

Syllogism



DEFINITION

What is a syllogism? Here's a quick and simple definition:

A syllogism is a three-part logical argument, based on deductive reasoning, in which two premises are combined to arrive at a conclusion. So long as the premises of the syllogism are true and the syllogism is correctly structured, the conclusion will be true. An example of a syllogism is "All mammals are animals. All elephants are mammals. Therefore, all elephants are animals." In a syllogism, the more general premise is called the **major premise** ("All mammals are animals"). The more specific premise is called the **minor premise** ("All elephants are mammals"). The conclusion joins the logic of the two premises ("Therefore, all elephants are animals").

Some additional key details about syllogisms:

- First described by Aristotle in *Prior Analytics*, syllogisms have been studied throughout history and have become one of the most basic tools of logical reasoning and argumentation.
- Sometimes the word syllogism is used to refer generally to *any* argument that uses deductive reasoning.
- Although syllogisms *can* have more than three parts (and use more than two premises), it's much more common for them to have three parts (two premises and a conclusion). This entry only focuses on syllogisms with three parts.

Syllogism Pronunciation

Here's how to pronounce syllogism: **sil-uh-jiz-um**

Structure of Syllogisms

Syllogisms can be represented using the following three-line structure, in which A, B, and C stand for the different terms:

1. All A are B.
2. All C are A.
3. Therefore, all C are B.

Another way of saying the same thing is as follows:

1. If A = B
2. and C = A
3. then C = B

Notice how the "A" functions as a kind of "middle" for the other terms. You could, for instance, write the syllogism as: C = A = B, therefore C = B.

Types of Syllogism

Over the years, more than two dozen different variations of syllogisms have been identified. Most of them are pretty technical and obscure. But it's worth being familiar with the most common types of syllogisms.

Universal Syllogisms

Universal syllogisms are called "universal" because they use words that apply completely and totally, such as "no" and "none" or "all" and "only." The two most common forms of universal syllogisms are:

- **"All A are B, and all C are A, so all C are B."** (This is the most common type of syllogism.)
 1. All mammals are animals.
 2. All elephants are mammals.
 3. Therefore, all elephants are animals.
- **"No A are B, and all C are A, so no C are B."**
 1. No mammals are frogs.
 2. All elephants are mammals.
 3. Therefore, no elephants are frogs.

Particular Syllogisms

Particular syllogisms use words like "some" or "most" instead of "all" or "none." Within this category, there are two main types:

- **"All A are B, and some C are A, therefore some C are B."**
 1. All elephants have big ears.
 2. Some animals are elephants.
 3. Therefore, some animals have big ears.
- **"No A are B, and some C are A, therefore some C are not B."**
 1. No doctors are children.
 2. Some immature people are doctors.
 3. Therefore, some immature people are not children.

Enthymemes

Enthymemes are logical arguments in which one or more of the premises is not explicitly stated, but is instead implied. Put another way: an enthymeme is a kind of abbreviated syllogism in which the writer presumes that the audience will accept the implied and

unstated premise. For instance, the following statement is an enthymeme:

- "Socrates is mortal because he's human."

This enthymeme is an abbreviation of a famous syllogism:

1. All humans are mortal.
2. Socrates is human.
3. Therefore Socrates is mortal.

The enthymeme leaves out the major premise. It instead assumes that all readers will understand and agree that "Socrates is mortal because he's human" without needing the explicit statement that "all humans are mortal."

Syllogistic Fallacies

A "fallacy" is the name for a mistake in logic. Syllogisms often seem like very simple statements, but you may be surprised how often people make logical mistakes when trying to put together simple syllogisms. For example, it may seem logical to make a statement like "Some A are B, and some C are A, therefore some C are B," such as:

1. Some nice people are teachers.
2. Some people with red hair are nice.
3. Therefore, some teachers have red hair.

Each of these categorical propositions is, after all, true—but in fact the final proposition, while true in itself, is *not* the logical conclusion of the two preceding premises. In other words, the first two propositions, when combined, don't actually *prove* that the conclusion is true. So even though each statement is *independently* true, the "syllogism" above is actually a logical fallacy. Here's an example of a false syllogism whose logical fallacy is a bit easier to see.

1. Some trees are tall things.
2. Some tall things are buildings.
3. Therefore, some trees are buildings.

The error in both of the above examples is called the "fallacy of the undistributed middle," since in each example the A is not "distributed" across the B and C in such a way that the B and C terms actually overlap. Other types of syllogistic fallacies exist, but this is by far the most common logical error people make with syllogisms.



EXAMPLES

Syllogisms appear more often in rhetoric and logical argumentation than they do in literature, but the following are a few of the more memorable examples of the use of syllogism in literature.

Syllogism in *Timon of Athens* by Shakespeare

In this passage from a lesser-known work of Shakespeare, titled *Timon of Athens*, the character Flavius asks Timon whether he has forgotten him. Timon responds with a syllogism.

Flavius: Have you forgot me, sir?

Timon: Why dost ask that? I have forgot all men; Then, if thou grant'st thou'rt a man, I have forgot thee.

