# Fallacies

# LOGIC FAIL

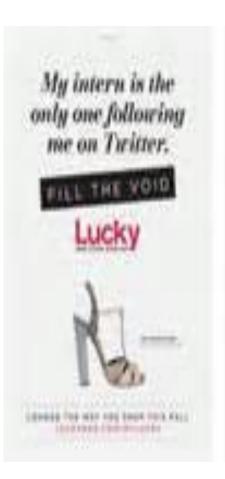
- Fallacies are elements that show how
- we may go wrong in our arguments

We derive at unwarranted (unjustifiable)
 conclusion from a set of premises

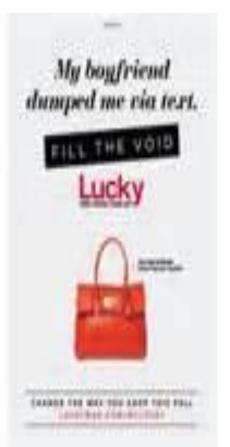
Conclusion lacks logical support

 Fallacious (untrue, misleading, wrong) arguments are used as rhetoric ploys by newspapers and advertisements, in the speech of the political leaders and even by parents who want their children to do what they want









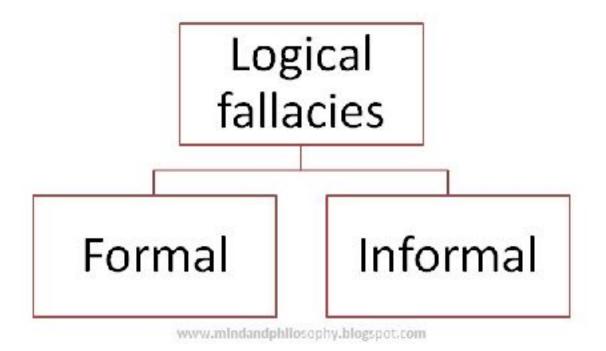


## How a fallacy is occurred?

 When an inference does not manage to provide adequate logical support, a fallacy is committed and the argument becomes invalid



### There are Two Major Kinds of Fallacies



## • 1. FORMAL FALLACY: THERE IS AN ERROR IN THE STRUCTURE OR THE FORM OF THE ARGUMENT



## Formal Fallacies

- Example of a deductive argument with a formal fallacy:
  - All humans are mammals. (premise)
  - All cats are mammals. (premise)
  - All humans are cats. (conclusion)
- Both premises in this argument are true but the conclusion is false. The defect is a formal fallacy and can be demonstrated by reducing the argument to its bare

#### structure:

- 1. All A are C
- 2. All B are C
- 3. All A are B



 2. INFORMAL FALLACY- A LINGUISTIC REASON LEADS TO A FALLACY

 INFORMAL FALLACY IS DIVIDED INTO 3 TYPES

## I. The Fallacy of Ambiguity

 The Fallacies that result due to ambiguities in language - state of being doubtfulness

One spelling mistake can destroy your life...
A Husband sent this to his wife:"I'm having a wonderful time wish you were her."



Teacher: Why are you late, Joseph?

Joseph: Because of a sign down the road.

Teacher: What does a sign have to do with your being late?

Joseph: The sign said, "School Ahead, Go

Slow!"





#### 10 മിനിറ്റിൽ 68 പട്ടിയെ തിന് ലോക റെക്കോഡ്

ന്യൂയോർക്ക്: പത്തു മിനിറ്റി നുള്ളിൽ ഒ നായകളെ തി ന്ന് അമേരിക്കക്കാൻ ലോ ക ദെക്കോഗ് സ്ഥാപ്പ്പ്വു അ മേരിക്കൻ സ്വാത്യത്യൂരിനാ ലോക്ഷത്തിന്റെ ഓഗമായി ന ഒത്തിയ വാർക്കികമത്സായതി ഓണ് യോയ് പെസ്റ്റ്നട്ട് എ ന്നാടകാരൻ സ്വാതം ദെക്കോ ഡ് തിരുത്തിയത്.

ളുടുപതിനായിം ഡോളർ സമമാനത്തുകയുള്ള പട്ടി ത്ന് റ്റ മസം. ന്യൂയോർക്കിലോ കോണി വീപിലാണ് നടന്ന ത്. ചെസ്റ്റ്നട്ടിന്റെ തുടർച്ച യായ മുന്നാംവിലയമാണ് ഇ ത്. കഴിഞ്ഞവർഷം 66 പട്ടി കളെ അകത്താക്കിയാണ് കി ത്ടം ചുടിയത്. അറുപത്തി നാലപ്പെട്ടികളുടെ മാംസം ഒ ക്ഷിച്ച് ജപ്പാൻകാത്ത് ടകേ പ്രാണ്ടാംസ്ഥാനത്ത്എത്തി.

