
UNIT 4 FALLACIES

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4.0 OBJECTIVES

The purpose of this unit is to enable the students to recognize fallacies. This is necessary because it is possible to distinguish valid arguments from invalid arguments only when we can identify invalid arguments. In other words, you can know what is good only when you know what is bad and if you know what is bad you, surely, will avoid the same. This is what, precisely, Socrates said. Fallacy is the class name given to bad (illogical) arguments. Fallacies are like plastic flowers: They give you the impression that they are valid. But, a student of logic, like a bee, should be able to distinguish between the real (valid) and the artificial (invalid).

4.1 INTRODUCTION

There are as many types of fallacies as there are types of errors in arguing. Falsehood has many faces whereas truth has only one. Therefore our task is clear. What do we mean by fallacy? How do they arise? How are they classified? How can we avoid them? These are some of the questions to which we turn now.

Logic deals with the Rules of correct thinking. Hence fallacy arises when we violate any of these Rules. Strictly speaking, a fallacy is a type of arguing which appears to be valid, but actually invalid. The term fallacy comes from the Latin word 'fallo,' meaning 'I deceive.'

We reason incorrectly when the premises of an argument fail to support its conclusion. Every fallacy can be a Non-sequitur ('it does not follow'). Examples: 'This man is not clever because he cannot talk fast' or 'He is not a patriot because he does not wear khadi.' Any argument of this sort is fallacious.

Therefore any error in reasoning is a fallacy. Logicians use the term 'fallacy' to mean typical errors, that is, mistakes in reasoning that exhibit a pattern that

can be identified and named. The great logician Gottlob Frege, regarded as the father of Modern Logic, has made this observation: One of the tasks of a logician is to 'indicate the pitfalls laid by language in the way of the thinker.' Every fallacy is a type of incorrect argument. The particular argument that violates some known or unknown Rule is commonly said to be a fallacy because it is an individual example of that typical mistake. When the Rule is unknown, it is the business of logician to discover or frame the Rule.

Illustration: Suppose one argues, 'All science is essentially materialistic; Karl Marx who was certainly a materialist, must therefore have been scientific.' This is a bad reasoning, fallacious, because conclusion does not follow from the premise. If every P is a Q, it does not follow from the fact that one is a Q that he is a P. All cats are mammals, but not every mammal is a cat. Here we can easily identify a pattern of mistake. We call this pattern 'the fallacy of affirming the consequent.'

This is a formal fallacy that violates one of the Rules of mixed hypothetical syllogism. Examples of some other formal fallacies are: undistributed middle, illicit major and illicit minor. Most fallacies, however, are not formal but informal; they are patterns of mistakes that arise from confusions concerning the content of the language used. Such informal fallacies arise in very many ways and they are often more difficult to detect than formal ones because language is slippery and imprecise, and can set traps. In this unit, we consider only informal fallacies, since the students are already familiar with the formal fallacies in their study of classical logic.

A word of caution: In ordinary speaking and writing people sometimes make mistakes without being aware of them. Therefore, though our logical standards should be high, in their application to arguments in ordinary life we should also be generous and fair. The sources of fallacies in our daily life are misinterpretations, false assumptions, lack of knowledge, distraction of the mind, prejudices, and so on.

4.2 CLASSIFICATION OF FALLACIES

Fallacies are numerous. Logicians are not unanimous as to the number and manner of the classification of fallacies. Some logicians have distinguished up to 112 different fallacies! Different logicians classify them differently. So, there is no correct taxonomy of fallacies. Often their grouping is arbitrary.

In our discussion we follow the latest classification done by Copi (2010, 395-461). He groups them into four main categories: fallacies of (i) relevance, (ii) induction, (iii) presumption, and (iv) ambiguity. What follows is an outline of these fallacies:

4.3 FALLACIES OF RELEVANCE

Fallacies of relevance are so called because relevance is ignored in such cases. Six of such mistakes are of interest here.

R1. APPEAL TO EMOTION (*ARGUMENTUM AD POPULUM*) is making use of the feelings and prejudices of people ('to the populace') rather than their reason. This is perhaps the most common of fallacies. Example: In campaigning

for election in India one might ask: 'Should you not vote for the Congress? Did not the congress men suffer imprisonment for the sake of the country?' Thus, the speaker (or writer) appeals to patriotism, an honorable emotion, without clear evidence to appeal to the feelings of his audience. The oratory of Adolph Hitler, whipping up the racist enthusiasm of his German listeners, is another classic example.

