

CHAPTER: FIVE

FALLACY

- ✓ **A fallacy** is a defect in an argument. It can be committed in many ways.
- ✓ But, they usually involve either **a mistake** in reasoning or the creation of some **illusion** that makes a bad argument appear good (or both).
- ✓ If both deductive and inductive arguments contain fallacies, they are either **unsound** or **uncogent**. If an argument is unsound or uncogent, it has one or more false premises or ² **it**

- ✓ There are two types of fallacies: **Formal** and **Informal**.
- ✓ A formal fallacy is one that may be identified through mere **inspection** of the **form** or **structure** of an argument.
- ✓ It is a mistake with respect to the **form**; or which resulted from **breaking some rule of validity**.
- ✓ Fallacies of this kind are usually **found only in deductive arguments** that have clearly recognized forms:

✓ Examples of **formal fallacy**:

1) All tigers are animals.

All mammals are animals.

Therefore, all tigers are mammals.

✓ The above argument has this form:

All A are B
will be:

All C are B
are B

Therefore, All A are C
are C

The **correct form**

All A

All B

2) If nepotism is wrong, then it is destructive.

It is destructive.

Hence, nepotism is wrong.

✓ **The form of the above argument is:**

If A, then B

B

Therefore, A

➤ **This is fallacy of affirming the consequent.**

Formal Fallacy:

3) If it is raining, then the ground is wet.

It is not raining.

So, the ground is not wet.

It has the following form:

If A, then B

Not A

So, not B

✓ This is **fallacy of denying the antecedent.**

INFORMAL FALLACIES

- ✓ These types of fallacies can be detected only through the mere **analysis of the content of the argument.**
- ✓ The fallacy occurs because of errors which arise from **carelessness** with respect to the **relevance of ideas** or with respect to the **clarity and consistency of language.**

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- ✓ Since the time of **Aristotle**, logicians have attempted to classify the various informal fallacies.
- ✓ **Aristotle** himself identified **thirteen** and separated them into **two groups**.
- ✓ The work of subsequent logicians has produced dozens more, rendering the task of

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✓ The contemporary logicians classify **Informal fallacies** into **five groups** as:

1. Fallacies of **Relevance**
2. Fallacies of **Weak Induction**
3. Fallacies of **Presumption**
4. Fallacies of **Ambiguity** and
5. Fallacies of **Grammatical Analogy**

A / **Fallacies of Relevance** (Fallacies involving irrelevant evidence)

- In fallacies of relevance, premises are logically **irrelevant to the conclusion**.
- Yet the premises are **relevant psychologically**, so the conclusion may seem to follow from the premises though it doesn't follow logically.

1. Appeal to Force

- It is sometimes also called “**Appeal to stick**” or **Ad baculum** Fallacy.
- The appeal to force occurs when ever **a conclusion is defended** by a threat to the well-being of those who do not accept it (**Baculum** is a **Latin** for “**Staff**,” the staff

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- In other words, **this fallacy always involves a threat** (may be either **explicit** or **implicit**) by an arguer to the **physical** or **psychological** well-being of the listener or reader.
- Here, some body **poses of conclusion** to another person and tells that person either explicitly or implicitly that **some harm will come to him/her if**

Examples:

1. Child to play mate:

“ Mr.x is the best show on TV and if you do not believe it, I am going to call my big brother over here and he is going to beat you up.”

2. Secretary to Boss:

“I deserve a raise in salary for the coming year. After all, you know how friendly I am with your wife, and I am sure you would not want her to find out what has been going on between you and that sex pot client of yours.”

2. Appeal to Pity

- Also called **ad Misericordiam** fallacy (misericordiam- **Latin** word for '**pity**' or "**mercy**").
- It occurs whenever an arguer poses a conclusion and then attempts to **evoke pity from the reader or listener** in an effort to get him or her to accept the conclusion. (sympathy).