മത്സരം ഇഎസ്പിഎൻ ഉർപ്പെടെയുള്ള സ്പോർട്സ് പാനരുകൾ തയാമയം സം പോഷണം പെയ്തു 1916 ലോ സ് ഈ മയാരം ആരംഭിച്ച എറ്റിനാല് കിലോഗ്രാം ഓ മോള ചെസ്റ്റ്നട്ട് ലോക് തെരു തീറ്റുത്തേക്കുട്ട് പ

## 63(19)

## വടകരയിൽ യുഡിഎഫ് സ്ഥാന വീരേന്ദ്രകുമാർ അനുവാദം തേ

വി 🕳 യിന്ദ്

തുവാതിംറി: വടകായിൽ യുഡി എം സ്ഥാനാർവിയാകാൻ എം പി വിദ്യേശകുമാർ അന്യവാദം പോടിച്ച് മൂന്നതായി ജനതാദർ എഡ് ദേശീയ പ്രസിഡൻ്റ് എച്ച് ഡ് ദേശനാഡ വെളിപ്പെടുത്തി. ജ് താദർ എസ് സംസ്ഥാനന്തി യു പിരിച്ചുവിട്ട് പുതിയ കഷ്ട്യി വീകരിച്ച കാര്യം വാർത്താസ യളനത്തിൽ അടിയിക്കുമ്പോടാ സ് ഇക്കാരും വെളിപ്പെടുത്തിയ

ലോക്സഭാ തെടഞ്ഞടുപ്പിൽ യുഡിഎഫ് സ്ഥാനാർഥികളെ നി ശ്ചയിച്ചപ്പോൾ വടകര വീരേന്ദ്ര കുമാറിനുവേണ്ടി ഒഴിച്ചിട്ടിരുന്നു. എന്നാൽ, നാമനിർദേശപുതിക സമർപ്പിക്കാൻ രാക്രീയപാർഴിയു ടെ ദേശ്യത്തെതുത്തൽനിന്ന് രജിക്കേന്ദ്ര സമ്മതപുത, നൽകി മല്ലന്നു പറഞ്ഞപ്പോഴാണ് വീരേ ശ്രകുമാർ പിരോദിയത്. തെര ഞ്ഞെടുപ്പിൽ യുധിഎഫിനൊപ്പം നിൽക്കാൻ വിരേശ്രകുമാർ നേ രഞ്ഞെന്നെ നിയേയിച്ചിരുന്നു.

ജനതാദളിൻ സീറ്റ് നിഷേധി ച്ച സംഭവം ഇതിനുമുന്നും കേര ഉത്തിൽ ഉണ്ടായിട്ടുണ്ട്. സുവൈ മാൻ റാവുത്തർക്ക് സീറ്റ് നിഷേ ധിപ്പട്രോൾ എൽഡിഎഫ് വിടാ ൻ ആലോപിക്കുകപോലും പെ യ്യാതിരുന്ന വീരേന്ദ്രകുമാർ തനി ക് സീറ്റ് നഷ്യപ്പെടുമെന്നാർത്താ ബ് ഇത്തരമൊരു തീരുമാനമെടു അത്.

ജനതാരളിന് എൽഡിഎഫ് സീറ്റ് നിഷേധിച്ചെന്ന വീരേത്ര കുമാറിന്റെ പ്രംമരണം തെറ്റാണ്. കോഴിക്കോടിനു പകരം മറ്റൊരു സീറ്റ് നൽകാരെന്ന് എൽഡിഎ ഫ് നേതൃതം അറിയിച്ചതാണ്. ജനതാരളിന് ഒരു മാജ്യസഭാ സീ റ്റ് സിപിഐ എം വാഗ്ദാനം ചെ ശ്തിമുന്നു. ഇതെല്ലാം മറച്ചുപി ടിച്ച് എൽഡിഎഫിനെതിരെ നു ബ്രൂപ്പാരണം നടത്തുകയാണ് വീരേത്രം വെയു വിവ

റായി വില യെന്നും അദ്ദേഹങ ലംഗട് വേ നായാന്യ ടുത്തിയാ നായിരു റായി വി! സംസാരി ദ്രേഹം ക കുമാനിന്

ക്കന്മാണ്

• എൻ എം ജോസഫ് പ്രസിഡന്റ്

Roll no - 07

Explain digestive system?
Its a process that start with right hand & ends with left .
What is the chemical formula for water?
h.i.j.k.i.m.n.o (h to 0).
Till when second world war was fought?
from page no 26 to page no 43.
Who was Bhagat Singh?
Ajay Davegan, Boby Deol, Manoj Kumar ,etc
Who was Adlof Hitler?
this person.
0
(10)

One Million copies of a new book sold in just 2 days due to a typing error of just 1 alphabet in title

**Title of Book:** 

"An idea can change your wife"





Ph.D

BANK MANAGER

What do you mean by Ph.d?

