# Recognizing Arguments

In this lesson, you’ll learn to:

1. Explain why arguments are characterized by the presence of a claimed **inferential link.**
2. Give examples of common types of non-arguments.
3. Distinguish between **illustrations** and an **arguments from example.**
4. Compare and contrast **explanations** and **arguments.**
5. Define **sufficient condition** and **necessary condition** and apply these definitions to analyze conditional statements.

## A Brief Review of How we Got Here, and where we are going

Earlier, we said that **logic** is defined as the study of **arguments.** Arguments, in turn, are defined as a collection of **statements** (sentences that are either true or false), one or more of which are claimed to provide reasons to believe one of the others. The statements that are meant to provide the reasons/evidence are called the **premises,** while the statement they support is called the conclusion. Finally, we talked about how to put arguments into **standard form** to help clarify the relationship between premises and conclusions (a necessary first step in figuring out how the argument works, and whether it is a good or bad one). In doing this, the **principle of charity** (basically, when paraphrasing the arguments of other people, your goal should be to make them sound as smart and well-informed as possible, *especially* if you disagree with them).

One main theme of this lesson is that not everything we hear, read, or think is an argument. Instead, arguments need to involve *premises offered in support of a conclusion* (these premises might provide good reason to believe the conclusion or they might not, but that’s for a future lesson). As we mentioned previously, it’s important to remember that “arguments” here DO NOT need to be confrontations between different people/groups. Instead, arguments can (and often do) happen within each of us as we try to figure out what to do or believe. In this context, it’s highly important to be able to recognize when we are engaged in this sort of argumentation (and, by contrast, when we *don’t* have arguments for our beliefs, even though we maybe should have them.)

## Is it an Argument? Three Tests

In every argument, there must be BOTH a “factual claim” that some statement(s) or other is true, AND a **claimed inferential link** that this justifies believing in the conclusion. That is, the person making the argument must claim (either explicitly or implicitly) that the premises provide reasons to believe the conclusion. Here are three “rules of thumb” for determining whether or not a given passage is an argument.

1. If there is actually IS an inferential link between the statements, one can safely assume that the passage counts as an argument.
   1. Ex: “Trees undergo photosynthesis. After all, all trees are plants and all plants undergo photosynthesis.” The first statement *really does follow* from the next two statements. So, it’s safe to assume that this is an argument (i.e. that the person was trying to convince you that the first statement was true.)
2. Conclusion and premise indicators (*so, therefore, for, because*) often indicate the presence of an argument. This is not a foolproof test, however, since (a) these indicator words can also indicate causal connections and (b) not every argument will have premise or conclusion indicators.
   1. Ex: “It’s safe to say that Harry won’t be coming to the party, because Tom Riddle is here, and Harry dislikes Tom.” In this case, the word *because* functions as a premise indicator, and the passage is an argument (with a conclusion of “Harry won’t be coming to the party.”)
   2. Ex: “The water started boiling because it was heated” is NOT an argument, even though it has the word “because” (which is often a premise indicator). In this case, “because” denotes a causal connection, and not an inferential one.
3. If a passage is recognizable as a common type of non-argument, then it is not an argument. Common types of non-arguments are discussed in the next section.

**Factual and Inferential Claims.** It can sometimes be helpful to think of an argument as consisting of two distinct parts. First, the premises of the argument must make some sort of **factual claim** about the way the world is. Second, the premises must make an **inferential claim** that, if this factual claim is true, then the conclusion is ALSO true. So, for example:

Premise: It is Tuesday (factual claim)

Premise: If it is Tuesday, I eat tacos (inferential claim)

Conclusion: So, I eat tacos today.

In more complex argument, the distinction between the factual/inferential claims may always not be this clear-cut (and, of course, in bad arguments, it is always possible to make *false* factual or inferential claims). Non-arguments, by contrast lack this distinctive combination of factual and inferential claim. So, for example, the claim “It is Tuesday” is not an argument by itself, and neither is the claim “If it is Tuesday, then I eat Tacos.” It is only when these claims are *combined* that we are able to advance a conclusion (and remember, all arguments need conclusions!).

## What are some Common Types of Nonarguments?

Arguments requirethat there be a claimed inferential link between premises and conclusion. Because of this, not every group of statements that someone writes or says counts as an argument. Here are common examples of things that are NOT arguments:

**Warnings** and **pieces of advice** are not arguments, though these same sorts of statements can serve as premises or conclusions to arguments (for example, if you gave some *reasons* to try and convince someone to follow them).