Besides politicians, many others, like advertisers, commit this fallacy. Advertising industry has raised it almost to the status of a fine art. Example: beauty products are associated with youth and captivating personalities, and self-confidence; men depicted using the products are generally handsome and famous, the women graceful and charming. They arrest our attention by relentless appeals to our emotions of every kind. Their suggestion is that the product - say soft drinks, or soap, - is sexy, or is associated with wealth or power, or some other admired traits, and therefore we, in purchasing it, will acquire some of that same merit.

Sometimes they use what is known as 'bandwagon fallacy' - to imitate others in action or thought or speech (fashion also can be included) because so many others are doing it. This is very common in media. Example: look at the following advertisement: 'Smooth sailing is all that's there to LIFE with LIC's JEEVAN SARAL (easy life). (The Week, 22 Feb. 2005).

A variant of this frequent fallacy is called *argumentum ad misericordiam* (appeal to pity). This is used very much in criminal trials. There may be cases where it may be justified. But, when the argument boils down to no more than an appeal to 'merciful heart' it is plainly fallacious. All sections of people use this fallacy some time or other. Very often parents use this sort of argument to secure their child's admission in prestigious schools. This is a familiar instance of this fallacy. Though often successful, the appeal to pity is ridiculed in the story of the trial of a youth accused of murdering his parents with an axe. Confronted with overwhelming proof of his guilt, his attorney appealed for leniency on the grounds that his client is now an orphan!

R2. THE RED HERRING is distracting the attention of listeners from the topic under discussion. As the story goes, red herring is used to distract or confuse dogs. It means a trail which is left to mislead deliberately. So whatever can keep the listener off the track may serve as a red herring. In a popular novel and movie, *The Da Vinci Code*, one of the characters, a Catholic Bishop, enters the plot in ways that very cleverly mislead. His name aptly suits the mission; Bishop Aringarosa - meaning 'red herring' in Italian.

R3. THE STRAW MAN is a way of arguing against some view by presenting an opponent's position as one that is easily torn apart. That is, it is very much easier to win a fight against a man made of straw than against one made of flesh and blood. To argue that one should not join the civil services since some civil servants are corrupt and by joining the service one would be supporting this systematic corruption is an example of a straw man argument. But this argument is not justifiable because someone may decide to join administration with the laudable intention of eradicating corruption in public life. This fallacy results when we adopt the most extreme view possible - that every act or policy of a certain kind is to be rejected. This argument is easy to win, but not relevant to the conclusion originally proposed.

R4. ARGUMENT AGAINST THE PERSON (*ARGUMENTUM AD HOMINEM*) consists in attacking the character of the opponent instead of proving or disproving the point at issue. Instead of proof, the argument merely

refers to his conduct. The thrust of the argument which commits the fallacy of ad hominem is not on the disputed conclusion, but on some person who defends it. This kind of personal attack is hurting, and might be conducted in either of two ways: One is abusive and the other circumstantial.

Abusive attack means 'questioning the integrity of the opponent'. But the character of an adversary is logically irrelevant to the truth or falsity of the reasoning employed. A proposal may be attacked as unworthy because it is supported by 'extremists,' or by 'fundamentalists.' But such allegations, even when plausible, are not relevant to the merit of the proposal itself. Socrates was convicted of impiety partly because of his long association with persons known to have been disloyal to Athens and rapacious in conduct.

Circumstantial ad hominem is to argue that you are as bad as I am; just as guilty of whatever it is that you complained about. Example: A hunter, accused of needless slaughter of harmless animals, sometimes replies by noting that his critics eat the flesh of harmless cattle. But the fact that the critics eat meat is totally irrelevant to the question raised, viz. whether needless killing is ethical. Another example: it may be unfairly suggested that a member of the clergy must accept a given proposition because its denial would be incompatible with the Scriptures.

The circumstances of an opponent are not properly the issue in serious arguments. It is the substance of what is claimed, or denied, that must be addressed. It may be rhetorically effective but that does not make up for its error. However, sometimes in court room proceedings, for example, it is acceptable, and often effective to call a judge's attention to the unreliability of a witness, and by so doing undermine the claims upheld by the testimony of that witness. But even this attack on the person of the witness does not establish the falsehood of what had been asserted.

