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Chapter III
Informal Fallacies

3.1 Fallacies in General

Fallacy: is a **defect** in an argument that consists in something other than merely false premises.

A fallacy is a **bad** argument. Conversely, any bad argument is bad because either it contains a **fallacy** or because it has one or more **false premise** or both.

It usually involves either a **mistake in reasoning** or the **creation of some illusion** that makes a bad argument appear good.

The tricks of **fallacies** fool not only the listener but also the arguer.

Formal Fallacy: is the one that may be identified through mere inspection of the **form** or structure of the argument.
This will be studied in detail on the later chapters.

Example: Fallacy of affirming the consequence

K …D
D____
K

If Mohammed Amin was killed in a plane crash, then Mohammed Amin is dead.
Mohammed Amin is dead.
Therefore, Mohammed Amin was killed in a plane crash.
(It is **fallacious**, because the argument has true premises and a false conclusion.)

Informal Fallacy: is the one that can be detected only through analysis of the **content** of the argument.
Example: Fallacy of Accident
Whoever thrusts a knife in to another person should be arrested. But surgeons precisely this when operating. Therefore surgeons should be arrested. (Hurley 129)

The fallacies in **most**, but **not all deductive** arguments may be identified through mere inspection of the **form**.

Example 1:

All factories are plants.

All plants are things that contain chlorophyll.

Therefore, all factories are things that contain chlorophyll.

(The **fallacious** nature of this argument cannot be identified through the mere inspection of the **form**, but through analysis of the **content**)

Example 2:

All valid deductive arguments with all true premises are **sound**.

All **sounds** can be measured in bel or decibel.

Therefore, all valid arguments can be measured in bel or decibel.

(**Fallacious**, because there is an **illusion** in the meaning of the word **sound**)

3.2 Classification of Informal Fallacies

Aristotle and other logicians classified informal fallacies in to many forms.

The major categories are fallacies of relevance, weak induction, presumption, ambiguity and grammatical analogy.

3.2.1 Fallacies of Relevance

1. Appeal to force (Argumentum ad Baculum)

Is also called (appeal to the stick)

It occurs whenever an arguer uses a **physical** or **psychological** threat (force), which is logically irrelevant to the subject matter of the conclusion, and is simply to convince its opponent.

Example:

A teacher to a student:

“You should attend the lecture regularly. If you miss a single lecture you will be dismissed from the university”

Example:

(Police inspector to suspected criminal)

You have committed the crime; if you do not accept this you will be tortured the whole night.

2. Appeal to Pity (Argumentum ad Misricordiam)

It occurs whenever an arguer attempts to convince the listener or reader by **evoke pity**.

Example:

A tax payer to judge: Your Honor, I admit that I declared thirteen children as dependents on my tax return, even through I have only two, and I realize that this was wrong. But if you find me guilty of tax evasion, my reputation will be ruined. I will probably lose my job, my poor wife will not be able to have the operation that she desperately needs, and my kids will starve. Surely I am not guilty. (Hurley: 118)

3. Appeal to the People
(Argumentum ad Populum)

3.1. Direct Approach:

Occurs when an arguer, addressing a large group of people, **excites the emotions** and enthusiasm of the **crowed** (arouse **mob mentality**) to win acceptance for his conclusion. Mob mentality usually created through mass media.

Example:

Communism is a political system where by men become the master of itself and Mr. Marx is a **fighter of communism**. Therefore, it is logical to accept Marxism.

2. Indirect Approach:

In this case the arguer directs his appeal not to the crowed as a whole but to one or more **individuals separately**, focusing up on some aspect of **relationship** to the **crowed**.

Three forms:

2.1. Bandwagon Argument

The idea is that **you will be left behind** or **left out of the group** if you do not accept it.

Example:

Of course, you have to vote the Social democrats, because majority of the people vote social democrats.

2.2. Appeal to Vanity

It attempts to persuade people by **associating the idea** with a certain celebrity who is **admired** and pursued.

Example:

You should buy Kangaroo foam because it is the mattress that Haile Gebresillsie uses.

2.3. Appeal to snobbery

It attempts to persuade the individual to accept the idea by making **feel** he/she is among the **few best**.

Example:

Hummer automobiles are not for every one but only for the few rich, if you qualify as one of the select few purchase it.