* Ex: You should not smoke (warning). I recommend Camel cigarettes (advice).

A simple **statement of belief** isn’t an argument, either, since there is no claimed inferential link with anything else. This doesn’t change if the statement of belief is controversial or false. It only changes once you start trying to provide reasons.

* Ex: Smith believes that women should not be allowed to vote. He also believes that alcohol should be outlawed.

**Reports** provide information about an event, and often appear in newspapers. They might relate a long series of connected events, or interview various people to uncover their beliefs. In some cases, they might even have a report *about* an argument. **Expository passages** (of the type commonly found in many textbooks) elaborate upon a topic sentence, but don’t provide evidence for it.

* Ex: A newspaper article about the outcome of a recent football game is not an argument. By contrast, an “opinion piece” arguing that the coach of the football team should be fired IS an argument.
* Ex: A passage from a textbook giving details about the lives of early settlers of Minnesota is not argumentative.

In other cases, it is more difficult to distinguish arguments from non-arguments:

An **illustration** uses examples to clarify what is meant by another more, general statement. They sometimes will have indicator words like *thus, so,* or *hence.* Illustrations are NOT arguments, however.

* Ex: Irish-style stouts are dark, somewhat bitter beers. Thus, Guinness is a stout; so are beers like Murphy’s and Beamish.

An **argument from example** uses examples as premises to supporta general conclusion. These ARE arguments.

* Ex: The best beer comes from Ireland. For example, Guinness and Smithwicks are both Irish beers, and both are clearly better than anything brewed in the U.S.

Do you see the difference between the two passages? In the second, but not the first, there is an implicit claim that the specific example provides *a reason to believe* the more general point. There is the claim of an *inferential link.*

## What is the Difference Between an Argument and an Explanation?

An **explanation** is a group of statements, one of more of which (the **explanans**) are claimed to provide the reason or cause of the other’s being true (the **explanandum**). Since the explanans does not provide *reasons to believe* the explanandum, explanations are NOT arguments. However, they do share certain structural similarities to arguments (and may even use similar indicator words).

* Ex: Chimpanzees do not have fire to scare away predators. Hence, chimpanzees spend much of their time in trees, since this is the only way for them to avoid being eaten.
* Ex: The moon stays in orbit around the earth because of gravitational force.

In an explanation, unlike an argument, it is *assumed* that the explanandum is true. So, if the potential “conclusion” of a passage seems to be so obvious that no one would debate it, consider the possibility that the passage might be an explanation (and not an argument).

## What is a Conditional Statement? Why aren’t they Arguments?

A **conditional statement** is a statement of the form *if antecedent A, then consequent C* or an equivalent form (such as *C if A* or *A only if C*).

* Ex: If *x* > 1 then *x* > 0.
* Ex: The soup will boil if it is left on the stove too long. (If S then B)
* Ex: Mary will bring an umbrella only if it is raining. (If U then R)
* Ex: If Napoleon was short, then he was a famous general.
* Ex: If Abe Lincoln was tall, then he was the King of France.

The antecedent A is a **sufficient condition** for the consequent C. Conversely, the C is a **necessary condition** for A. Conditional statements are NOT arguments. However, they often serve as premises or conclusions. Moreover, whenever an argument of the form *P therefore Q* is deductively valid, the conditional *if P then Q* will be true.

## Solved Problems

Identify the following as arguments or non-arguments, and explain your answer.