EX AMPLE: Tax payer to judge

Your honor I admit that I declined to implement a government policy of value added tax due to the fact that if I implement it, I may loose additional money which would enable me to open a new business for my elder son. If you take any measure against this, I will probably lose my job, my poor wife won't be able to have the

3. Appeal to the people (Argumentum **ad populum**)

- It uses such desires as to be **loved, esteemed, admired, valued, recognized** and **accepted** to get the reader or listener to accept a conclusion.
- It occurs when an **arguer attempts to persuade** a person or group of persons **by appealing to be accepted or valued by others. Two approaches** are involved here:

- ✓ The **direct approach** occurs when an arguer, addressing a large group of people, elicits/evokes the emotions and enthusiasm of **the crowd to win acceptance for his conclusion**. The objective is to arouse mob mentality.
- ✓ The **direct approach** is not limited to **oral argumentation** but also similar effect can be accomplished in **writing**.
- ✓ **Politicians** and **demagogues** are best examples for using direct

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- ✓ **Adolf Hitler** was a master of the technique. The objective is to arouse a kind of mob mentality.

Consider the following speech:

Example: “I look out at you all, and I tell you, I am proud to be here. Proud to belong to a party that stands for what is good for Germany. Proud to stand with men and women who can get our

➤ In the **indirect approach** the arguer directs his/her appeal not to the crowd as a whole but to **one or more individuals separately**. The **indirect approach** has **three** forms:

1. The **bandwagon** argument, (If you use it, **you are also with us**).
 2. The appeal to **vanity**, (If you use it, **you too will be admired**) and
 3. Appeal to **snobbery**, (If you use it, you are also among the superior).
- ✓ All are standard techniques of the **advertising industry**.

Example 1:

1. Of course you want to buy Colgate toothpaste. Why, 90 percent of American people brushes with Colgate.

- ✓ The idea here is you will be left behind or left out of the group if you do not use the product.
- ✓ Hence, it is an instance of **Bandwagon Argument.**

- The appeal to **vanity** often **associates** the product with a certain **celebrity** who is admired and pursued, the idea being that you, too, will be admired and pursued if you use it.

Example 2:

- ✓ Do you want to have modern shoes? Then, you should have to choose Anbessa Shoe. This is because our products are the first choice of the famous

Example 3:

- **Coca cola is not for everyone. It is consumed only by those who have the ability to distinguish high quality products from others.**
- ✓ **Here the point is if you qualify as one of the selected few, you should prefer the product.**
- ✓ **Therefore, it is an example of snobbery argument**

4. Argument Against Person

- Also called “**Argumentum Ad hominem**” fallacy (Ad Hominem is a Latin phrase meaning “**against the man**”)
- This fallacy always involves **two arguers**. One of them advances either directly or indirectly a certain argument, the other then responds by directing his or her attention not on the first person’s argument, **but to the**

➤ When this occurs the second person is said to commit an argument against the person. It has three forms:

1. *ad hominem abusive*,
2. *ad hominem circumstantial*
and
3. *tu quoque* (“you too” fallacy)

➤ In *ad hominem abusive* the second person responds to the first person's argument by **verbally abusing** the first person.

Example:

Sigmund Freud's psychoanalysis theory²⁴ is nonsensical and unacceptable. Freud, you

- Unlike to ad hominem abusive, **ad hominem circumstantial** rather than verbally abusing the opponent, the arguer tries to **find certain circumstances** that affect his/her opponent.

Example:

The Dalai Lama argues that China has no business in Tibet and that the West should do something about it. **But the Dalai Lama just wants the Chinese to leave so he can return as leader.** Naturally, he argues this way.

➤ In the *tu quoque* (*you too*) fallacy the arguer usually cite features in the life or behavior of the first arguer that conflicts with the latter's conclusion. The nature of this fallacy looks like this: “**How dare you argue that I should stop doing X; while, you do (or have done) X yourself.**”

Example: Child to his mother:

Your argument that I should stop stealing candy from the corner store is no good. You told me yourself just a

5. Accident

- The fallacy of accident is committed when **general rule is applied to the specific case** it was not intended to cover. The general rule is cited in the premise and the wrongly applied to the specific case mentioned in the conclusion.

