it's true that all Republicans are space aliens and Barack Obama is a Republican, would this support the conclusion that Barack Obama is a space alien?" The answer is yes. This inference here is sound (notice that it is the same inference used by Aristotle in his argument above). The problem with this argument is the factual claim.

To test the factual claim, ask, "Are all of the premises true?" Aristotle's argument contains a good inferential claim and a good factual claim. The turtle argument includes a good inferential claim but a bad factual claim.

See if you can provide the proper (but separate) evaluations of the inferential and factual claims of the following three arguments:

TRY IT

LeBron James is over five feet tall. (Premise)

Therefore, LeBron James is over seven feet tall. (Conclusion)

What are the inferential and factual claims? +

The inference in this argument is unsound. From the fact that a person is over five feet tall, it does not follow that he or she is over seven feet tall, (or that he or she is over six feet tall). However, the factual claim is sound because LeBron James is over five feet tall (note that the factual claim verifies the premises, not the conclusion).

TRY IT

LeBron James is over twelve feet tall. (Premise)

Therefore, Lebron James is over seven feet tall. (Conclusion)

What are the inferential and factual claims? +

We can determine whether the inference is sound by asking, “Assuming that it is true that LeBron James is over twelve feet tall, does it follow that he is over seven feet tall?" In this case, the answer is "yes," so the inference is a good one. However, since he is not over twelve feet tall, the factual claim falls short.

TRY IT

LeBron James is over five feet tall. (Premise)

Therefore, LeBron James is over six feet tall. (Conclusion)

What are the inferential and factual claims? +

This argument can be evaluated in the same way as the first argument in this example. Even though LeBron James is over six feet tall, it does not follow from the fact that he is over five feet tall. Therefore, even if you believe that he is over six feet tall, this argument provides no support for that belief.

MAKE THE CONNECTION

Why bother trying to understand philosophical arguments? Whether or not you realize it, you make arguments in everyday life. Even something as simple as this qualifies as an argument: “When it is cold outside, I wear my jacket. Today it is cold outside. Therefore, I should wear my jacket.” Understanding and evaluating arguments are useful abilities. See if you can recognize examples of arguments in your day-to-day life.

Philosophical analysis is not required to evaluate the argument involving your jacket. As we begin to realize when we (or others) are making an argument, we will also begin to evaluate them: to determine when their conclusions follow from their premises, and when they do not.

Suppose someone told you, “We should use capital punishment because it is cheaper than imprisonment for life.” They have made an argument. They *only* support their conclusion that we should use capital punishment by claiming that it is cheaper. If we were only interested in financial costs, this would be a good inferential claim. However, since it costs more money to execute someone than to imprison them for life, it is a bad factual claim. This could be the focus of further discussion of the issue.

SUMMARY

Argumentation is the way that philosophy seeks truth. Understanding how to **evaluate an argument** is an important skill. Every argument makes both a factual and an inferential claim. In order to be

successful (i.e., to provide a reason to accept the conclusion), it must do both well. Therefore, every argument requires two independent evaluations.

Source: This tutorial was authored by Sophia Learning. Please see our Terms of Use.

TERMS TO KNOW

Argument
A group of statements containing both a factual claim or claims and an inferential claim or claims

Conclusion
A statement that is intended to be supported by the premises of an argument

Factual Claim
A claim that some fact or facts obtained in the world is true

Premise
A statement presented for acceptance or rejection in an argument (without support) but that is intended to support a conclusion

Inferential Claim
A claim that the premises support the conclusion