|  |  |
| --- | --- |
| **Passage** | **Is it an argument?** |
| Have you ever read Plato? | No! This isn’t even a statement. |
| I’d recommend reading Plato’s *Apology.* You should stay away from the *Laws,* though. | No. The first statement appears to be a piece of advice, while the second looks like a warning. The person still hasn’t tried to give you any reasons, though. |
| If Socrates taught Plato, then Plato was influenced by Socrates. | No. This is a conditional statement (and it’s almost certainly a true one, but I haven’t actually given you any reasons to think this). The claim is that Socrates teaching Plato was **sufficient** for being an influencing him. Another way of saying the same thing: Socrates’ influencing Plato was a **necessary** consequence of his teaching him. |
| Plato is one of the most important philosophers of all time. After all, his work inspired everyone from Christian and Islamic theologians to the founders of democracy to the early scientist. | Yes. This is an argument—it’s actually trying to provide you *reasons* for believing a certain conclusion. |
| I believe that Aristotle is actually a more rigorous thinker than Plato. However, I think Zeno is smarter than either of them. | Again, we’re back to non-arguments here (this looks like a simple statement of belief, not backed up by any premises/evidence). |
| The unexamined life is not worth living. So, many people seemingly successful people are currently leading lives that are not worth living. | Yes, this is an argument (based on famous claim by Socrates, and one which may have led to him being executed). |
| Plato wrote the *Apology* partiallybecause he wanted to record Socrates’ speech, but also because he wanted to advance his own philosophical views. | While this contains the word “because,” it is NOT an argument. Instead, it looks like a causal explanation (“this happened because that happened.”). It might be true, and it might be false, but we don’t have any evidence either way right now. |
| In most areas of life outside of politics, we trust knowledgeable experts more than ignorant laypeople. For example, when I’m sick, I go to the doctor. When I need my car fixed, I go to the mechanic. By analogy, we can conclude that the government should be run by experts, and not ignorant lay people (as happens in a democracy). | Yes, this is a (somewhat complex) argument. The examples are used to clarify a premise (about the way we trust usually trust experts more than laypeople). This premise is then used to argue for a (pretty controversial) conclusion: that democracy is a bad form of government. |
| Plato believed that every idea and object we had corresponded to something called a Form that existed outside the physical world. For example, he thought there was a Form of “Bed”, a Form of “Cat”, a Form of “Three” and a Form of “Good.” | No, this isn’t an argument. Instead, it simply illustrates what Plato means by “Form.” We might extend this into an expository passage saying more about Plato’s ideas. |
| Plato thought that people in power shouldn’t have their own money, their own spouses, or even their own children. He thought this because he saw how these things could lead people to become corrupt, and behave immorally. | No. This is a report about an argument Plato made, but is not itself an argument, because no effort is made to convince you that Plato is right/wrong. |
| Plato’s arguments against democracy inspired many dictators over the past 2,500 years. Because of this, his books should be banned. | Yes, this is an argument. If you wanted to critique this argument, though, you’d probably want to spell it out at greater length. So, for example, what implicit premises might you want to include if you expressed it in standard form? |

Identify the sufficient and necessary conditions in the following conditional statements:

|  |  |  |
| --- | --- | --- |
| **Conditional Statement** | **Sufficient** | **Necessary** |
| If Hopper is a frog, then Hopper is a reptile | Hopper is a frog | Hopper is a reptile |
| Jane goes to the party only if Jim goes too. | Jane goes to the party | Jim goes to the party |
| You will get an A if you study hard. | You study hard | You get an A |

## Review Questions

1. Determine whether the following are arguments. If they are, state the conclusion. If they are not, say what sort of non-argument they are.
   1. Most chemotherapy drugs work by targeting cells that are in the process of reproducing via mitosis. Thus, cisplatin (a common chemotherapy drug) causes cancer cells to swell up and explode before they can divide.
   2. The whole problem with the world is that fools and fanatics are always so certain of themselves, and wiser people so full of doubts. (Bertrand Russell)
   3. My friend George got his little finger bitten off by a snapping turtle. This example shows that these animals don’t make good pets for small children.
   4. Given that chimpanzees and many other animals are sentient and sapient, we should treat them with respect. (Jane Goodall)
   5. If defeating Nazi Germany required that the Allied army intentionally kill some innocent German civilians, then intentionally killing civilians is sometimes morally acceptable.
   6. According to Social Darwinists, the current social structure is morally perfect. They think this because it is the production of evolution, and evolution always leads to the best possible outcomes.
   7. If you think of feelings you have when you are awed by something - for example, knowing that elements in your body trace to exploded stars - I call that a spiritual reaction, speaking of awe and majesty, where words fail you. (Neil deGrasse Tyson)
   8. Since Lyra is exceptionally skilled at lying, and has rarely been caught, we can conclude it is likely she will be able to trick the police detective who is interviewing her.
2. Choose a conclusion that you are tempted to DISAGREE with from the list below, and then write an argument in FAVOR of it. (The idea here is to practice charitable interpretation of the arguments of others). Please use at least THREE premises, and put your argument in STANDARD FORM. You should make your argument as strong as possible.
   1. Abortion is/is not morally permissible.
   2. Euthanasia should/should not be allowed.
   3. The death penalty should/should not be legal.
   4. The private right to gun ownership should/should not be restricted.
   5. It is/is not immoral to eat non-human animals.
   6. Immigration should/should not be restricted.
   7. Children should/should not be required to attend school until age 18.