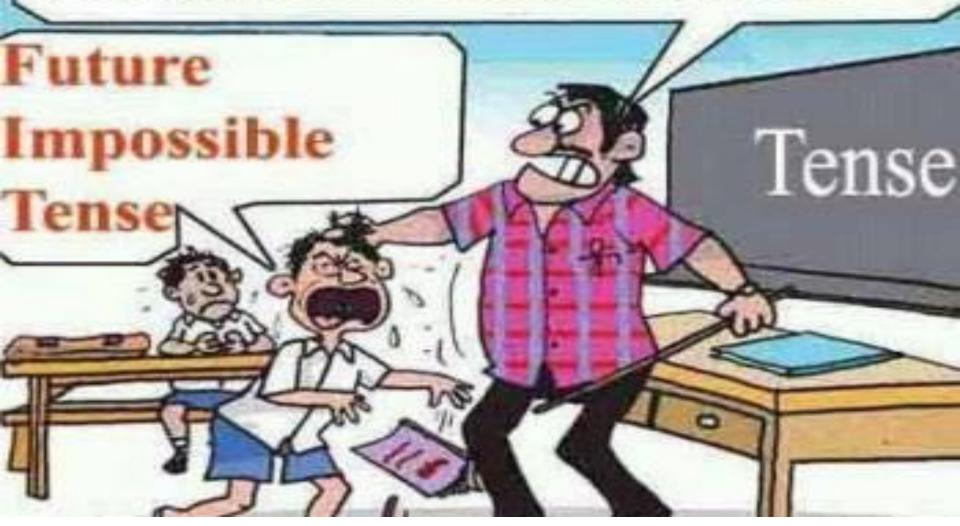




Passed Highschool with Difficulty....

## English Class

"One day our country will be corruption free". Which tense is it??

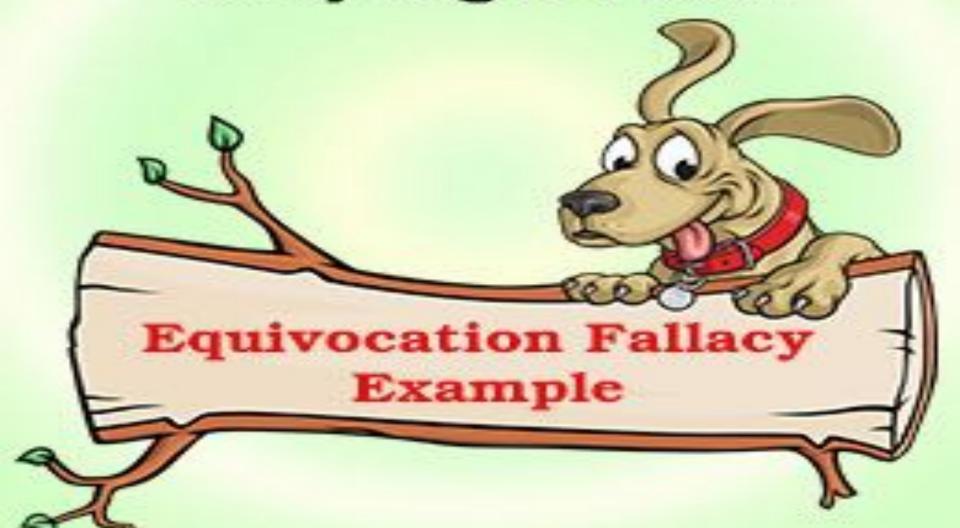


## 1. Equivocation - more than one meaning

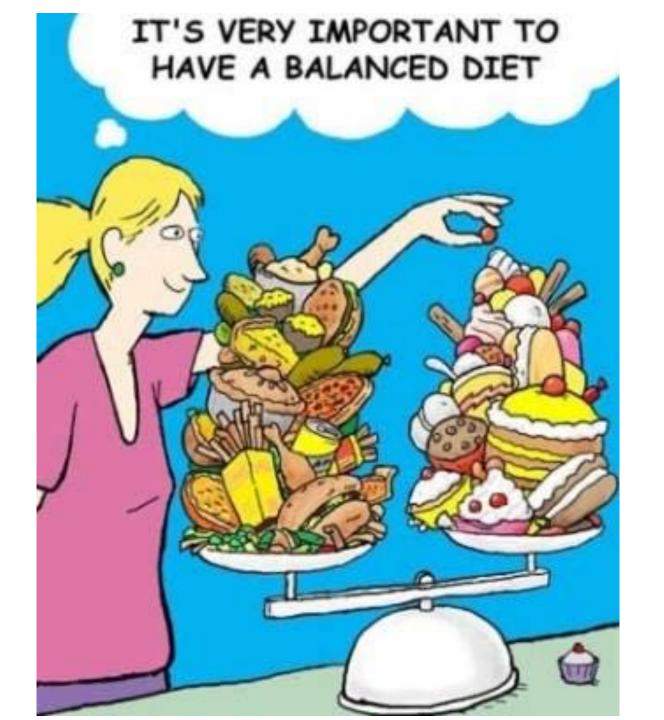
- Fallacy depending on the double meaning of a word
- Lexical Confusion
- If in the same argument the word is used in two senses there is a fallacy of equivocation

All trees have barks.

