

Argument Mapping 2: Claims and Reasons

We'll start with the very basics here, so be patient. It becomes far more challenging when we apply these basic rules to real arguments, as we'll see.

Claims

The basic starting point of an argument is the claim. A claim is just what it sounds like – an idea that someone is trying to convince someone else is true. Some sample claims:

Socrates is mortal.

John is a good quarterback.

Professor Ostwald's class is too easy.

My tuition bill is too expensive.

Dinosaurs are popular.

Notice how these are relatively straightforward statements (i.e. full sentences) that are *either true or false*. The person advancing the claim (i.e. the proponent) will normally argue that they are true, but others can object to them (which we'll talk about in Tutorial #5).

Reasons

A claim is supported by a reason, that is to say proof or evidence to believe that the claim is true. Without a reason to believe the claim is true, you don't technically have a claim (in the argumentative sense), only an article of faith. But, as we'll see with our course readings, even 'articles of faith' are usually supported by some type of reason or evidence – religious arguments can become quite complicated, though they usually rely on different types of evidence than scientific debates. Theologians and religious believers argue with each other all the time about what to believe, and they don't simply say "Believe me or else." They use various reasons to support their views – quoting passages from the Bible, appealing to natural law or social utility, trying to convince others of their special access to divine knowledge... In short, reasons are evidence. The most common of these are factual descriptions of reality, statistical evidence, and definitions.

Some sample reasons:

Socrates is a man.

John threw for thirty-nine touchdowns last season.

One of my friends says Professor Ostwald's class is too easy.

My tuition bill is 30% of my income.

Dinosaur toys are a perennial favorite with children.

Notice how these too, like claims, are relatively straightforward statements that are also either true or false. Their difference, in other words, lies in their role within an argument – are they intended to be a claim or a reason? You can intuitively see how they support the claims above.

Claim: *Socrates is mortal*. Reason: [Because] *Socrates is a man*.

Claim: *John is a good quarterback*. Reason: [Because] *John threw for thirty-nine touchdowns last season*.

Claim: *Professor Ostwald's class is too easy.* Reason: [Because] *One of my friends says Professor Ostwald's class is too easy.*

Claim: *My tuition bill is too expensive.* Reason: [Because] *My tuition bill is 30% of my income.*

Claim: *Dinosaurs are popular.* Reason: [Because] *Dinosaur toys are a perennial favorite with children.*

Assertibility Question (AQ)

All reasons for claims must answer what we call the Assertibility Question (AQ). This question is, simply: “How do we know that [insert specific claim here] is true?” It’s called the *Assertibility Question* because you are asking what evidence allows one to assert that the claim is true. You ask it when you are presented with a claim and the proponent should respond with a reason to believe the claim is true.

Proponent’s claim: *Socrates is mortal.*

Skeptic asking the AQ: How do we know Socrates is mortal?

Proponent’s reason: Because *Socrates is a man*

Proponent’s claim: *I should get an A in this course.*

Skeptic asking the AQ: How do we know you should get an A in this course?

Proponent’s reason: Because *I scored 92% in this course.*

All we are doing here is asking for evidence, and we do this all the time in the real world (especially when we don’t immediately accept the claim). It’s important to train ourselves to ask the AQ formally, because it forces us to ask for evidence rather than just accepting things blindly.

Arguments versus Explanations

This is an important point, but is often hard to distinguish. Using the vocabulary of critical thinking, an argument is a combination of a claim(s) and their supporting reason(s). It deals with whether the main claim is *true or not*, and therefore relies on empirical descriptive evidence, or statistics, or definitions for support.

On the other hand, an explanation describes the *mechanism* by which something happens – it deals with issues of *cause and effect*. Explanations are *causal theories* (theoretical explanations) for why something (might) happen, but they are not the same thing as arguments, which provide concrete evidence that something actually did happen. Explanations may themselves be true or not (i.e. explain adequately why something happens), but they cannot be used as evidence to believe a claim – they make it plausible, but not certain. To give an example, we can think of many possible reasons why somebody would commit a crime or why a student might cheat on a test, but those reasons are not *by themselves* enough to conclude that a particular person actually has committed a particular crime or cheated on a particular test. We need empirical evidence for that, and explanations do not provide this type of evidence.