Example:

Whoever pierces a person's body with a knife should be brought to court. But surgeons often do this when operating. Therefore, surgeons should

6. Straw Man Fallacy

It is committed when an arguer **distorts an opponent's argument** for the **purpose of more easily attacking** it, demolishes the distorted argument, and then concludes that the opponent's real argument has been demolished.

It always involves two arguers. Exaggeration of the first person's argument by the second arguer is

Example

Mr. Debebe has argued against prayer in the public schools. Obviously Mr. Debebe advocates atheism. But atheism is what they used to have in Russia. Atheism leads to the suppression of all religions and the replacement of God by an omnipotent state. Is that what we want for this country? I hardly think so. Clearly Mr. Debebe's argument is

7. Missing the Point

Also called “*Ignoratio Elenchi*” means **ignorance of the proof**.

The arguer is ignorant of the logical implication of his/her premises, and draws a conclusion that misses the point.

It occurs when the premises of an argument **support one particular conclusion**, but then a different conclusion, often vaguely related

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Example:

Crimes of **theft** and **robbery** have been increasing at alarming rate lately. Therefore, we must restate the **death** **penalty** immediately.

Possible conclusion:

- ✓ (We have to strengthen the capacity and potential of police officers.)

8. Red Herring Fallacy

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

There is a good deal of talk these days about the need **to eliminate pesticides** from our fruits and vegetables. But many of these foods are essential to our health. Carrots are an excellent source of vitamin A, broccoli is rich in iron, and oranges

B. Fallacies of Weak Induction

- They occur when the **connection** between premises and conclusion is **not strong enough** to support the conclusion (when there is **no enough evidence** in an argument for us to believe the conclusion).
- However, the fallacies of weak induction often **involve emotional grounds for believing the**

9 (1). Appeal to Unqualified Authority (**Argumentum ad Verecundiam**)

- It occurs when the cited authority or witness is **not trustworthy**.
- Possible reasons are:
 - i. Lack of the required expertise.
 - ii. Biasedness or prejudice.

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Example:

Dr. Awalom, our family **Physician**, has stated that the creation of muonic atoms of deuterium and tritium hold the key to produce a sustained nuclear fusion reaction at room temperature. In view of Dr. Awalom's expertise as a **Physician**, we must conclude that this is indeed true.

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

- When the premises of an argument state that **nothing has been proved one way or another** about some thing and the conclusion then makes a definite assertion about that thing. The issue usually involves **some thing that has not yet been proved**. This fallacy can have **two forms**:

1) The claim that **a statement is true**

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2) The claim that a **statement is false** (or may be reasonably believed false) simply because it has **not been proven true**. Here are two corresponding examples:

Example 1:

People have been trying for centuries to disprove the claims of astrology, and no one has ever succeeded. Therefore, we must

Cont...

- ✓ **Conversely**, the following argument commits **the same fallacy**:

Example 2:

People have been trying for centuries to provide conclusive evidence for the claims of astrology, and no one has ever succeeded. Therefore, we must conclude that astrology is a lot of

11(3). Hasty Generalization (Converse Accident)

- It is a fallacy that affects inductive generalization. The fallacy occurs when there is a reasonable likelihood that the sample is not representative of the group. Such a likelihood may arise if the sample is either too small or not randomly selected. Example:

Six Arab fundamentalists were convicted of bombing the World Trade Center in New York City. The message is clear: Arabs are

12(4).False Cause

- It occurs whenever the link between the premise and conclusion depends on some **imagined causal connection** that probably **doesn't exist**.
- Whenever an argument is suspected of committing the **false cause fallacy**, the reader or listener should be able to say that the conclusion depends **on the supposition that X causes Y**, whereas X probably does not cause Y at all.