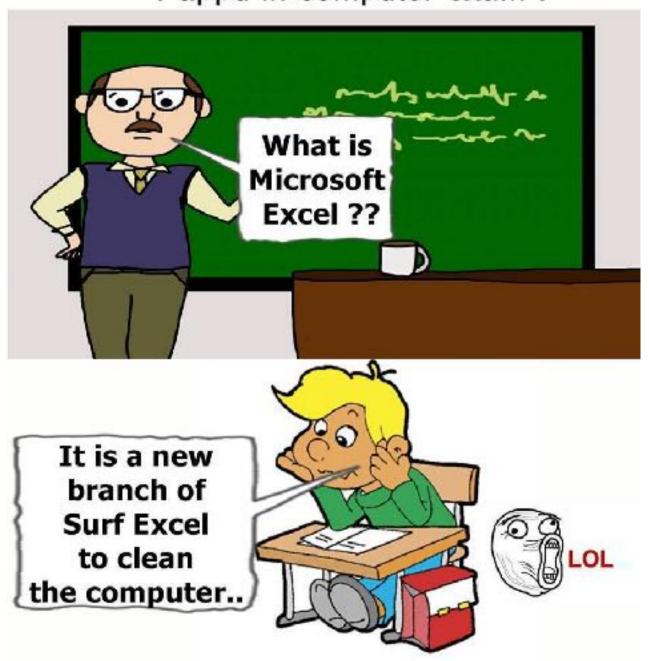
Every dog barks. Therefore,
every dog is a tree.







#### Pappu in computer exam-:





TEACHER: What is the chemical formula for water?

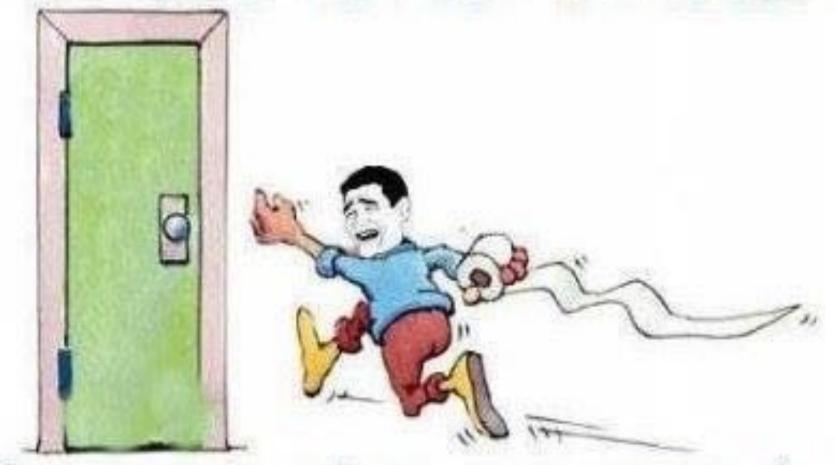
PAPPU: "HIJKLMNO!

TEACHER: What are you talking about? PAPPU: Yesterday you said it's H to O!



## The best way to make a girl fall for you is to tie both of her shoe laces together :'3

## Newton's 4th law of motion



Loose motion can never be done in slow motion.

### Cell

- Biology smallest part of body
- Physics- Battery Cell
- Communication- Cell phone
- Sociology- Jail



# Ost control

## 2. Amphiboly

Result of syntactic (connected system or order - the due arrangement of words in sentences in their necessary relations ) Ambiguity

Because of statements that are syntactically confusing

 Amphiboly is the use of grammatically ambiguous sentence to deceive or mislead others.

## 2. Amphiboly

The anthropologists went to a remote area and took photographs of some native women, but they weren't developed.

"The doctor wanted to operate on the patient, but he was not ready," the "he" is ambiguous and could refer to either the doctor or the patient.

## Murder of English

- 1. Pick up the paper and fall in the dustbin.
- Both of you stand together separately.
- Why are you looking at the monkeys outside when I am inside.
- Will you hang the calendar or else I will hang myself.
- 5. I have 2 daughters both are girls.
- 6. Give me a blue pen of any color.
- 7. The principal is revolving in the corridor.
- 8. all of u stand in a straight circle
- 9. Open the Window Let the AIRFORCE come in.

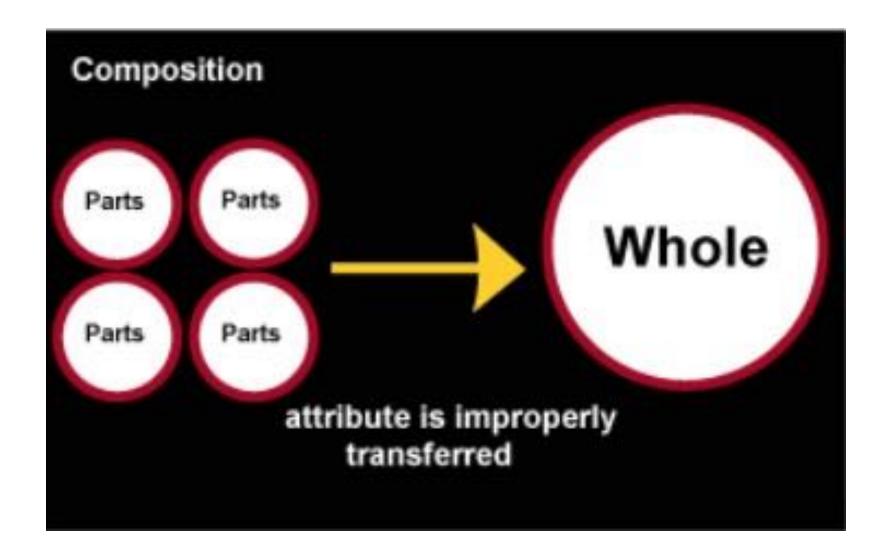
## 3. Composition

- Attributing the property of the parts of a thing to the entire thing
- a conclusion is drawn about a whole based on the features of its constituents

Hydrogen is not wet. Oxygen is not wet. Therefore, water (H2O) is not wet.

