

# *Chapter Three*

## *Informal Fallacies*

### *Introduction*

→A fallacy, in general, can be defined as an error in reasoning.

→Fallacies could be committed unintentionally or intentionally so as to manipulate the weakness of audiences in fulfilling their motives by diverting or modifying the audiences' attention or position without

# cont...

- Both deductive and inductive arguments may contain fallacies.
- If fallacy is committed in a certian argument , if it is deductive it is **unsound**, if it is inductive it is **uncogent**.
- Formal fallacies are found only in deductive arguments.
- But informal fallacies might be committed either from deductive /inductive argument.

# Type of fallacies

- fallacies can broadly be divided into two types: **formal** and **informal**.
- **formal fallacies** are committed when the **form** or **logical structure** of arguments are violated

Example; All tigers are animals.

All mammals are animals.

Thus, all tigers are mammals.

All A are B

All C are B

Thus, all A are C

**Informal fallacies** are committed when the ***content of an argument*** is problematic.

Example; All factories are plants.

All plants are things that  
contains chlorophyll.

Thus, all factories are things that  
contains chlorophyll.

# Categories of informal fallacies

- Informal fallacies can be divided in to five main sub categories; they are
  - » fallacies of relevance
  - » fallacies of weak induction
  - » fallacies of presumption
  - » fallacies of ambiguity
  - » fallacies of grammatical analogy

# 1. Fallacies of Relevance

- The premises are **logically irrelevant** to the conclusion, but for **psychological reasons**, they may seem relevant.
- all fallacies of relevance commonly share the following basic features:
  1. **The premises of an argument are logically irrelevant to the conclusion of an argument. However, they are psychologically relevant hence they seem correct or persuasive.**
  2. **The connection between the premises and the conclusion is emotional, not logical.**

# Sub categories

- There are around eight fallacies under the fallacy of relevance

## **1. Appeal to force or stick fallacy**

(Argumentum ad Baculum).

★ occurs whenever a conclusion is defended through possessing ***physical or psychological threats*** to those who do not accept it.

- indicating that some danger will happen to those who do not accept the position.

## **Examples**

- 1, A lazy student to her professor , unless you give me “A” grade in logic I will accuse you as if you rape me.*
- 2, Child to its Playmates:** *Arsenal is the best football club in the world, if you don’t accept this, I am going to call my brother and he will throw you out!*
- 3, Wife to husband:** *I deserve a weekend in Langanos and unless you agree to take me there; I am going to pack up the kids and leave.*

## 2. Appeal to Pity (Argumentum ad Misericordiam )

- ★ basically occurs when an arguer tries to pose a conclusion by **evoking pity** from the listeners or readers.

### Example

- 1, *A weak student to the instructor , professor here me once please I should deserve at least "B" in logic, unless I will be improhabition and total low of moral to attend other courses.*
- 2, My client is an integral part of this community. If he is sent to prison not only will this city suffer but also he will be most missed by his family. You surely cannot find it in your hearts to reach any other verdict than "not guilty."

### 3. Appeal to the People

(Argumentum ad Populum).

- committed in urging the acceptance of a position simply on the ground that:

A. lots of people accept it

B. distinguished personalities and popular ones used it.

There are two **approaches** here

\* Direct

\* Indirect

# Direct approach

- committed directly when the arguer, addresses a large group of people through **writing or speech**.

**Appeal to Bandwagon:** emphasizes that the majority's choice is the correct one and urges the audiences to join them.

**Example**; chewing chat can not be all wrong because 70% of the students of Addis Ababa university see nothing wrong with it.

# Cont..

- Of course you want to buy the best toothpaste that is, why, 90% of Americans brush with it.
- Everyone says that a logic course is easier than a math course, so it must be.
- Everyone believes that men write the best novels; therefore, there is little doubt that they do so.

# Indirect approach

- the arguer ***directs his or her appeal not to the crowd as a whole directly, rather to some aspects of their relationship to the crowd.***
- *This approach is usually common in advertising industry.*

**Appeal to Vanity** : is committed when an arguer associates products with celebrities and popular figures such as artists, athletes, footballers, etc.

- committed when the products are associated with **very few selected individuals**

**Example:**

1, Heineken is the best alcoholic beverage of the year. Even C/Ronaldo likes its test. Never miss it !!

2, Who is going to wear this fashion dress ,a dress worn by famous artist Aster Awoke in her new year Sheraton show.

