



Module 0 Lecture: Logical Arguments

What Is an Argument?

An argument is more than just an assertion. An assertion is simply a statement of opinion. It is a declaration of one's own beliefs on the matter at hand.

In contrast, an *argument* is an attempt to persuade others to your point of view. Because an argument is an attempt to *persuade*, it needs to include more than just a statement of fact or an expression of your opinion. It needs to include *the reasons the reader should believe the same thing*.

For example, If I were to just say, “All Greeks are mortal,” that is simply an assertion. I'm simply speaking my opinion on the issue.

However, if I want to persuade *others* that all Greeks are mortal, I must present an argument. My assertion needs to include a big, persuasive *because*. Without a “because” in my assertion, I am not providing the reader with any reasons to believe my conclusion.

Arguments have a specific structure. Although arguments can be written in different ways, they can all be boiled down to a *syllogism*. According to the all-knowing Wikipedia, “A syllogism ... is a kind of logical argument in which one proposition (the conclusion) is inferred from two or more others (the premises) of a certain form.”

Here's an example of a syllogism:

Premise A: All men are mortal.

Premise B: All Greeks are men.

Conclusion: All Greeks are mortal.

In this syllogism, if the two premises are true, the conclusion must be true as well. The conclusion cannot be wrong if the premises are true. In addition, I'm not simply presenting an assertion (the conclusion), I'm presenting the reasons my assertion is true (the premises).

Here's another way of framing the exact same argument:

If all men are mortal, and *if* all Greeks are men, *then* all Greeks are mortal.

This is the exact same argument in sentence form. The sentence is more than merely an assertion—it is a complete argument.

Because it is a complete argument, I can rewrite it once more, like this:

All Greeks are mortal *because* all men are mortal, and all Greeks are men.

The big, persuasive *because* in that sentence is what makes the sentence an argument instead of merely an assertion. It is an attempt to persuade others that my assertion is indeed true.

What Makes a Good Argument?

All arguments have two central qualities, *validity* and *soundness*.

Validity

An argument is *valid* if the conclusion necessarily follows from the premises. For example, the previous argument is valid because if all the premises are true, the conclusion must be true as well. If the argument is *invalid*, it is usually because there are *logical fallacies* in the argument. A *fallacious* argument is never valid.

Soundness

An argument is *sound* if it is valid, and if the premises are true. Therefore, if the premises in the previous argument are true, the argument is both valid and sound. However, if it turns out that the first premise in the argument is false (for example, not all men are mortal), the argument might be valid, but *not* sound.

What Is an Assumption?

Often, logical arguments are incomplete—that is, not all of the argument’s premises are spelled out completely. Consider the following argument:

A: People who are not selfless are bad.

B: Adam thinks about himself.

Conclusion: Adam is bad.

This argument is *invalid*—the conclusion doesn’t *necessarily* follow from the premises. However, those making the argument could be assuming an *additional* (but unstated) premise:

C: Selfless people never think about themselves.

This unstated premise is an *assumption* because it is taken for granted in the argument.

The people making the argument might not even realize they’re making an assumption or that their assumption should be stated explicitly to make their argument valid. Their assumption may be embedded in the very way that they make sense of the world. Without ever realizing it, they just act as though their assumption is true, and that everybody else shares the assumption.

In short, an assumption is a *hidden premise* in an argument. If someone makes an argument that doesn’t make sense, or seems to be (on the face of it) invalid, it’s probably healthy to look for the *hidden premises*.

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Simply ask, “What must *also* be true in order for this argument to be valid?” This question allows you to take a peek into the other person’s worldview, and to make *explicit* (that is, give words to) the implicit assumptions behind the other person’s argument.

Sometimes, when we make a previously hidden assumption *explicit*, we realize that we don’t really believe it. For example, once we make premise C (“Selfless people never think about themselves.”) explicit, and put it to paper, we might realize, “That’s not actually true. I *don’t* believe that.”

This may sometimes require us to call into question our original conclusions. Perhaps Adam *isn’t* really bad, and we came to that conclusion based on a false (hidden) premise.

What Is an Implication?

Oftentimes, arguments have unstated *implications*. While an assumption can be compared to the premises of an argument, an implication can be compared to the *conclusions* of an argument.

Consider this example:

A: People who are not selfless are bad.

B: Selfless people never think about themselves.

This is an incomplete syllogism. It’s missing a conclusion. To figure out the missing conclusion, you ask, “What is implied by the premises but not stated?” In this case, the answer is easy:

Conclusion: People who think about themselves are bad.

In this example, the conclusion was an *implication* of the premises.

Even complete arguments (that is, valid arguments that have premises and a conclusion) can have further, sometimes unintended implications if further assumptions are made.

Let’s look at another (relatively famous) example.

Consider this argument:

A: Only witches float when put in water.

B: Sally, when put in water, floats.

Conclusion: Sally is a witch.

This is a valid argument (even if it may not be sound). However, the way the argument is worded might lead to some unintended implications:

C: Ducks float.

Implication: Ducks are witches.

Some unintended implications, however, are not just the result of poor wording. Let’s consider this example:

A: Being scrutinized by others is emotionally harmful and avoidable.

B: Avoidable emotional harm should be avoided.

Conclusion: We should avoid scrutinizing the behavior of other people.

If we take the premises to be true, this is a valid argument. However, when we add some further assumptions, we may reach an unintended implication:

C: Temple recommend interviews are a form of scrutiny.

Conclusion: We should avoid or change temple recommend interviews.

This would be an example of an *unintended implication*. The person making the argument likely does not intend to imply that bishops and stake presidents are emotionally harmful.

Pointing out unintended implications is a good way to help us refine our arguments and make them more moderate and realistic.

In addition, if we strongly believe that an implication of our argument is untrue, it is likely a signal that one of our premises is untrue (or poorly worded).

The person making the argument would likely try to reject premise A (as it is written) and reword it (for example, “some forms of scrutiny are emotionally harmful” or “scrutiny in some contexts is emotionally harmful”).

Conclusion

In conclusion, arguments are *assertions* that are given *reasons*. An argument has premises and a conclusion.

Arguments can be *valid* or *invalid*. An argument is invalid if the conclusion *doesn't follow* from the premises.

Arguments can be *sound* or *unsound*. An argument is sound only if the premises are *true* and the argument is valid.

An *assumption* can be compared to the *premises* of an argument. Arguments sometimes rely on unstated (*hidden*) assumptions.

An *implication* can be compared to the *conclusions* of an argument. Arguments can sometimes have *hidden* or *unintended* implications.