This fallacy has **three forms**:

i. Post hoc ergo propter hoc, (after this, therefore on account of this)

➤ It depends on The first event causes the second event. Example:

A black cat crossed my path and latter I tripped and sprained my ankle. It must be that black cats really are bad luck.

ii. Non causa pro causa (not cause for the cause)

The cause of some thing is not really the cause at all.

Example:

The Ethiopian national foot ball

iii. Over simplified cause

- While a **multitude of causes** are responsible for a certain effect, the arguer selects just one of these causes and represents it as if it was the sole cause.

Example:

The quality of education in our high schools has been declining for years. Clearly, our teachers just are not doing their job these days.

13(5). Slippery Slope

- Occurs when the conclusion of an argument rests upon an **alleged chain of reaction** and there is not sufficient reason to think that the chain of reaction will actually take place.

Example:

Immediate steps should be taken to outlaw pornography once and for all. The continued manufacture and sale of pornographic material will almost certainly lead to an increase in sex-related crimes such as rape and incest (**continues**)

Cont...

(...continued)

This in turn will gradually erode the moral fabric of society and result in an increase in crimes of all sorts. Eventually a complete disintegration of law and order will occur, leading in the end to the total collapse of civilization.

- ✓ **Because there is no good reason to think that the mere failure to outlaw pornography will result in all these dire consequences, this argument is fallacious**

14(6). Weak Analogy

- This fallacy **affects inductive arguments** from analogy. As we saw before an argument from analogy is an argument in which the conclusion depends on the existence of an analogy, or similarity, between two things or situations. **It is committed when the analogy is not strong enough to support the conclusion.**

Example:

- Lula's new car is bright blue, has leather upholstery, and gets excellent gas mileage. Saba's new car is also bright blue and has leather upholstery. Therefore, it **probably** gets excellent gas

C. Fallacies of Presumption

- ❖ These fallacies arise **not because the premises are irrelevant to the conclusion** or **provide insufficient reason for believing the conclusion** but because the premises presume what they purport to prove.
- ❖ The premises presume/(**to assume to be true without proof**) what they purport to prove. So, the truth is **uncertain or implausible**.
- ❖ All of these fallacies involve the use of **unwarranted premises**.

15 (1). Begging the Question (Petitio Principii)

- The fallacy of begging the question is committed whenever **the arguer creates the illusion that inadequate premises provide adequate support for the conclusion** by leaving out a key premise, by restating the conclusion as a premise, or **by reasoning in a circle.**
- The latin name for this fallacy, **petitio principii**, means “**request for the source.**” The actual source of support for the conclusion is not

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- In this kind of reasoning, after reading or hearing the argument, the observer is inclined to ask, “**But how do you know X?**” where **X is the needed support.**

Example 1:

Murder is morally wrong. This being the case, it follows that abortion is morally wrong. (**leaving out a key premise**)

(It begs the question “How do you

Example 2:

Capital punishment is justified for the crimes of murder and kidnapping because it is quite legitimate and appropriate that someone be put to death for having committed such hateful and inhuman acts. (restating the conclusion as a premise in slightly different language)

Example 3:

Ford Motor Company clearly produces the finest cars in the United States. We know they produce the finest cars because they have the best design engineers. This is true because they can afford to pay them more than other manufacturers. Obviously they can afford to pay them more because they produce the finest cars in the United

16(2). Complex question

- It occurs when a single question **that is really two** (or more) questions is asked and a **single answer is then applied to both questions.**

Ex:1. Have you stopped cheating on exam?
2. where did you hide the cookies you stole?

