

Fallacious Reasoning (Emphasizes the flawed or misleading nature of the reasoning)

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Abstract - It is essential to recognize that "faulty reasoning" and "faulty logic" denote the same principle, both indicating a deficiency in reasoning. The term "faulty" denotes the presence of errors or imperfections, while "logic" pertains to sound reasoning or judgment. Faulty logic can also be seen as a rhetorical technique. This paper demonstrates how incorrect or misleading answers can ultimately guide us toward accurate conclusions. By honing the ability to identify faulty logic, individuals can become more discerning consumers of both enlightenment and outcome. When an argument or reasoning is described as faulty, it suggests that the argument is flawed or incorrect, often due to a failure in logical reasoning.

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I. INTRODUCTION

We frequently encounter circumstances in our daily lives where we must make decisions even though we are aware of the outcome and whether they are right or bad. We can greatly benefit from "The Faulty/False logic" in these circumstances.

So, what is faulty logic? Let's break it down.

- Faulty = having faults or imperfect
- Logic = reason or sound judgment

Therefore, flawed logic is flawed reasoning. Another kind of persuasive strategy is flawed reasoning.

II. WHERE DO WE SEE FAULTY LOGIC USED?

- In newspaper editorials
- In commercials
- In print ads
- In conversations
- In books
- In magazines
- In T.V. shows

We see faulty logic Everywhere!

Types of Faulty Logics

Recursive Reasoning:

Definition: The author, speaker, or advertisement backs up a claim with further statements. The argument's justification repeatedly makes the same assertion as the original argument.

Example: This experiment confirms our hypothesis because it was designed to test the hypothesis, and we know the experiment is valid because it confirms our hypothesis.

Explanation: The second half of the statement says basically the same thing as the first half.

Since the conclusion must be true if the premises are true, the elements of a circular argument are frequently logically sound. Circular reasoning is a pragmatic flaw in an argument when the premises require just as much proof or evidence as the conclusion, and as a result, the argument is unable to persuade. It is not a formal logical mistake. This can also be stated as follows: the premises offer no independent basis or proof for the conclusion, and

there is no reason to accept them unless one already believes the conclusion.

Global Generalization

Definition: The author uses a small amount of facts to draw conclusions. (Search for terms like "all", "every" and "always")

Example: I loved that cricket match we saw yesterday while playing Virat Kohli. I am going to watch all cricket matches of team India and I am sure that I'll like all of them.

Explanation: It is an imperfect judgment (or faulty logic!) to assume that you will love all Virat Kohli cricket matches just because you loved one.

Drawing conclusions that are excessively general because they go beyond what is reasonable given the information at hand is known as global generalization. The term can also be used to describe a situation in which an excessively generalization has been drawn.

Although global generalization is commonly employed in ordinary speech, it can also be used to indicate something slightly more specialized related to the area in question in logic, linguistics, psychology, and other academic disciplines. Similar in nature, generalization is usually employed when reaching such a conclusion is deemed suitably pragmatic and not unduly broad.

Contradiction:

Definition: A situation where two or more statements, principles, or values are in conflict, making it impossible to reconcile or satisfy both simultaneously.

Example: As a project manager my top priority will improving and productivity of company. So my first act will reduce man power of my company.

Explanation: Reducing the man power contradicts the manager's first statement of improving and productivity of company.

According to conventional logic, a contradiction arises when a statement contradicts an established fact or itself. It is frequently employed as a method to identify prejudice and false beliefs. According to Aristotle's law of non-contradiction, "It is impossible that the same thing can at the same time both belong and not belong to the same object and in the same respect." This statement exemplifies a typical trend in applied logic.

False Causality

Definition: When two things happen simultaneously and it is assumed that one caused the other, this happens.

Example: I took vitamin C, and my cold went away. Therefore, vitamin C cured my cold.

Explanation: This statement attributes a false cause (my cold is cured) to the effect (when I take vitamin C).

The Latin phrase "post hoc, ergo propter hoc," which translates to "after this, therefore because of this," is another name for the error of false causality. It is also known as "false cause." The idea that one event must have caused another because it happened after it in time is known as the fallacy of false cause.

Over-Simplification

Definition: The process of reducing complex issues, ideas, or phenomena to overly simple or simplistic explanations, ignoring or neglecting important details, nuances, and complexities.

Example: The solution to climate change is just to use renewable energy.

Explanation: The above statement is too simplified. The use renewable energy is not only the solution of climate change.

A particular type of false dilemma in which conjoint possibilities are disregarded is called causal oversimplification. To put it another way, when "A and B and C" or "A and B and not C" (etc.) are not taken into account, the potential causes are

presumed to be "A or B or C"; in other words, the "or" is not exclusive.

Supposition

Definition: A statement, idea, or assumption that is accepted or proposed as true, without conclusive evidence or proof, often as a basis for reasoning, discussion, or investigation.

Example: I suppose that the weather will be good tomorrow.

Explanation: It's only one man's opinion that weather will be good tomorrow, other may differ to this opinion.

An informal fallacy known as the fallacy of composition occurs when someone assumes that something is true of the whole just because it is true of a portion of it.

Usefulness of Faulty Logic

We frequently encounter circumstances in our daily lives where we are unable to decide between the limited number of answers provided (particularly in mathematics multiple-choice questions). For this, pick the most likely solution, consider it the solution, and go over the issue again. There will eventually be a contradiction if the decision is incorrect. The next choice will then be tested right away. The same action is done repeatedly in this manner until there are no more contradictions. One can quickly arrive at the right response in this manner.

When choosing the best approach to solve an integral or derivative problem, the flawed logic is also rather helpful.

As you can see, fallacies come in a wide variety. Because they are composed of layers of subcategories, informal fallacies are especially complicated. You'll be able to spot these logical errors immediately now that you know what some of the most common fallacies look like! Try to maintain your thinking as rational as possible by looking at these instances of logic.

Logical Fallacies

A statement that appears to be true until the laws of logic are applied is called a logical fallacy. Then you understand it's not. People can frequently be misled by using logical fallacies to persuade them to believe something they otherwise wouldn't.

It's crucial to be able to distinguish between arguments that are true and those that are not. It can assist you in avoiding being a victim of false information and is an essential component of critical thinking.

False conclusions drawn from logical fallacies may lead you to make judgments you later come to regret. Additionally, employing a logical fallacy in your own arguments can give the impression that you lack knowledge or are naive. Even worse, it can give the impression that you are dishonest.

Let's look at the most prevalent logical fallacies so you can identify them and know how to steer clear of them if you encounter them at work.

Key Points

Arguments that may seem convincing but are flawed in their reasoning are known as logical fallacies. They could be the consequence of careless logical mistakes or intentional deception of others. You risk making bad decisions based on weak arguments if you take logical fallacies at face value. Additionally, employing them yourself—even unintentionally—can harm your reputation.

Being able to recognize them is a useful ability. Learning the structure of a logical argument and critically analyzing the arguments you read and hear will help you do this.

III. CONCLUSION

This flawed reasoning approach may appear tedious and time-consuming, but as long as it provides us with accurate answers, it is worthwhile to try. Many situations in daily life can be attributed to the incorrect logic types outlined above. The most crucial thing to keep in mind is that "Imperfect reasoning is flawed logic."

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