Contrast reasons versus explanations for the examples mentioned earlier:

Claim	Reason for claim being true (how we know it's so)	Explanation why claim is true (why it's so)
<i>Socrates is mortal</i>	<i>Socrates is a man</i>	<i>People's physical bodies wear out over time</i>
<i>John is a good quarterback</i>	<i>John threw for thirty-nine touchdowns last season</i>	<i>John practices every day</i>
<i>Professor Oswald's class is too easy</i>	<i>One of my friends says Professor Oswald's class is too easy</i>	<i>Professor Oswald's class only assigns one paper</i>
<i>My tuition bill is too expensive</i>	<i>My tuition bill is 30% of my income</i>	<i>There are too many millionaire faculty</i>
<i>Dinosaurs are popular</i>	<i>Dinosaur toys are a perennial favorite with children</i>	<i>Dinosaurs are exotic creatures</i>

Hopefully you can see the difference between the two. If you can't (and there are always difficult cases), there are a number of tricks that can help when it is difficult to determine whether it's a reason or an explanation:

- Try to come up with what the alternative might sound like. As the table above shows, when you compare the two directly, it's relatively easy to figure it out, so make up an alternative in any difficult case. If the statement in question is "Napoleon must have died because of arsenic poisoning," and you think it is an argument, then figure out what an explanation for it would sound like. If you can't, try it the other way: what would an argument that Napoleon must have died be? Maybe: Napoleon must have died because his body is buried in Paris. This last one makes sense, so in this case, our original statement would seem to be an explanation for why he died, rather than an argument that he did in fact die.
- Another technique is to add indicator words that are usually used to distinguish arguments from explanations – this is not guaranteed to work every time, but in many cases it will help. If you think a statement is an argument, you should be able to substitute the indicator word "therefore" between the two parts and it should still make sense. If you think it is an explanation, you should be able to substitute "due to" and have it still make sense.

For example, "Napoleon must have died because of arsenic poisoning" rephrased as an argument would look like: "Napoleon must have died *therefore* [of] arsenic poisoning." This doesn't make sense. Rephrasing it as an explanation, we'd get: "Napoleon must have died *due to* arsenic poisoning." Now that makes sense, so it must be an explanation. Similarly, "Napoleon must have died because his body is buried in Paris" makes sense as "Napoleon's body is buried in Paris *therefore* Napoleon must have died" (reverse the order to get the direction of causality correct). On the other hand, it doesn't make sense to say "Napoleon must have died *due to* his body being buried in Paris." Unless, I suppose, he died from being buried alive...

- More generally, explanations tend to use language that focuses on theories, causes, effects, and with verbs (often with the preposition 'from' or 'of') that imply cause and effect (died from, died of, increases, decreases, prevents...).

- To add confusion, on occasion an explanation might serve as an argument – it will depend on what the author intended.

The difference between reasons and explanations is important, because we often confuse the two – especially when we hear an explanation for *why* something is, without checking to see if it actually *is* or not. We do this for several reasons.