So the structure of Timon's syllogism is as follows:

1. All men are men that Timon has forgotten.
2. Flavius is a man.
3. Therefore, Flavius is a man that Timon has forgotten.

Syllogistic Fallacy in *The Merchant of Venice* by Shakespeare

In [The Merchant of Venice](#), a beautiful, young woman named Portia is arranged to marry whomever can correctly guess which of three caskets contains her portrait: the gold, the silver, or the lead casket. A prince comes to solve the riddle, and thinks he has worked out the answer when he reads the following inscription on the gold casket:

"Who chooseth me shall gain what many men desire."

Upon reading this inscription, the suitor immediately exclaims:

Why, that's the lady. All the world desires her.

But he's mistaken; the gold casket does *not* contain the portrait of Portia. The suitor clearly thinks he has made a logical deduction using the structure of a syllogism:

1. All men desire Portia;
2. Many men desire what is in this chest;
3. Therefore what is in the chest is (the portrait of) Portia.

But this "syllogism" is actually an example of the "fallacy of the undistributed middle," as we described above. In other words, it's the equivalent of saying "some trees are tall, and some buildings are tall, so therefore some buildings are trees."

Syllogism in "Elegy II" by John Donne

The following poem by John Donne contains a syllogism, though Donne takes some liberties with language in putting his syllogism together:

All love is wonder; if we justly do
Account her wonderful, why not lovely too?

These lines could be translated into the structure of a syllogism like so:

1. All love is wonder.
2. She inspires wonder (or she is "wonderful").
3. Therefore, she inspires love (or she is "lovely").

Syllogism in "To His Coy Mistress" by Andrew Marvell

If you look closely, you can see that this poem by Andre Marvell contains a subtle syllogism, scattered throughout the poem. Embedded in the beginning, middle, and end of the poem are the **major premise**, the **minor premise**, and **the conclusion**.

Had we but world enough and time,
 This coyness, lady, were no crime.
 We would sit down, and think which way
 To walk, and pass our long love's day.
 Thou by the Indian Ganges' side
 Shouldst rubies find; I by the tide
 Of Humber would complain. I would
 Love you ten years before the flood,
 And you should, if you please, refuse
 Till the conversion of the Jews.
 My vegetable love should grow
 Vaster than empires and more slow;
 An hundred years should go to praise
 Thine eyes, and on thy forehead gaze;
 Two hundred to adore each breast,
 But thirty thousand to the rest;
 An age at least to every part,
 And the last age should show your heart.
 For, lady, you deserve this state,
 Nor would I love at lower rate.
 But at my back I always hear
 Time's wingèd chariot hurrying near;
 And yonder all before us lie
 Deserts of vast eternity.
 Thy beauty shall no more be found;
 Nor, in thy marble vault, shall sound
 My echoing song; then worms shall try
 That long-preserved virginity,
 And your quaint honour turn to dust,
 And into ashes all my lust;
 The grave's a fine and private place,
 But none, I think, do there embrace.
 Now therefore, while the youthful hue
 Sits on thy skin like morning dew,
 And while thy willing soul transpires
 At every pore with instant fires,
 Now let us sport us while we may,
 And now, like amorous birds of prey,
 Rather at once our time devour
 Than languish in his slow-chapped power.

You might translate the above as follows:

1. **Being coy is fine so long as there's lots of time.**
2. **There isn't any time.** (I can hear "time's winged chariot" right behind me!)
3. **Therefore, don't be coy.** (We should be amorous "while we may.")



WHY WRITERS USE IT

Writers use syllogisms because they're a useful tool for making an argument more convincing in persuasive writing and rhetoric. More specifically, writers might choose to use syllogism because:

- Using a syllogism can help make a logical argument sound indisputable, whether it's being used to illustrate a simple point or a complex one.
- Although syllogisms may seem somewhat tedious—since often they are just spelling out things that most people already know—it is helpful to clarify the terms and basic assumptions of an argument before proceeding with your main points.
- As shown in the [Merchant of Venice](#) example from above, even a false or poorly constructed syllogism can help make an ill-conceived argument sound airtight, since using the language and structure of logical argumentation can be very convincing even if the logic itself isn't sound.



OTHER RESOURCES

- [The Wikipedia Page on Syllogism](#): A helpful, though technical resource if you want to learn more about the history of syllogisms, the many different types, and how the different ways they can be described using symbols.
- [The Dictionary Definition of Syllogism](#): A basic definition, including a bit on the etymology: the root of the word is the Greek verb "to infer."
- [To-the-point syllogism](#): An extremely to the point page on basic syllogisms and enthymeme.

HOW TO CITE

MLA

Bergman, Bennet. "Syllogism." LitCharts. LitCharts LLC, 5 May 2017. Web. 31 Aug 2017.

Chicago Manual

Bergman, Bennet. "Syllogism." LitCharts LLC, May 5, 2017. Retrieved August 31, 2017. <http://www.litcharts.com/literary-devices-and-terms/syllogism>.