 The thread you are using is easily torn, so the garment you are making will be easily torn

- What is wrong with it-
- The threads may well be easily torn and yet the cloth maybe sturdy





### 4. Division

- Attributing the properties of the whole to it parts
- The logical fallacy of arguing that what is true for the whole is also true for the parts

Fallacy: America is the fattest country on the earth, therefore all Americans are fat.

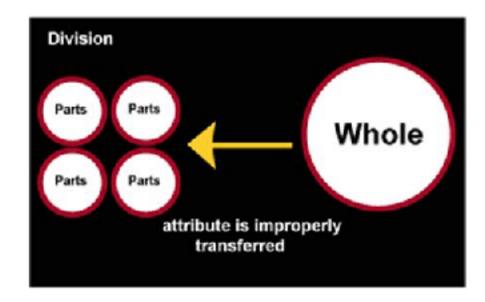
Reality: Not all Americans are fat.

Fallacy: Terrorist attacks committed by Muslims are in the name of Islam, therefore all Muslims are terrorists. Reality: The majority of Muslims are not terrorists.

## **Fallacy of Division**

Assuming that what is true of the whole is true of its parts.

 CR students, compared to students at other California community colleges, are less likely to earn their degrees. Therefore, you are less likely that other Calif. CC students to earn your degree.  Toyotas are the most reliable automobiles.
 Therefore, your Toyota is reliable.



#### Fallacy of Division

- Assuming that what is true of the whole is true for the parts.
  - Example: That car is blue. Therefore, its engine is blue.
  - Example: Your family is weird. That means that you are weird too.

#### 5. Emphasis

- Twisting words for ones own benefit and emphasizing things which are not originally emphasized
- Mother: you spilled the Coffee on the carpet
- Jasmine: I Spilled the Coffee?
- Mother: There you are. You admit it

### 6. Red Herring Fallacy

 Introducing a topic which is completely irrelevant to the topic under consideration just to divert the attention from the original issue

 An observation that draws attention away from the central issue in an argument or discussion;

# if you can't win an argument, correct their grammar instead.

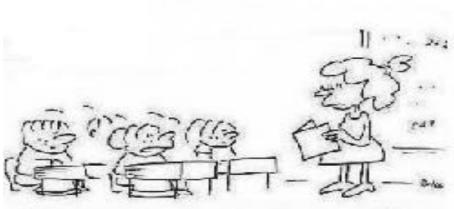
 Suppose we are discussing whether admission criterion for undergraduate courses in universities and colleges should be made stricter -

 Someone argues- I think we ought to make the selection criterion stricter because after all we are in a period of recession and we don't want to lose our jobs

# II. The Fallacy of Unwarranted assumption

An Argument suffers the fallacy of UA -If argument is a) poorly based- a premise that is poorly based b) a conclusion that is not adequately supported

# II. The Fallacy of Unwarranted assumption



"If two negatives make a positive, how come two wrongs don't make a right?"



- If walking is good for your health, the postman would be immortal.
- A whale swims all day, only eats fish, only drinks water and is fat.
- A rabbit only eats vegetables, runs and hops all day long and only lives 5 years.
- A tortoise doesn't run and does nothing energetic, yet it lives for 450 years.

And you tell me to exercise! I don't think so

### 1. Begging the Question

 An argument begs the question If the conclusion that it intends to prove is already assumed in its premise

#### 1. Begging the Question

 Tobacco chewing is a cause for oral cancer because there is a casual relation between tobacco and cancer

#### 1. Begging the Question

We see that the conclusion, which wants to
 establish the fact that tobacco chewing is the cause
 of oral cancer, assumes the premise that there is a
 relation between of cause and effect between
 tobacco and cancer

Petitio Principii

the conclusion is assumed in one of the premises

- This can also be known as a "Circular Argument"
  - because the conclusion essentially appears both at the beginning and the end of the argument, it creates an endless circle

• Examples:

 Everyone wants the new iPhone because it is the hottest new gadget in the market

 God is real because the Bible says so, and the Bible is from God.

#### 2. Complex Question

 When we ask a question which has a hidden assumption that is unwarranted

Eg. Lawyer: "So, have you stopped Lying"?

- Makes an unwarranted assumption that the witness used to lie
- makes the question a complex one that has a hidden unwarranted (unnecessary) assumption
- Two questions 1. Do you really lie?
  - 2. Have you stopped doing so now?

