

Reasoning using False Reasons

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Abstract

First of all, faulty reasoning and faulty logic are two different ways to say the same thing. Faulty logic/reasoning is an imperfect reasoning. Let's break it down. Faulty = having faults or imperfect and Logic = reason or sound judgment.

Faulty logic is another kind of persuasive technique. Here in this paper it is presented how with the help of wrong/false answers we can approach the right/correct answers. If you learn to recognize faulty logic, you will become a more astute consumer of products and information. If you describe someone's argument or reasoning as faulty, you presume that it is wrong or contains mistakes, usually because they have not been thinking in a logical way.

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I. INTRODUCTION

In our daily life many a times we come across situations where we have to take decisions despite knowing the end result whether we are correct or wrong. In such situations 'The Faulty/False logic' can help us tremendously.

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

i)Faulty = having faults or imperfect

ii)Logic = reason or sound judgment

Thus faulty logic is an imperfect reasoning. Faulty logic is another type of persuasive technique.

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!

III. TYPES OF FAULTY LOGICS

A.Circular Reasoning

- 1) Definition: The writer (or speaker or ad) supports a claim with restatements of that same claim. The Argument goes around and around with the reason making the same claim as the original argument.
- 2) Example: Albert is a wonderful writer because he writes so well.
- 3) Explanation: The second half of the statement says basically the same thing as the first half.

The components of a circular argument are often logically valid because if the premises are true, the conclusion must be true. Circular reasoning is not a formal logical fallacy but a pragmatic defect in an argument whereby the premises are just as much in need of proof or evidence as the conclusion, and as a consequence the argument fails to persuade. Other ways to express this are that there is no reason to accept the premises unless one already believes the conclusion, or that the premises provide no independent ground or evidence for the conclusion.

B. Overgeneralization

- 1) Definition: The writer reaches conclusions from a limited number of facts. (Look for words such as all, every, and always.)
- 2) Example: "I loved that movie we saw last night with Brad Pitt. I am going to rent all of his movies, and I am sure I'll like all of them."
- 3) Explanation: It is an imperfect judgment (or faulty logic!) to assume that you will love all Brad Pitt movies just because you loved one.

Overgeneralization is the act of drawing conclusions that are too broad because they exceed what could be logically concluded from the available information. The word can also be used to refer to an instance when such an overly broad conclusion has been made.

Overgeneralization is frequently used in everyday speech, but it can also be used in logic, linguistics, psychology, or other fields of research to mean something a little bit more specific relating to the particular field. Generalization is similar, but it is typically used when drawing such a conclusion is considered appropriately practical and not overly broad.

C. Contradiction

1) Definition: The writer states a position that contradicts an earlier stated premise.

2) Example: "As Principal, my top priority will be improving the results. So my first act of office will be to cut funding for buying new Audio-Visio Aids."

3) Explanation: Not buying the new Audio-Cisio Aids contradicts the Principal's first statement that improving student's results is his first priority.

In traditional logic, a contradiction occurs when a proposition conflicts either with itself or established fact. It is often used as a tool to detect disingenuous beliefs and bias. Illustrating a general tendency in applied logic, Aristotle's law of non-contradiction states that "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."

D.False Causality

1) Definition: This occurs when two events happen at the same time and an assumption is made that one event causes the other.

2) Example: Our house was burglarized, right after that new family moved in.

3) Explanation: This statement attributes a false cause (New family next door) to the effect (The burglary)

The fallacy of false causality is also called "false cause" or called by the Latin term, "post hoc, ergo propter hoc," translated as "after this, therefore because of this." A fallacy

of false cause indicates that since one event followed another in time, the first must have caused the second.

E. Over-Simplification

1) Definition: This occurs when a single cause is assumed to have created a problem or an issue. In reality the problem or

2) Example: The cause of fewer rains this year is global warming.

3) Explanation: The above statement is too simplistic. Global warming is not the only reason of fewer rains.

Causal oversimplification is a specific kind of false dilemma where conjoint possibilities are ignored. In other words, the possible causes are assumed to be "A or B or C" when "A and B and C" or "A and B and not C" (etc.) are not taken into consideration; i.e. the "or" is not exclusive

F. Assumptions

1) Definition: This occurs when the writer may be proven false or may be merely stating an opinion.

2) Example: Nashik is the most beautiful city in India.

3) Explanation: Yes, Nashik are beautiful, but that is only one man's opinion. Others may think any other city is more beautiful. The fallacy of composition is an informal fallacy that arises when one infers that something is true of the whole from the fact that it is true of some part of the whole.

IV. USEFULNESS OF FAULTY LOGIC

In our daily life many a times we come across situations where we're stuck in choosing one from the available few options (Especially mathematical MCQs). For this chose the most likely option and treat it as the answer and review the problem. If the choice is not correct then somewhere at some place a contradiction will arise. Then immediately the next option will be tried. In this way the same thing is repeated till any contradiction does not arise. In this way one can easily approach the correct answer.

The faulty logic is also very useful in deciding the appropriate method for solving an integral or derivative problem.

As you can see, there are many different types of fallacies. Informal fallacies are particularly complex because layers of

subcategories exist within them. Now that you know what some of the most prevalent fallacies look like, you'll be able to identify these lapses in logic right away! Take a look at these examples of logic to keep your reasoning as reasonable as possible.

1) LOGICAL FALLACIES

A logical fallacy is a statement that seems to be true until you apply the rules of logic. Then, you realize that it's not. Logical fallacies can often be used to mislead people – to trick them into believing something they otherwise wouldn't.

The ability to discern a valid argument from a false one is an important skill. It's a key aspect of critical thinking, and it can help you to avoid falling prey to fake news.

If you're taken in by a logical fallacy, false conclusions might cause you to make decisions that you later regret. And using a logical fallacy in your own arguments can make you look gullible or uninformed. Worse still, it can make you seem dishonest.

Let's examine the most common logical fallacies, so that you can recognize them and know how to avoid them if you come across them in your working life.

2) KEY POINTS

Logical fallacies are arguments that may sound convincing, but are based on faulty logic and are therefore invalid. They may result from innocent errors in reasoning, or be used deliberately to mislead others. Taking logical fallacies at face value can lead you to make poor decisions based on unsound arguments. And using them yourself – even by mistake – can damage your reputation.

Knowing how to spot them is a valuable skill. You can do so by learning how a logical argument is constructed, and by thinking critically about the arguments that you hear and read.

V.CONCLUSION

Even though this method of faulty logic seems boring and time consuming but as long as it is giving us correct answers, it is worth trying. The above mentioned types of faulty logic can be applied to many of the daily life situations. The most important thing to remember is 'The Faulty Logic is an Imperfect Reasoning.'

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REFERENCES

- 1) Online survey through Bo Bennett. "[Appeal to Ridicule](http://logicallyfallacious.com)". logicallyfallacious.com
- 2) "[A List Of Fallacious Arguments](#)". Retrieved 6 October 2012
- 3) Challenging False Logic Puzzles Paperback – December 31, 1997 By [Norman D. Willis](#)