R5. APPEAL TO FORCE (*ARGUMENTUM AD BACULUM*) consists in appealing to physical force to make the opponent to submit. 'Appeal to the stick' is hardly logic, though sometimes very effective, for example, in making the criminals confess their crimes. However, no one would agree that 'might is right.' The threat of force in any form is unreasonable and therefore fallacious. It is indeed very odd if someone says, 'When you have no case, well get angry and threaten.' This is equal to saying: the best policy of defending yourself is to become offensive.

Right from the domestic front to the international forum, threat, a 'subtle' weapon, is used as a powerful instrument of persuasion. Many powerful nations are using 'arm twisting' policy like reducing financial aid, cutting the technical assistances, and so on, if the opponent countries do not sign a particular treaty. Though threats are used implicitly on a large scale by all sections of society, accepting a conclusion merely on the basis of threat is not at all sound from a logical point of view.

R6. MISSING THE POINT (*IGNORATIO ELENCHI*) is diverting attention from the real point at issue. It is arguing beside the point. This applies to many kinds of arguments where the conclusion does not follow from the premises. Example: 'The object of war is peace; therefore, soldiers are the best peacemakers.' Even if it is assumed that the object of war is peace, still it does not imply that soldiers are the best peacemakers.

Of the various informal fallacies of relevance, *ignoratio elenchi* is perhaps the most difficult to describe with precision. It is confusion in reasoning that the speaker does not fully recognize. Aristotle, who classified fallacies, explained it as a mistake made in trying to refute another's argument; defender tries to argue for P and the opponent counters it with an irrelevant Q.

In a sense, every fallacy is an *ignoratio elenchi* because there is a gap between the premises and the conclusion, and thus the debator misses the point. So, *ignoratio elenchi* is a catch-all class of fallacies: *Non sequitur* is similar fallacy in which the conclusion does not simply follow from the premises. *Non sequitur* is more often applied when the failure of argument is obvious. 'A great, rough *non sequitur*,' Abraham Lincoln observed in a speech in 1854, 'was sometimes twice as dangerous as a well polished fallacy.'

R7 ARGUMENT FROM IGNORANCE (ARGUMENTUM AD IGNORANTIAM) is taking advantage of the ignorance of the opponent. Example: 'there is neither heaven nor hell because no one has seen it.' Or, 'Ghosts do not exist because no one has proved its existence so far.' If a proposition has not yet been disproved, can we conclude that it is true? If we say yes, then we are arguing from the supposed absence of disproof to the presence of proof. This is what the examples given above show. Or, if some proposition has not yet been proved true, then can we conclude that it is false? If we can, then we are arguing from the absence of disproof to the presence of proof. The following example falls under this category. 'Since no one has disproved a supernatural being, the supernatural being exists.'

Both these inferences are defective. For, ignorance or absence of evidence is taken as evidence for the conclusion. Unfortunately, our daily life is sprinkled with this fallacy. The customer asks the shopkeeper concerning the quality of an item like cloth. The spontaneous reply is that so far no one has complained against it. Similarly, a customer asks the manufacturer about the quality of the glass he is buying. The standard answer is: 'I have been making and selling glass for nearly ten years and since then I have not heard any complaint against it.'

Even in science this fallacy crops up. In archeology, for example, evidences might have been destroyed over a period of time. But we cannot, therefore, conclude that an otherwise plausible claim is false. This fallacy has been very attractive to pseudo-scientists who make unverifiable claims about psychic phenomena. Their claims regarding telepathy or clairvoyance are examples of this sort of fallacy. They justify their proposition by arguing that critics have been unable to disprove it.

This fallacy can be a major hindrance to progress. Galileo, whose newly invented telescope revealed the mountains and valleys of the moon, was confronted with this sort of fallacious argument by his opponents. Similarly, whenever some change is proposed, within an institution or in society at large, those threatened by it are likely to counter it with this type of fallacy thus: 'How can we know whether it will work? How can we know whether it is safe? We do not know. So, we should not adopt the change proposed.' True, it is often impossible to prove the workability or safety in advance. But it is not the ground for rejection.