## 2. Complex Question

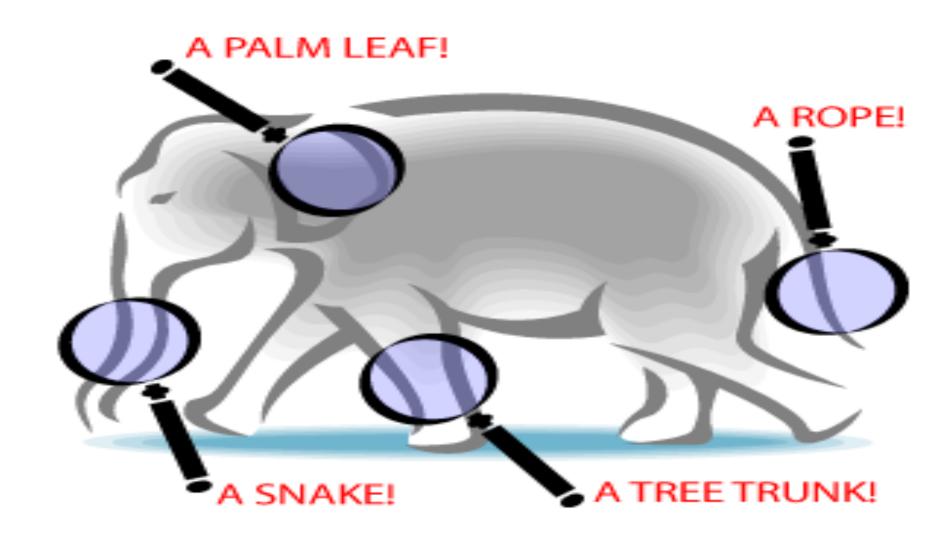




#### 3. Hasty Generalization

- Makes a generalisation based on few instances
- Eg. Some one sneezed when I went out today. I missed my interview.
- Therefore, whenever someone sneezes when we are going for some important work, we will fail in performing that work properly.

## 3. Hasty Generalization



 While making a general statement, if we intentionally chose samples that are sure to conform to the general thesis, then sample is biased

- Eg. A study taken in Bengal and Assam shows that 85% of the people love to eat fish.
- So, 85% of Indians love fish
- A study in the college shows that the students of First year English does not come in time.
- There fore, the First year students of the College are not punctual

Pastor Pete: People are turning to God

everywhere!

 9 out of 10 people I interviewed said that they had a personal relationship with Jesus Christ.

- Fred: Where did you find these people you interviewed?
- Pastor Pete: In my church.

# 5. Unqualified Generalization (Dicto Simpliciter)

 Making a generalisation without excluding the exceptions

 A fallacy in which a general rule is treated as universally true regardless of the circumstances: a sweeping generalisation.

 Eg. No one should spend money on psychiatrists (does not take into account the people with psychiatric problems)

# 5. Unqualified Generalization (Dicto Simpliciter)

- India is a "Hindu Rashtra". Therefore, all Indians are Hindus.
- So, let muslims go to pakistan and Christians go to vatican

 Vegetarian food is good to health there fore all good people are vegetarians

#### 6. False Cause

- Considering something to be the cause of something else
- Eg. Stemy lost her job because she forgot to fast on Tuesday

- Antony failed in the exam, because, ......
- English is tough for Soorya because,.....

#### 7. Coincidence

 Taking a coincidental connection between two events as indicative of a strict casual relation

- Eg. Astrologer predicted I will get a job at 25.
- It happened so.
- He then predicted I will get married at 29 and now
   I believe what he says will come true

#### 7. Coincidence

If a black cat crosses some thing bad will happen

 If three are going together for a venture, it will be a failure.

• On the day of English exam, the invigilator in our section was Fr. Joseph. I got highest mark for English Therefore, ...

· Find similar examples- Cricket match, Film, Election etc.

#### 8. Post Hoc Fallacy

- Post hoc -a shortened form of post hoc, ergo propter hoc
- fallacy in which one event is said to be the cause of a later event simply because it occurred earlier.

 Also called the fallacy of false cause, faulty cause, and arguing from succession alone. The Latin expression post hoc, ergo
 propter hoc can be translated literally as
 "after this, therefore because
 of this."

#### 8. Post Hoc Fallacy

- If we take an event X as the cause of the event Y
- Event X happened immediately prior to event Y.
   Therefore, X caused Y.

Let's not take Bill on our picnic.
 Every time we take him out with us, it rains.'

#### 8. Post Hoc Fallacy

 Eg. You had not taken bath in the morning. You got highest mark for that exam.

 You come to a conclusion If I write an exam without bath it will be a success

End result - just being dirty!

ate a loaf of bread, and got a cold a few days later

I must have gotten sick from the bread I ate

## 9. Common Cause Fallacy

We take some event X to be the cause of Y,

Where as actually both X and Y are the effects of Z

## 9. Common Cause Fallacy

Eg. Child has high temperature(X)

Child has rashes (Y)

Therefore, I assume "High Temperature is the cause for Rashes"

But actually the child has high temperature and rashes(X&Y) because of Viral Fever (Z)

#### • slippery slope Fallacy



slippery slope Fallacy

a course of action is objected to on the grounds that once taken it will lead to additional actions until some undesirable consequence results.

Also known as the *slippery slope argument* and the *domino fallacy*.