4. Argument against the person (Argumentum ad Hominem)

It involves two arguers and is occurred when one of the arguers attempts to convince the other not by presenting convincing arguments; but through attacking the person by mentioning its weaker sides.

Three forms:

4.1. The **ad hominem abusive**

It occurs when the second person responds the first person's argument by **verbally abusing** the first person.

Example:

Her argument for abortion is useless because she argued that way for she aborted three times.

4.2. The **ad hominem circumstantial**

It occurs when the second person responds the first person's argument by **discrediting** the opponent's argument by alluding (referring indirectly) to certain **circumstances** that affect the opponent.

Example:

The dean's argument for 70-30 policy is useless for he argues in that way simply because he is member of the ruling political party.

4.3. The **tu quoque ("you too")**

It begins when the second arguer attempts to convince by citing features in the life or **behavior** of the first arguer that **conflict** with his/her **conclusion**.

Example:

His son concluded that his father's argument against smoking is useless for his father smokes too.

5. Accident

It is committed when a **general rule** is **misapplied** to a **specific case** which was not intended to cover.

Example:

Property should be returned to its rightful owner. The drunker man who is starting a fight with his opponents at the pool table lent you his pistol, and now he wants it back.

Therefore, you should return it to him now. (Adapted from Hurely: 123)

6. Straw Man

It is committed when an arguer **distorts** an opponent's argument for the purpose of more **easily attacking** it.

Example:

Wr/t Meron's argument for college love affair is useless. Obviously this love affair leads the students to unwanted pregnancy. And unwanted pregnancy will definitely results in college drop out, medical and psychological complications. Therefore, her argument is useless.

7. Missing the Point (Ignoratio Elenchi)

It occurs when the premises of an argument supports one **particular conclusion,** often **vaguely related** to the correct conclusion, is drawn.

Example:

Democracy is a mock in most African countries. The only alternative is therefore, reestablishing the military government.

8. Red Herring

It is committed when the arguer **diverts** the **attention** of the reader or listener by **changing the subject** to some totally different issue.

Example:

Ato Belete is asked to report why he has been late last night. He started to talk about the amazing TV show he watched that night, and smartly managed to change the attention of the requester.

N.B. While both Red herring and Straw man fallacies proceed by generating a new set of premises, but Missing the point draws inappropriate conclusion from the original premise.

3.2.2 Fallacies of Weak Induction

They occur due to the **weak connection** between the premises and the conclusion.

9. Appeal to unqualified Authority (Argumentum

ad verecundiam)

It occurs when the cited authority or witness is not trustworthy.

Example:

Our mathematics professor said that Ethiopia had no written philosophy until C 20th. Therefore, it is true that Zerayacob's C17th philosophy can not be considered as a written Ethiopian Philosophy.

10. Appeal to Ignorance (ad Ignoratiam)

It is occurred when the arguer concludes something to be evident because **noting is known with certainty**, and vice versa.

Example:

Noting is known with certainty about the existence of devil. Therefore, devil does not exist.

11. Hasty Generalization (Converse Accident)

It is committed when a **specific case (sample not representative)** is applied to a **general rule** which was not intended to cover.

Example:

Last year three students of AU were found to be addicted to marijuana. Therefore, majority of the students of AU are addicted to the drug.

12. False cause

It occurs whenever the link between premises and conclusion depends on some **imaginary causal connection** that probably does not exist.

Three types:

12.1. Post hoc ergo prompter hoc

It occurs just because one event precedes another event and the arguer concluded that the preceding cause is the cause for the current effect ="**after this on account of this"**

Example:

During the past two months every Saturday a fox had crossed Ato Adefris on his way for hunting and he was unfortunate. Therefore, to be fortunate in his hunting task in the future Ato adefiris should change his route.

12.2. Non causa pro causa

It occurs when what is taken to be the **cause** of the something **is not really the cause** at all.

Example:

Best medical doctors are those who are paid salaries in excess of 10,000 Eth. Birr. Therefore, the best way to ensure Dr. Dereje will become the best medical doctor is to raise his salary to at least 10,000 Eth. Birr.

12.3. Oversimplified cause

It occurs when a **multitude of cause** is responsible for a certain effect but the arguer selects just **one** of these and represents it as if it is the **sole** (only) cause.