R8 THE APPEAL TO INAPPROPRIATE AUTHORITY (*ARGUMENTUM AD VERECUNDIAM*) is also known as 'ipse dixit' (the master has said it). If I argue that 'the soul is immortal because Plato says so, then I commit this fallacy. This fallacy occurs when the premises appeal to the judgment of some person(s) or text(s) that have no legitimate claim to authority in the matter at hand. This is a very common and crafty fallacy because a person who is an expert in one field is taken as an expert in some other, comparatively, unrelated field. If, for example, we take Bertrand Russell, a great authority on philosophy, as an authority on the matter of shoes, we commit this fallacy.

The most blatant examples of misplaced appeals to authority appear in advertising 'testimonials.' Since Sachin Tendulkar, an authority in cricket, says that a particular cool drink is good, we should accept that drink as superb.' This is fallacious. If Sachin had recommended a particular brand of cricket bat, then his words would have been authoritative. But when it comes to the matter of drinks he is no better than any other. Likewise, we cannot take a scientist, an expert in making nuclear weapons, as an authority on international economical or political matters. Nor can we consider a great religious leader as an expert on financial matters

R9 MISERICORDIAM: This is an appeal to pity. From Plato's dialogues we understand that in ancient Greece, the criminals followed this method to escape punishment. It is doubtful whether this was followed by one who was not guilty.

Of course, no fallacy is committed when we are guided by the judgment of acknowledged experts. In fact, such recourse to authority is necessary for most of us on very many matters. Taking expert opinion is surely one of the reasonable ways of supporting a conclusion though not conclusive.

Check Your Progress I

Note: Use the space provided for your answers.

- 1) Explain the meaning of fallacy? Distinguish between formal and informal fallacies

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- 2) Give examples for Argument Against the Person (*Argumentum AD Hominem*) and Appeal to Inappropriate Authority (*Argumentum AD Verecundiam*)

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4.4 FALLACIES OF INDUCTION

In the strict sense of the term there is nothing like inductive fallacy though several fallacies are included under this category. A fallacy arises when a Rule of inference is violated. This can be put in this way also. An argument is invalid if and only if it is fallacious. Distortion of meaning in the process of understanding can also be regarded as a fallacy because distortion of meaning can be construed as violation of grammatical or syntactical Rules. On the contrary, inductive inference is not governed by any logically certain Rule as such. In other words, inductive argument is neither valid nor invalid. It is either probable or improbable. Further, probability or improbability is a matter of degree. An argument may be very highly improbable. In terms of truth-value its value can never reach '0' when the truth-value of premises is '1'. In other words, regarding improbable argument as fallacious is itself fallacious. Therefore fallacy of an inductive argument stands or falls with disputed Rule or Rules. Without going into the merits or demerits of this criticism, let us use the term fallacy in a loose sense and consider briefly some supposed inductive fallacies.

D1. ANALOGY: An argument which infers unobserved similarity from observed similarity or similarities between two or more than two objects or persons is known as analogy. It is true that Rules are laid down to distinguish strong analogy from weak analogy. But the point is that the logical status of strong and weak arguments remains the same. Therefore if one of them is fallacious, then the other one also is fallacious. Only pragmatic considerations help us to retain one at the cost of the other.

D3. FALSE CAUSE (*ARGUMENTUM NON CAUSA PRO CAUSA*): The fallacy of false cause is committed when two events are causally connected when, in reality, such connection does not exist. This is a very common mistake. Superstition, for example, suffers from this fallacy. Suppose that someone says that a black cat crossed the path of a traveler and shortly afterwards he broke his head and therefore the black cat crossing the path is cause. This is an example of this fallacy.

Post hoc ergo propter hoc ('after this, therefore because of this') is another form of this fallacy. Every antecedent of an event is not necessarily the cause of the consequent event. Example: 'thunder is heard after the lightning. Therefore lightning is the cause of thunder.' Mistakes of this kind are rather common. Unusual weather conditions are blamed on some unrelated celestial phenomenon that happened to precede them; an infection caused by a virus is thought to be caused by a chill wind, or wet feet, and so on.

False cause is also the fallacy committed when one mistakenly argues against some proposal on the ground that any change in a given direction is sure to lead to further changes in the same direction - and thus to grave consequences. Taking this step, it may be said, will put us on a slippery slope to disaster - and such reasoning is therefore called the fallacy of the slippery slope.