• slippery slope Fallacy

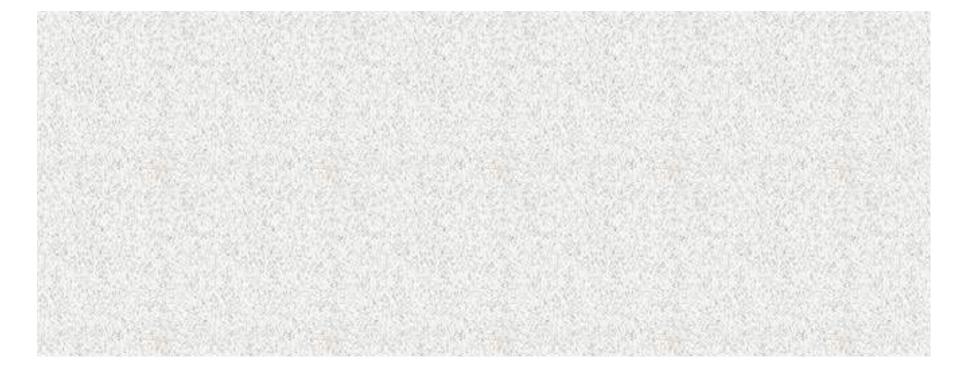
The slippery slope is a fallacy,

"precisely because we can never know if a whole series of events and/or a certain result is determined to follow one event or action in particular.

 Usually, but not always, the slippery slope argument is used as a fear tactic

#### 10. Slippery slop

 Arguing that event Y must inevitably follow from event X without proper justifications to support the argument



#### 10. Slippery slop

 Eg. We should stop them from banning pornographic literature

Because once they do it, next step of them would be burning all the books

#### 10. Slippery slop

We should not allow beer parlors. It would make all the college students alcoholics

 We should ban Pk. Otherwise it would lead all the religious people to abandon religion

If you allow to kill cow, in future they would kill all other animals



Asserting that if we allow A to happen, then Z will consequently happen too, therefore A should not happen.

The problem with this reasoning is that it avoids engaging with the issue at hand, and instead shifts attention to baseless extreme hypotheticals. The merits of the original argument are then tainted by unsubstantiated conjecture.

#### 11. Gambler's Fallacy

- An argument that repeated occurrence of an event that departs from the expected norm indicates that the event will cease soon
- Eg. Gamblers believes that if one has lost many times the one will win the next time



#### 12. Fallacy of False Dichotomy

 In argument, coming into a conclusion without mentioning all the alternatives

### 12. Fallacy of False Dichotomy

Eg. Anushka is either in the college or she is at home. We called her home and she is not there. So, she is in the College

- She will be either in the library or in the Lake view. She not in the library. So she will definitely be in the lake view

#### III. The Fallacy of relevance

 Believing in the truth of the conclusions without providing adequate reason

#### Question By A STUDENT !!



If A Single Teacher Can't Teach Us All The Subjects, Then..

How Could You Expect A Single Student To Learn All Subjects??

#### What is a fallacy of relevance?

A fallacy of relevance is one where the argument in which it occurs has premises that are logically *irrelevant* to the conclusion.

They appear to make sense though which makes them difficult to identify.

What is flawed about an argument with a fallacy of relevance is that the connection between the premises and conclusion is emotional.

 To recognize this kind of fallacy, you need to be aware of the difference between arguments that use genuine evidence and those that rely on an emotional appeal.

## 1. Appeal to inappropriate authority (argumentum ad verecundiam)

- based on the belief that prestigious people cannot be wrong
- Sachin said drink Pepsi, so we should drink Pepsi
- Mother said I have fever. So I am not going to college today

#### 2. Ad Hominem

- Judging the veracity of a person's words based on his/her character.
- Coming to a conclusion that words of a person cannot be true because he/she have some sort of flaws
- Eg. "Why should we accept what max Muller said about Indian Philosophy"? He was not even an Indian.
- Personal attack
- I know the background of your family etc.
- How can Soniya Gandhi Love India? Because she is from Italy
- How can Smrithi Irani be the education minister?
   She is not educated herself

"Ad hominem attacks are attacks against people as a means of discrediting their ideas. Basically, it is a weaselly, dirty, sneaky attack."



Can we let a shrimp like this run our great country?

### 3. Tu Quoque (Look who is talking)

 Coming to a conclusion that one who advises something has the same flaw in his life and therefore what he says cannot be true.

Eg. Father(a smoker)
 says to son: "don't
 smoke. Smoking is bad
 for your health".

Son: "Look who's talking"

 How can obama talk about peace when he him self attacked Iraq



"ഒരിക്കൽ ക്രിസോസ്റ്റം തിരുമേനി എന്നോട് ചിരിച്ചുകൊണ്ട് ചോദിച്ചു; കല്യാണം കഴിക്കാത്ത കാപ്പിപ്പൊടിയച്ചൻ എങ്ങനെയാ കല്യാണം കഴിച്ചവരോട് ഇങ്ങനെയൊക്കെ പറയുക എന്ന് . ഞാൻ ചിരിച്ചുകൊണ്ട് പറഞ്ഞു; നല്ല റഫറിമാർക്ക് റൂൾസ് മൊത്തം അറിയാം, ഗയിം ഇല്ലെന്നു മാത്രമേയുള്ളൂ." ഫാ ജോസഫ് പുത്തൻപുരക്കൽ





### 4. Non Sequitur(Does not follow)

- When the conclusion does not follow from the premises
- All the formal fallacies are cases of non sequitur
- Eg. I am sick. I do many medical treatments, but everything failed. So, I conclude that medical treatment is useless and Faith healing only can cure me.