Cont.

- **Appeal to snobbery** : products are usually associated with persons with **high social positions** (business man, kings, queens, and princes in general).

### Example

*1, First of all do you know the mark of the shoe it clark, you should know that clark is not for an ordinary person buy and join the dignitaries*

*2, Florida Hotel, no doubt, is the best hotel in Gondar. That is only for distinguished and very important persons. Come and enjoy your weekend at Florida Hotel!!!*

## 4. Argument against the person (Argumentum ad Hominem)

- Attacking one's opponent in a personal and abusive way for the purpose of ignoring the argument of others.
- *There are three types of fallacy of ad hominem:*

### ***A. Fallacy of ad hominem abusive***

- an arguer engages him/herself in direct **personal attacks or abuses against his opponent.**

- Committed when we **directly attack the person himself.**

### Example

- *Hailu's idea about there is life after death should be discouraged since he was regularly treated in Emanuel hospital and he is patient.*
- *Ato Gebeyehu has argued for increased funding for the disabled. But nobody should listen to his argument. Ato Gebeyehu is a Slob who cheats on his wife, beats his wife, beats his kids, and never pays his bills on time.*

# Cont.

## **B. Fallacy of ad hominem Circumstantial**

- also called **genetic fallacy**.
- is not directed to attacking the person, rather on the circumstance he belongs to.

### **Example:**

melaku's idea ,we should fast is not acceptable ,after all he is catholic priest and priests in that position are expected to posses such views.

# Cont..

## **C. Fallacy of ad hominem tu quoque (you too)**

- is committed when we argue that our opponent's claim is false since his/her argument is contrary with what he has said or done before.

**E.g.** But Doctor, surely your advice that you should not drink coffee is not sound advice since you yourself often drink coffee.

- **Doctor---** I see abnormalities in your breathing and heartbeat. So, you must stop taking tobacco. Ok?

**Patient---** what do you mean doctor ? I saw you by my own naked eyes on the other day that you too were smoking. so your advice is not correct.

## **5. Accident**

- \* ***wrongly apply general rule to specific case that cannot cover the former.***
- \* *this fallacy is committed when the general rule, principle or truth is wrongly applied to particular instance or situation.*

# Cont..

## **Example**

*1, Freedom of speech is constitutionally guaranteed right .so, john should not be arrested for his insultation.*

*2, Children should obey their parents. Therefore, little Abush should follow his alcoholic fathers orders to drop out of school and get a job.*

## 6. Straw Man

- occurs when some one distorts his/her opponent's argument for the purpose of more easily attacking or demolishing it.
- **by diminishing /exaggerating or**
- **Misinterpretation** of our opponent's argument.

### Example

*Dr. Kebede has just argued against affirmative action for women. It seems what he is saying is that women should stay out of the work place altogether. Just keep them barefoot and pregnant. That is what Dr. Kebede wants. Well! I think we are all smart enough to reject his argument.*

## 7. Missing the point (Ignorantio Elenchi)

- Also called **irrelevant conclusion**.
- occurs when the premise of an argument supports the conclusion, which has nothing to do with correct conclusion.
- the argument has a problem of the logical implication of the premise.
- The conclusion is not correctly formed.

**Example**; Addis Ababa university has a lot of problems. Many of the instructors are inexperienced. It follows that ; the university should be entirely closed.

# 8. Red Herring

- Committed when an arguer diverts the attention of the listeners or readers by changing the original subject to some totally different issue without notifying the listeners' or readers'.
- Is an attempt to divert the attention of audiences to a totally different issue .

**Example; chala---** do you know, Gebru that Hana has got “ A” in prose fiction.

**Gebru---** it is not surprising. Aster always wears miniskirt and attracts teachers with her half - naked body. That is it and not her own effort.

## 2. Fallacies of Weak Induction

- Occur not because the premises are logically irrelevant to the conclusion, rather it is because the **connection between the premises and conclusion is not strong enough.**
- Fallacies of weak induction are commonly characterized by
  - **premises are not sufficient to arrive at the conclusion,**
  - **premises probably support the conclusion and they are accompanied by emotional appeals.**

# Sub categories

- There are six fallacies included in weak induction

## 1. **Appeal to unqualified authority (Argumentum ad Verecundiam)**

←The authority at hand can be either individual **person or institution**

- The fallacy of unqualified authority is committed when we attempt to support our claim by:

- ★ citing the statement of another person who has no authority in the field of specialization.