Example:

There are more laws on books today than ever before, and more crimes are being committed than ever before. Therefore, to reduce crime we must eliminate the laws. (Hurley 140)

13. Slippery slope

It is another variety of false cause. It occurs when the conclusion of an argument rests up on an **alleged chain reaction** and there is **no sufficient reason** (not likely to occur) to think that the chain of reaction will actually takes place.

14. Weak Analogy

It affects inductive argument from Analogy. It is committed when the **analogy is not strong** enough to support the conclusion. **Example:**

Object A has a, b, c and z qualities.
Object B has a, b, c, qualities.
Therefore, object b probably has quality z.

3.2.3 Fallacies of Presumption

Arguments containing these fallacies presume (guess) what they purport to prove.

Four kinds:

15. Begging the question (Petitio Principii)

To commit this fallacy some form of **phraseology** be used that tends to conceal the questionably true character of a key premise.

In other words, the arguer creates the **illusion** that premises provide adequate support by:

1. **Leaving out key premise**

(Ignoring the questionably true premise which is needed to make the argument valid.)

Example:

Murder is morally wrong. This being the case, it follows that abortion is morally wrong.

(It ignores the questionably true premise which is

"Abortion is murder")

2. Restating the conclusion as a premise

Example:

Anyone who does not have an innate ability could not be a great football player. Therefore, any football player has an innate ability. (The **questionable** [may be false] premise says the same thing as the conclusion)

3. Reasoning in a circle Example:

Democracy is the best political system. That is why it contains the most profound insights. Thus it influences most countries in the world. Therefore, it is the best political system.

16. Complex Question

This fallacy consists in phrasing **two or more questions** in the form of a **single question** and a **single answer** is applies to both or all questions.

Example:

Have you stopped smoking?

[If the answer is yes, it means the person has been smoking. If no, it means the person at least has been smoking.]

17. False Dichotomy

False bifurcation or Either-or fallacy

The arguer presents **two unlikely options** as if they were the only ones available.

Example:

Either you borrow me the money or you don't deserve to be called my brother.

18. Suppressed Evidence

It is committed when the arguer ignores stronger evidence that supports a different conclusion.

It occurs when an **inductive** argument **ignores** some important piece of evidence that **outweighs** the presented evidence and entails a very **different** conclusion.

Example:

Typewriter repairmen have earned a good living in the past. Therefore, typewriter repairmen will earn a good living in the future.

[It ignores a piece of evidence that computers have almost completely replaced typewriters in recent years.]

3.2.4 Fallacies of Ambiguity

They arise from the use of **ambiguous** language in the premise or conclusion.

19. Equivocation

It occurs when the conclusion of an

argument depends on **a word** or **a phrase** being used in two different senses.

Example:

All valid deductive arguments with all true premises are **sound**.

All **sounds** can be measured in bel or decibel.

Therefore, all valid arguments can be measured in bel or decibel.

(**Fallacious**, because there is an **ambiguity** in the meaning of the *word* **sound** which has two different meanings in different senses)

You can also imagine arguments that contain words like *obtuse, law, right, fan,* etc.

20. Amphiboly

It occurs when an arguer misinterprets an **ambiguous statement** and then draws a conclusion based on the faulty interpretation.

The ambiguous statement is made by **someone other** that the arguer.

The ambiguity arises from, a mistake in **grammar** or **punctuation**.

Example:

Almaz told workinesh that she had made a mistake. It follow that Almaz has at least the courage to admit her own mistake.

Example:

"Kill him not leave him."

Based on this written message from his boss a solider should conclude that he is ordered to kill the man in question.

3.2.5. Fallacies of Grammatical Analogy

They are called grammatical analogy because they occur in arguments that are grammatically similar to other, non fallacious arguments.

21. Composition

It occurs when the arguer **erroneously** (wrongly) transfers an attribute from the **parts** of something onto the **whole**.

Example:

Each atom in this piece of chalk is invisible. Therefore, the chalk is invisible.

[The attribute invisible is wrongly transferred from the parts on to the whole.]

22. Division

It occurs when the arguer **erroneously** (wrongly) transfers an attribute from the **whole** of something onto the **parts**.

Example:

Salt is a nonpoisonous compound.
Therefore, its component elements sodium and chlorine are nonpoisonous.
[The attribute nonpoisonous is wrongly transferred from the **whole** on to the **parts**.