#### 5. Divine Fallacy

- A kind of non sequitur fallacy
- When we cannot explain some phenomenon, we recourse to thinking that God must have been responsible for it.

 Eg. People could not find out the reason for thunder and lightening, so they came to a conclusion that it is a result of God's rage.

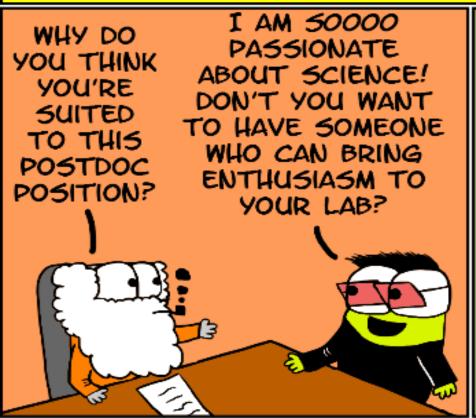
## 6. Appeal to Emotion (argumentum ad populum)

- Appealing to one's emotional weakness so as to persuade him/her to do or not to do something
- Eg. An advertisement of for a jewellery says:
- " If you do not give your wife a diamond ring, for your wedding, you don't love her"
- Mother says: "Eat another chapatti otherwise, other wise I will be sad"

#### THE UPTURNED MICROSCOPE PRESENTS Logical Fallacies in the Lab

TODAY: APPEAL TO EMOTION

TRYING TO EVOKE AN EMOTIONAL RESPONSE INSTEAD OF USING A VALID ARGUMENT.





### 7. Appeal to pity (Argumentum ad misericordiam)

 While persuading someone, if we appeal to his/her sense of pity Eg. Student writes in the answer sheet "I am from a poor family. My parents are sick. I am taking care of them and don't get enough time to study. Please give me marks"

### 8. Appeal to force(argumentum ad baculum)

 Opposite to appeal to pity. Persuading someone to do something by threatening  Eg. The student writes in the answer sheet "If you fail me in the exam, you will be in trouble. Because I am the son of M.L.A."

## 9. Inference from Ignorance (argumentum ad ignoratiam)

- Argues that something is true because it cannot be proved to be false or something is false because it cannot be proved to be true.
- Eg. God must exist because I cannot prove that He doesn't exist.
- God does not exist because I cannot prove that He does.

ബിജുവിന്റെ വാഹനം ഇപ്പോൾ സെൽവിയുടെ വീട്ടിൽ എത്തിക്കഴിഞ്ഞു! അതാ ചന്ദ്രൻ ഒരു സഞ്ചിയുമായി മുറിയിലേക്ക് വരുന്നു. സഞ്ചിയിൽ സീഡി ഉണ്ടാവുമോ? ഉണ്ടെങ്കിൽ അത് മുഖ്യമന്ത്രിയുടെ ദൃശ്യങ്ങളുള്ള സീഡിയാണോ, എത്രസമയം കാണും അതിലെ ദൃശ്യങ്ങൾ ദൃശ്യങ്ങൾക്ക് വ്യക്തതയുണ്ടാവുമോ തുടങ്ങിയ കാര്യങ്ങളെക്കുറിച്ച് ചർച്ച ചെയ്യേണ്ടതുണ്ട് , ഒരു ചെറിയ ഇടവേളയ്ക്കു ശേഷം മടങ്ങിവരാം





#### 10. Appeal to Tradition

 If are asked to follow a course of action because it is according to traditional norms  You should go to church every Sunday.

Why?

Because it is the tradition

 We should stand up when the teacher comes to class

Why?

Because it is part of tradition

# 11. Irrelevant Conclusion (ignoratio elenchi)

In giving an argument, if we provide evidence that is not exactly relevant for the particular conclusion at hand

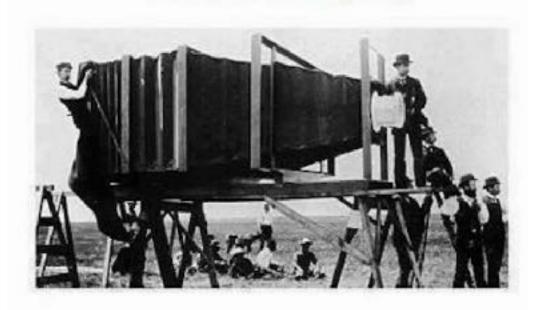
 Eg. All children should get ample attention from their parents

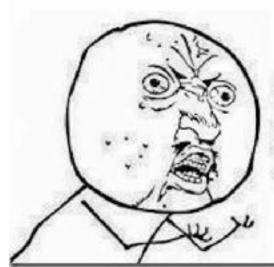
Parents who work full time cannot give ample attention to the children.

Therefore, mothers should not work full time.

( how could the speaker come to a conclusion only about "mothers")

### Making of the world's first camera





Which camera took the picture of the world's first camera ????

Y U NO EXPLAIN ???