- ★ referring the judgment of an authority that is likely to be biased.

# cont

★ referring a person who has the habit of telling lies or disseminating wrong information.

## Example

1, We should abolish the death penalty.

Many respected people, such as foot ball player **Lionel Mesi**, have publicly stated their opposition to it.

2, But Mom I don't see why I have to wear socks; Einstein never did wear socks.

# Cont.

- 3, Those who say that extra-sensory perception is not reliable are mistaken. The police, Hollywood stars, and politicians have all relied on it.
- 4, Abune merkorios who is famous figure in EOC argued that we should not accept Protestantism since protestants are nothing.

## 2. Appeal to Ignorance (Argumentum ad Ignorantiam)

- committed when **lack of evidence or proof** for something is used to support the conclusion
- **something is the case (true) because no one has proved it false**
- **something is not the case (false) because no one has proved it true**

## Example

1, God exists no one proves the non existence of God.

2, No mathematician has ever been able to demonstrate the truth of the variants of the Goldberg conjecture, so they cannot all be true.

3, No one ever been able to prove the existence of UFO's. Thus, we can conclude that UFO's does not exist.

### 3. Hasty Generalization

- is the opposite of **accident /converse accident**.
- committed when an arguer tries to generalize about a thing or an event based on **insufficient evidence**

E.g, As I walked to the library from the Learning Center no one person spoke to me. Lander University is not as friendly as I was led to believe.

cont.....

2, The meteorologist predicted the wrong amount of rain for May. Obviously the meteorologist is unreliable.

**N.B** scientifically proved or reasonable samples are not fallacies.

### **Example**

*Ten Milligram of Substance Z was fed to four mice, and within two minutes all four went into shock and died. Probably substance Z, in this amount, is fatal to the average mice.*

## 4. False Cause

- occurs whenever the link between premises and conclusion depends on **some imagined causal connection that properly does not exist**
- This fallacy can further be divided in to three types.

## A. **Post hoc ergo propter hoc fallacy**

**\* based on chronological relationship**

- committed when we arrive at a certain conclusion by claiming that one thing is the cause of another thing because **it precedes in time**

Example

- 1, I have crashed with car because before I crashed with the car the dog crosses the road while I was driving.*
- 2, President Jones raised taxes, and then the rate of violent crime went up. Jones is responsible for the rise in crime.

# Cont...

## **B. Non Causa pro Causa Fallacy**

■ not the cause for the cause

### **Example**

- 1, There are more churches in Ethiopia today than ever before and more HIV victims ; so, to eliminate the epidemic we must abolish the church.*
- 2, The library is always opened and most students failed in the exam so to let students pass the exam we should close the library.*

## C. Oversimplified Cause Fallacy

- committed when relevant causal antecedents of an event are **reduced by** introducing factors **insufficient** to the account of the effect

### **Example**

*1, Most students fail in logic because teachers do not come to class regularly.*

2, All third world countries cannot come out of their deep rooted problems because of lack of advanced technology

## 5. Slippery Slope fallacy

- Also said to be **camels nose fallacy**.
- assumes that series of events happen or follow one from the other as a result of the first cause in a series,
- Based on the **unlikely chain of reaction**.

**Example- student---** “I do have a question, teacher.”

**Teacher---** “ I will not allow you to ask me because, if I allow you to ask me, others will start raising questions and as a result I will not have enough time for my lecture.

## Cont..

- 2, "Animal experimentation reduces our respect for life. If we don't respect life, we are likely to be more and more tolerant of violent acts like war and murder. Soon our society will become a battlefield in which everyone constantly fears for their lives. It will be the end of civilization. To prevent this terrible consequence, we should make animal experimentation illegal right now".
- 3, "We have to stop the tuition increase! The next thing you know, they'll be charging \$40,000 a semester!

## 6. Fallacy of Weak Analogy

- committed when the similarity between two things or situations **is not strong enough to support the conclusion to be drawn** .
- When the two contrasted things are considered alike only in unimportant ways.
- ★ The basic structure of an argument from weak analogy is:
  - » Entity A has attributes a, b, c and z
  - » Entity B has attributes a, b, c
  - » Therefore, entity B probably has attribute z.