A brief criticism is required. Identification of causal necessity with logical necessity is now history. Failure at two levels accounts for this sort of identification; one, failure to distinguish sequence from consequence and second, failure to recognize the dominant role played by the way in which human mind can perceive and cannot perceive the pattern of events. Again, causal necessity has only pragmatic significance. Mistaking pragmatic necessity to logical necessity is the real fallacy.

D4. HASTY GENERALIZATION: In reality, the term hasty generalization is a misnomer. Generalization, whether or not hasty, does not conform to any Rule. In the strict sense of the word, generalization becomes fallacious when association of events within fair sample is taken to represent association within the larger population. Quite often, generalization raises its head, sometimes ugly, when we pass judgment on humans divided by creed or nationality. Unless it is proved that dividing factors are the defining elements of character or personality no judgment can be accepted as authoritative. This explains why widespread stereotypes about people, who come from certain countries, with certain ethnic background, are and commonly mistaken and also why hasty generalizations about foreign cultures is illogical.

4.5 FALLACIES OF PRESUMPTION

These are fallacies that assume the truth of some unproved propositions. Such presumption often goes unnoticed. It is, therefore, usually sufficient to call attention to the smuggled assumption and to its doubtfulness or its falsity to expose such a fallacy. There are three common fallacies of this kind.

P1. ACCIDENT arises due to a lack of clarity regarding the meaning of terms used. It has two forms: (i) direct or simple fallacy of accident consists in arguing that what is true of a thing under normal circumstance is also true of it under special circumstances. Consider this example: 'Freedom is the birth right of man; so no one should be imprisoned.' This is ordinarily true but it is not applicable to a man who has committed a serious crime. Another example is more educative. 'Such and such a person should be fined for ignoring a 'No Swimming' sign when the purpose of jumping into water is to rescue some one from drowning.'

(ii) The Converse fallacy of Accident is the opposite of the direct fallacy of accident. It occurs when we argue that what is true of a thing under special circumstances is also true under normal circumstance. Consider this example. 'Liquor is beneficial in certain cases of diseases; they must, therefore, be beneficial for all persons and so its prohibition must be lifted.' This is similar to hasty generalization.

In the realm of morals, the fallacy of accident occurs if one is not careful in applying the general moral dictum. For instance, it is true that telling a lie is wrong but in order to save one's life, it is not wrong to tell lie. We have to consider the distinction between general Rule and special circumstances with greater care. Logician's job is to warn the arguer that the fallacy can creep in reasoning when we argue from an unqualified statement to a qualified one. We cannot simply assume that a generalization applies universally. For instance, there is a general principle in law, 'hearsay Rule,' that hearsay evidence may not be accepted in court. But this does not apply when the person, whose communications are reported, is dead.

P2. COMPLEX QUESTION is also called fallacy of many questions. It is a deceitful device. This fallacy consists in asking a question in such a way as to presuppose the truth of some proposition buried in the question. This is a favorite device of layers. For instance, a lawyer asks a defendant: 'have you stopped beating your wife.' It assumes that you are married, and that your wife is alive, and that you used to beat your wife, and so on. But none of these may be the case. The truth may be that you are a bachelor. The best way to face this fallacy is to refute all the presuppositions hidden in the question one by one, instead of giving a straight yes or no answer which might land you in trouble.

The appearance of a question in an editorial or headline often has the purpose of suggesting the truth of the unstated assumptions on which it is built: 'Judge Took Bribe?' This technique is a common mark of what is known as 'yellow journalism.' And in debate, whenever a question is accompanied by the aggressive demand that it be answered 'yes or no,' there is reason to suspect that the question is 'loaded' - that it is unfairly complex.

P3. BEGGING THE QUESTION (*PETITIO PRINCIPII*) consists in cleverly assuming the conclusion in the premises instead of proving it. Example: 'I should not do this because it is wrong.' This argument does not prove why the action is wrong but merely assumes it to be evil. Thus, if we assume what needs proof, then we are mere beggars, begging what we ought to earn by proof. This fallacy ends where it begins.

A celebrated example of the fallacy which occurs in the philosophical writings is the argument that everything in the world has a cause, since if it did not; we should have effects without causes. This fallacy is a subtle one because it assumes rather than restate the conclusion.