- Psychologically we want to understand *why* something is the way it is, not just that it *is*, so we feel convinced by explanations when we should first and foremost be asking for evidence of it being true before inquiring into why it might have happened. (Notice that this last sentence was in fact an explanation rather than an argument!) Prosecutors can get a defendant convicted without motive (“we know he did it, we just don’t know why”), but it is much more satisfying and convincing to a jury if they know *why* he did it too (i.e. what motivated him to do it). And if the prosecutor’s interpretation of the defendant’s motive is wrong, that doesn’t necessarily mean that the defendant did not in fact do it. We feel that explanations make things more likely to be true because we humans want to fully understand something before believing it (usually).
- As we all know, you can know something is true without understanding *why* it is the case – we know we’re alive even if we don’t know why, scientists may understand some biological or physical process without yet understanding how or why it works that way, you know you failed the course even if you don’t know why, religious people may know that one should act in a certain way without knowing why God wants us too, and so on.
- We can all come up with many possible explanations for why something happened, but that doesn’t tell us anything about whether it is actually true or not. Pundits can go on and on about why the Ramseys killed their daughter JonBenet (wealthy frustrated mom living out her failed ambitions through her pageant daughter, bedwetting accidents...), but that doesn’t substitute for concrete evidence that they actually did kill her. After all, we can rationalize or explain just about *anything*, so coming up with an explanation is not *by itself* much evidence of its veracity. And just because we cannot explain something does not mean it did not happen – only that we may lack the knowledge, insight, or experience to see the cause.
- In large part our confusion derives from the fact that our language has not evolved to distinguish clearly between reasons and explanations. Confusingly, we use the same words to indicate both reasons and explanations, even the words ‘reason’ and ‘explain’ can be used almost interchangeably. Both ‘because’ and ‘why’ can also be used to refer to either reasons or explanations, which is why [why used here as an explanation] the AQ is phrased somewhat awkwardly as “How do we know this claim is true?” Otherwise, the simpler question “Why is this true?” makes it more likely that we’ll confuse the two and accept an explanation when we really want a reason. Similarly, a reason (as it’s commonly understood) could be either an argument or an explanation, and even the terms argument and explanation are used interchangeably in common speech, which is why it is important to distinguish them in this context.
- Further confusion is added when explanations and arguments are mixed up together in a single paragraph – writers will frequently combine both evidence that something is true and an explanation for why it is true in the same text. This makes it more difficult for readers to distinguish the two from each other.

Remember: ‘An argument is how we know, an explanation is why it’s so.’

See if you can distinguish which of the following is an argument versus an explanation, i.e. which provides adequate evidence to believe the claim (assuming the evidence is true) versus an explanation for why the claim *might possibly* be true:

1. *Christianity is a violent religion* because:
 - a) *it groups humanity into two mutually-exclusive categories of saved & unsaved.*
 - b) *Christians commit violence in the name of God.*
2. *I should get an A in this course* because:
 - a) *I did better than Steve and he got an A.*
 - b) *I have high self-esteem.*
3. *Europeans are more interested in global issues* because:
 - a) *Europeans have a long history of global colonization.*
 - b) *European media pay more attention to global issues.*
4. *More people are interested in American Idol than presidential politics* because:
 - a) *more people voted in American Idol than in the presidential election.*
 - b) *people find talent shows more interesting than politics.*
5. *Argument mapping improves critical thinking* because:
 - a) *it takes advantage of our inherent spatial abilities.*
 - b) *standardized critical thinking tests indicate that students who use argument mapping improve their CT scores far more than students who use other methods to learn critical thinking.*
6. *God must exist* because:
 - a) *we can’t explain Nature without Him.*
 - b) *almost everyone agrees that He exists.*
 - c) *many famous scientists said He existed.*
 - d) *there can be no morality without God.*
 - e) *the Bible says He exists.*
 - f) *life has no meaning without a supernatural being.*
 - g) *the universe had to be created by someone.*

The preceding examples show how the word ‘because’ can indicate both reasons and explanations.

Remember once more that an argument’s claim is not automatically true, even if it gives reasons to believe it is true. The definition of an argument is only that it is a claim (a full sentence that is either true or false) supported by one or more reasons to believe that claim. Whether any given claim is actually true or not depends on two things: 1) the validity of its logical structure and 2) the soundness (i.e. truth) of its reasons. We’ll explore this as we go along.

Key Points

- Claims and reasons are single-sentence statements that are either true or false.
- Assertibility Question (AQ) – *How do we know that this claim is true?* The answer will be a reason (e.g. empirical evidence) to believe the claim.

- Explanations are not reasons for how we know something is true or false. Empirical evidence, statistical evidence and definitions are valid reasons to believe an argument; possible or plausible explanations are not acceptable reasons because they *assume* the truthfulness of whatever phenomena they are explaining.