# Example

*1, No one would buy a pair of shoes without trying them on. Why should anyone be expected to get married without premarital sex? :*

2, Guns are like hammers--they're both tools with metal parts that could be used to kill someone. And yet it would be ridiculous to restrict the purchase of hammers--so restrictions on purchasing guns are equally ridiculous.

# 3. Fallacies of Presumption

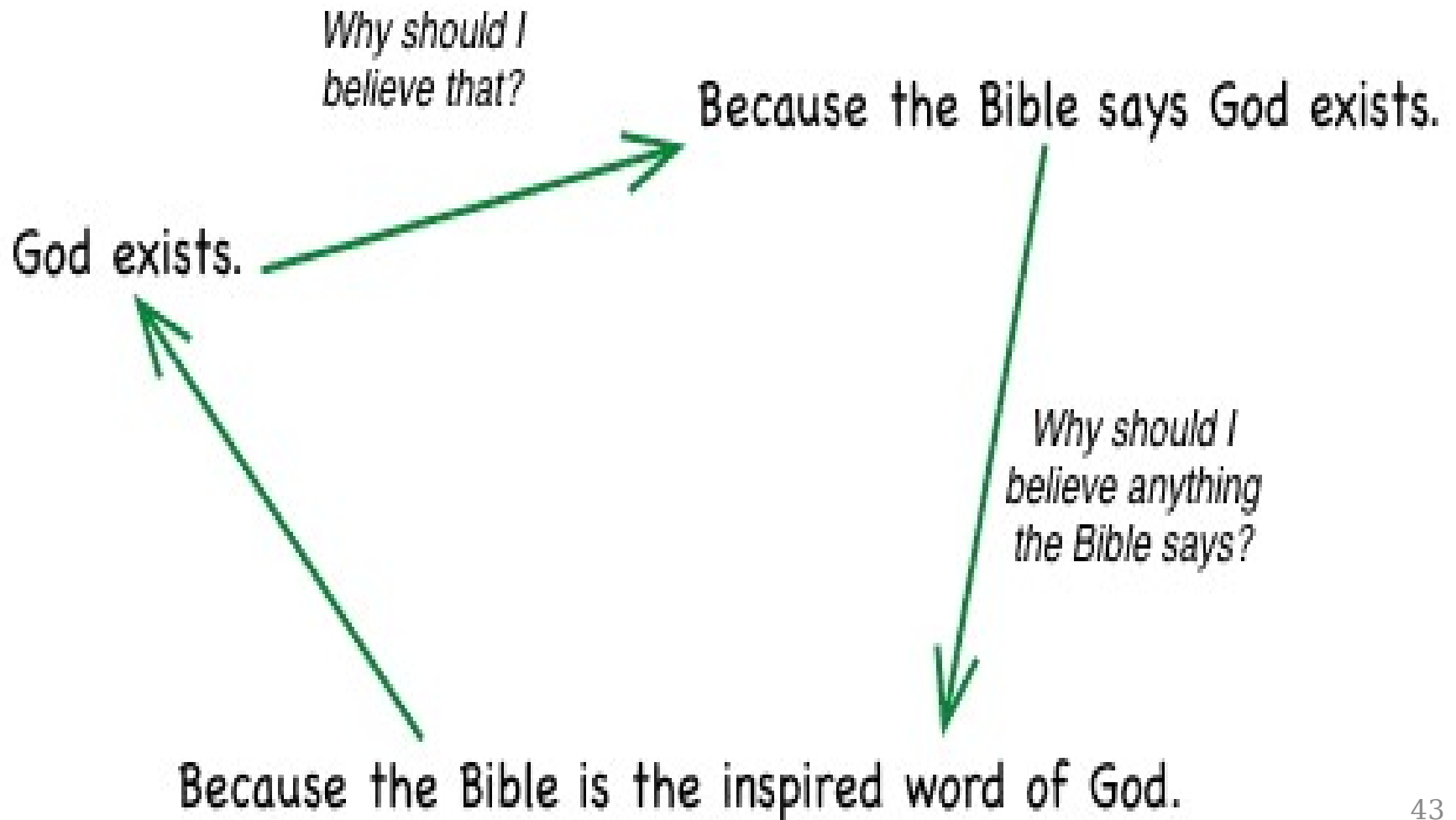
- Committed when the assumption given in the premise is **not supported by proof**, but the arguer maintains that it does not need proof and invites his/her audiences to accept it as it is.
- Fallacies of presumption are usually characterized by:
  - ★ **drawing a conclusion from statements that are questionable .**
  - ★ **unjustifiable assumption and presumption with their details.**

# A. Begging the Question (Petitio Principii)

also called **circular Argument/reasoning.**

- We may get questionable ideas either in the part of the premise or the conclusion
- premise is not essentially different from the conclusion.
- The argument is **valid**.

