

## What is a logical fallacy?

A "fallacy" is a mistake, and a "logical" fallacy is a mistake in reasoning. There are, of course, other types of mistake than mistakes in reasoning. For instance, factual mistakes are sometimes referred to as "fallacies". However, the Fallacy Files is specifically concerned, not with factual errors, but with logical ones.

However, not just any type of mistake in reasoning counts as a logical fallacy. To be a fallacy, a type of reasoning must be potentially deceptive, it must be likely to fool at least *some* of the people *some* of the time. Moreover, in order for a fallacy to be worth identifying and naming, it must be a *common* type of logical error.

### History

Aristotle was both the first formal logician—codifying the rules of correct reasoning—and the first *informal* logician—cataloging types of incorrect reasoning, namely, fallacies. He was both the first to name types of logical error, and the first to group them into categories. The result is his book *On Sophistical Refutations*.

However, Aristotle's teacher, Plato, deserves credit for being the first philosopher to collect examples of bad reasoning, which is an important preliminary piece of field work before naming and cataloging. Plato's "Euthydemus" preserves a collection of fallacious arguments in dialogue form, putting the perhaps exaggerated examples into the mouths of two sophists. For this reason, fallacious arguments are sometimes called "sophisms" and bad reasoning "sophistry". Aristotle refers to a few of these examples as instances of his named fallacies.

In the centuries since Plato and Aristotle, many great philosophers and logicians have contributed to fallacy studies, among them John Locke, John Stuart Mill, Jeremy Bentham, and Arthur Schopenhauer.

### Why study fallacies?

Why study how to reason *incorrectly*; why not just study how to reason *correctly*? There are two reasons:

1. Even if *you* could count on reasoning correctly 100% of the time, you cannot count on others doing so. In logical self-defense, you need to be able to spot poor reasoning, and—more importantly—to understand it. To be able to correct others' mistakes, or to refute them convincingly, you need to understand *why* they are wrong.
2. Studying formal logic and the rules of *correct* reasoning is like having a road map that shows how to get from point A to point B. However, even the best navigators sometimes get lost, and it helps if the roads that go nowhere are clearly labeled "DEAD END", "WRONG WAY", or "DO NOT ENTER".

That is what fallacy studies is all about: marking the wrong turns that reasoners are likely to take. Thus, studying fallacies is no substitute for studying the positive principles of good reasoning—learning to navigate through logical space, so to speak.

## Definitions

*Argument*--A unit of reasoning composed of propositions

*Proposition*--A sentence which can be either true or false; a statement with a "truth-value."

*Premiss*--In an argument, a proposition presented as evidence for the conclusion.

"Premiss" is a technical term in logic, which is frequently spelled "premise". Both are correct spellings.

### *Premiss Indicator*

A type of argument indicator that indicates the proposition in which it occurs is a premiss.

Examples:

since (nontemporal meaning)	may be inferred from
as indicated by	given that
because	seeing that
for	for the reason that
in that	inasmuch as
as (noncomparison meaning)	owing to

### *Conclusion*

In an argument, the proposition for which evidence is provided.

### *Conclusion Indicator*

A type of argument indicator that indicates the proposition in which it occurs is a conclusion.

Examples:

therefore	we may infer
wherefore	it must be that
accordingly	whence
we may conclude	so
entails that	it follows that
hence	implies that
thus	as a result
consequently	

*Sophist*--An itinerant teacher of Ancient Greece, whose subjects usually included rhetoric.

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