J. S. Mill argued that categorical syllogism commits the fallacy of *petitio principii*. For example, consider this argument. 'All men are mortal; Ram is a man; Therefore, Ram is mortal.' Here while establishing the truth of the premises, the conclusion is already taken into account. Without disputing this comment, let us take a non-syllogistic argument committing this fallacy: A man registered a woman in a hotel as his wife and replied, when asked for proof, 'Certainly she's my wife because I am her husband.'

This fallacy is not limited to common man. Sometimes even powerful minds are snared by this fallacy. For instance, logicians have, for long, sought to prove the reliability of the law of uniformity of Nature. This is an inductive principle which says that the laws of nature will operate tomorrow as they do today and therefore in basic ways nature is uniform, 'That the future will essentially be like the past' is the claim at stake. This is never doubted in ordinary life, but it turns out to be very difficult to justify on philosophical grounds. If we ask 'why conclude that the future will be like the past?', then the answer would be, 'because it always has been like the past.'

4.6 FALLACIES OF AMBIGUITY

These fallacies arise as a result of the shift of meaning of words and phrases, shift from the meanings that they have in the premises to different meanings ascribed to them in the conclusion. Such mistakes are called fallacies of ambiguity. The deliberate use of such devices is usually crude and readily detected; but at times the ambiguity may be obscure, the error accidental, and the fallacy subtle. Five varieties are distinguished below.

A1. EQUIVOCATION is the fallacy which consists in using words or phrases with two or more meanings, deliberately or accidentally, while formulating an argument. Fallacies related to ambiguous terms discussed in categorical syllogism serve as examples in this context also. The Rule is: 'In a categorical syllogism there should be three and only three terms, each used twice in the same sense.' The violation of this Rule is the simplest way of committing this fallacy.

A2. AMBIBOLY consists in a misunderstanding due to the ambiguous grammatical construction of propositions. Many advertisements inadvertently commit this fallacy. 'Why go elsewhere to be cheated? Come to us.' Consider another example: Suppose we are told that a number is equal to three times five plus four. This is an example of amphiboly since the answer might be either $[(3 \times 5) + 4 = 19]$ or $[3 \times (5 + 4) = 27]$.

A3. ACCENT consists in lifting a word out of context resulting in illegitimate emphasis upon it. For example consider this sermon. 'Thou shall not bear false witness against your neighbour.' If we emphasize unduly the word neighbour, then it would mean that you are free to bear false witness against others. On the other hand, if against is stressed, then it would mean that you may bear false witness for your neighbor, and so on.

The accent may be oral, or may make use of italics, or other devices in the language. Often much of what we mean depends on the accent of words in an argument. Propagandists deliberately distort statements to mislead audiences. Example: tabloid newspapers often use bold and large print to attract the reader's attention. Advertising relies on this device heavily. Consider this advertisement in a newspaper: 'TAKE ABSOLUTELY FREE' the contest entry form. If we consider the extent of the uses of emphasis in various forms and the use of meanings deliberately taken out of context, we can rename accent as 'the fallacy of emphasis.'

A4. COMPOSITION occurs when what is true of the parts taken separately is said to be true of the whole taken collectively. Example: 'cotton cannot be strong enough to make clothes of; for, look, I can break this cotton thread quite easily.' It is true that when each thread is taken separately, but not true when they are taken together. Another example: J. S. Mill commits this fallacy when he argues that the general happiness is the greatest good because each individual desires happiness.

A5 DIVISION is the opposite of composition: what is true of the whole is taken to be true of its parts. Here is an example. 'He must be a catholic, for he is an Italian and Italy is a catholic country.' True, Italy as a whole is Catholic but the same need not be true of every Italian. Another example is given below. Some people argue that what is best for the nation must necessarily be advantageous for each citizen.

Check Your Progress II

Note: Use the space provided for your answers.

- 1) Explain the meaning of composition and division

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2) Give examples for amphiboly and accent.