# CIRCULAR REASONING



# Cont...

## **Example**

1, I believe the president is telling the truth because he says he is telling the truth.

2, God exists ,because the bible says so.

3, Mr x is not thief, because he said I am not thief.

## B. False Dichotomy

- is committed when the arguer insists that **only two alternatives are possible** in a given situation .
- It occurs whenever one is faced with a very **limited numbers of alternatives**.
- It presumes that one of the suggested alternatives must be true

# Cont..

## **Example**

- 1, we logic instructors have two options either to give D and F grade for students or stop instructing them
- 2, I am tired of those young peoples who criticize their country. I said “Ethiopia” love it or leave it. Thus, the conclusion is obvious

## C. Suppressed Evidence

- is committed when the argument **ignores evidence/s that outweighs the presented evidence and entails a different conclusion.**
- The evidence that is suppressed must be so important that it outweighs the presented evidence, and it must require a different conclusion than the one drawn.
- Usually, **suppression is intentional** as the arguer **deliberately omits the key evidence** (premise) and instead emphasizes a certain point in order **to hide the relevant premise** that would entail totally different point.

# Cont..

## Example

Before ten years, you get 1000 Birr per month. Now at this time in 2004 E.C, the government of the country who usually thinks for the wellbeing of its citizens has increased your salary three times and now you get 3000 Birr per month. Therefore, now you are leading a decent and good life as the money in your pocket has increased three times.

## D. Complex question

- is committed when the arguer **asks two or more questions in a way that makes it appear that only one question has been asked.**
- Asking questions to answer it genuinely without being **confused and tricked is not wrong.**
- But, when the question is complex and aimed only at **trapping and confusing** the respondent it will be fallacious.

## Cont...

- are familiar devices to lawyers and judges when examining defendants to admit crimes.

### **Example:.**

- 1, *Have you stopped in involving such crimes?*
2. Why haven't you been studying, as you should? You would feel a lot better if you would take you school work more seriously

## 4. Fallacies of Ambiguity

- are committed when misleading or wrong conclusion of an argument is drawn from **ambiguous words or statements**.
- includes Equivocation and Amphiboly.

# A. Equivocation

- Occurs when a word or phrase in a single argument are used in **two different senses or connotations** .
- This fallacy leads toward unintended conclusion by making a word or words to have **two different meanings in a single argument.**

## ***Example***

*1, my brother never used a glass*

*2, ..stay a part of a system.*

Cont..

## ***B. Amphiboly***

→ occurs because of a  
**mistaken grammars.**

### **Example**

Kasaye told me that he  
always quarrels with his  
father when he is drunk.

## 5. Fallacies of Grammatical Analogy

- are caused by **presumption of analogy of attributes of the whole entity of some thing and its parts or reverse.**
- There are two types of the fallacies of grammatical analogy

## A. Composition

- Occur when attributes of **parts of a thing** are wrongly applied or associated to the **whole entity of a thing** .
- When parts of something is wrongly applied on that thing (**we are with in one thing**).

***from Part***  ***to whole***  
***part .***

# Cont...

## Example

1. “Mr. X likes water and barley. Therefore, Mr. X must like Dashen beer.”
2. *Each atom in this table is invisible to the naked eye. Therefore, the table is invisible to the naked eye .*

- However, if there is a **legitimate transference of an attribute from parts in to the whole**, fallacy of composition will never occur.

## **Example**

*Each atom in this piece of chalk has mass. Therefore, the piece of chalk has mass.*

## B. Division

- The fallacy of division is the exact **opposite of composition.**
- what is true of a whole is also true of its parts or what is true of a whole is also true of some of its parts.
- ***From whole***  ***part of a thing.***

# ***Example***

***1, Water extinguishes fire  
so, its two components  
hydrogen and oxygen  
extinguishes fire***

*2, Carbon monoxide is a  
poisonous gas. Therefore, its  
two components, carbon and  
oxygen must be poisonous.*