- ✓ The above single question consists in it self the following two questions;
1. Did you cheat on exam in the past?
2. If you did cheat in the past, have you stopped now?
- ✓ It involves an implicit argument, usually intended **to trap the respondent in to acknowledging something that he/she**

17(3). **False Dichotomy** (false bifurcation or the “either.... or ...” fallacy)

- It is committed when one premise of an argument is an “either... or ...” (disjunctive) statement that presents two alternatives as if they were jointly exhaustive (**as if no third alternative was possible**). One of the alternatives is usually preferred by the arguer.

Example:

Either you buy only American made product or you don't deserve to be called a loyal American. Yesterday you bought a new Toyota . Therefore, it is clear that you don't deserve to be called a loyal American.

18 (4). Suppressed Evidence

- ✓ Committed when the **arguer ignores some important piece of evidence that outweighs** the presented evidence and entails a very different conclusion.

Example:

Most dogs are friendly and pose no threat to people who pet them. Therefore, it would be safe to pet the little dog that is approaching to us now.

- ✓ The arguer **ignores** that dogs also ⁵ **be**

D.FALLACIES OF AMBIGUITY

Arguments are sometimes **flawed because they contain ambiguous words** (phrases or statements), that is, they involve subtle confusion between two closely related concepts. These are fallacies involving ambiguity. And there are **two types** of such fallacy.

19(1). Equivocation

- A logical fallacy resulting from the use of multiple meanings of a single expression.
- It occurs when the conclusion of an argument depends on the fact that one or more words are used, either explicitly or implicitly in to **two different senses** in the argument.

Example:

A mouse is an animal. Therefore, a large mouse is a **large animal**.

(This argument illustrates the **ambiguous use of a relative term**. The word “large” means different

20(2). Amphiboly

- It occurs when the arguer **misinterprets a statement that is ambiguous** and proceeds to draw conclusion **based on this faulty interpretation.**
- The original statement is usually asserted by someone other than the arguer.
- And **structural defect** is usually a mistake in grammar or punctuation-missing comma, a dangling modifier, an ambiguous antecedent of a pronoun, or some other careless arrangement of words.
- Example: John told Henry that he had made a mistake. It follows that John has at least the courage to admit his own

E. Fallacies of Grammatical Analogy

- This form of fallacy contains **two types** namely fallacies of **composition** and **division**.
- Arguments that commit these fallacies are **grammatically analogous** to other arguments that are good in every respect. Because of this **similarity in linguistic structure**, such fallacious arguments⁵⁸

20(1).

Composition

- The fallacy of composition is committed when the conclusion of an argument depends on the **erroneous transference** of an attribute from the **parts** of something in to the **whole**.
- It occurs when it is argued that because the parts have a certain attribute, it follows that the whole has that attribute too and the situation is such that the attribute in

Example:

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

2. Sodium and chlorine, the atomic components of salt, are both deadly poisons. Therefore, salt is a deadly poison.

✓ **However,** not every such transference is illegitimate. Consider the following example:

This fallacy is sometimes confused with **hasty generalization**. To avoid the confusion, **examine the conclusion** of the argument. If the conclusion is a general statement, a statement in which an attribute is predicated distributively **to each and every member of a class**, the fallacy committed is hasty generalization. But if the conclusion is a **class statement**, in which an attribute is predicated **collectively to a class as a whole**.

22(2).Division

- The fallacy of division is the exact reverse of composition. As composition goes from parts to whole, **division goes from whole to parts**. The fallacy is committed when the conclusion of an argument depends on the erroneous transference of an attribute from a whole (a class) to its parts (or members).

Ex: Salt is a nonpoisonous compound. Therefore, its component elements sodium and chlorine are nonpoisonous.

✓ However, the following argument contain no fallacy:

Example: This piece of chalk has mass. Therefore, the atoms that compose this piece of chalk have mass. (No fallacy is committed).

■ Division is sometimes confused with **accident**. Division proceeds from the class to the members, while accident proceeds from the general to the specific. Thus, to avoid such a mistake, examine the premises. **If the premises contain a general statement, the fallacy committed is accident; if they contain a class statement, the fallacy is division.**

THE END