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4.7 EXERCISES

Name the fallacies in the following:

- R1. i) One of Patrick Henry's famous speeches (in Virginia on 23 March 1775) concludes with this appeal: ... There is no retreat but in submission and slavery. The next gale that sweeps from the north will bring to our ears the clash of resounding arms. ... Is life so dear, or peace so sweet, as to be purchased at the price of chains and slavery? Forbid it, Almighty God! I know not what course others may take; but as for me, give me liberty or give me death.' It is reported that the crowd, upon hearing his speech, jumped up and shouted: 'To arms! To arms!'
- ii) At his trial in Athens, Socrates referred with disdain to other defendants who had appeared before their jury accompanied by their children and families, seeking acquittal by evoking pity. Socrates continued: 'I, who am probably in danger of my life, will do none of these things. ... and I have a family, yes, and sons, O Athenians, three in number, one almost a man, and two others who are still young; and yet I will not bring any of them here to petition you for acquittal. (Plato, Apology. 34)
- R2. In the world of finance, a prospectus is issued to attract investors in a company about to go public, which speaks much about the company but does not mention the price of its shares.
- R4. Mr. X has no appreciation of music; for, has he ever purchased a ticket for a musical performance?
- R5. (i) The father tells his son, 'Sunny, next time before giving you pocket money, I will see your report card.'
- (ii) The union workers threaten the establishment that if their demands are not met, they will go on a strike.
- R6. Suppose a person emphasizes the importance of increasing funding for the public schools. His opponent responds by insisting that a child's education involves much more than schooling and gets underway long before its formal schooling begins.
- D1. i) 'All experiments with recombinant DNA must be stopped immediately,' said one scientist, who asked: 'If Dr. Frankenstein must go on producing his little biological monsters ... how can we be sure of what would happen once the little beasts escape from the laboratory?'

- ii) Another scientist who wanted to block any further experimentation with DNA made his appeal explicitly: 'Can we predict the consequences? We are ignorant of the broad principles of evolution ... We simply do not know. We are ignorant of the various factors we currently perceive to participate in the evolutionary process. We are ignorant of the depth of security of our own environmental niche ... We do not know.'
- D2 'We admire the depth and insight of great fiction, say, in the novels of R. K. Narayan. Therefore we resort to his judgment in determining the real culprit in some political dispute.'
- D3. i) 'The death penalty in the U.S. has given us the highest crime rate and greatest number of prisoners per 100,000 populations in the industrialized world.' Therefore death penalty is the cause of the highest crime rate.
- ii) 'The slippery slope argument, although influential, is hard to deal with rationally. It suggests that once we allow doctors to shorten the life of patients, who make such request, doctors could and would wantonly kill burdensome patients who do not want to die. This suggestion is not justified....'
- D4. The owner of a 'fish and chips' shop in England defended the healthfulness of his deep-fried cookery with this argument: 'Take my son, Martin. He's been eating fish and chips his whole life, and he just had a cholesterol test, and his level is below the national average. What better proof could there be than a fryer's son?'
- P1. i) 'To charge interest on the money loaned is quite legitimate. Therefore to take interest loaned to a friend in distress is quite legitimate.'
- ii) 'All killers of humans are murderers. Soldiers are killers of humans in war. Therefore the soldiers are murderers.'
- iii) 'To give charity to young, healthy beggar is wrong. Therefore, charity is bad.'
- P2. i). 'How exactly did you feel when you murdered your brother?'
- ii) 'Why are our politicians so corrupt?'
- iii) 'How can we change our education system to make our studies more effective?'
- P3. 'You ought to give alms because it is a duty to be charitable.'
- A1. 'Idle men are inefficient. Idle men are incapable. Therefore, idle men are invaluable.'
- A2. 'The farmer blew out his brains after receiving an affectionate farewell of his family with a shotgun.'
- A3. 'Since every part of a certain machine is light in weight the machine as a whole is light in weight.'
- A4. i) 'That cricket team is a good team. So, each of its players must be good.'
- ii) This corporation is very important and Mr. Das is an official of this corporation and therefore Mr. Das is very important.'

4.8 LET US SUM UP

Fallacy is an illogical way of arguing. Formal informal fallacies are two kinds of fallacy. A formal fallacy is committed when a Rule of inference is committed. Ambiguity in expression results in informal fallacy. If we know when a fallacy is committed we are less likely to err. Therefore knowledge of erroneous thinking has positive advantage. Inductive inference is not governed by any Rule of inference. Therefore in the strict sense of the word there is nothing like inductive fallacy.

4.9 KEY WORDS

Fallacy: An argument which violates a Rule of inference is called a fallacy.

4.10 FURTHER READINGS AND REFERENCES

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