

CHAPTER 3

FALLACIES

A fallacy is a frequently committed mistake in reasoning. We can roughly classify fallacies into three main groups: Fallacies of Irrelevance, Fallacies of Presumption, and Fallacies of Ambiguity. Of these, the Fallacies of Irrelevance are the simplest to understand. They present evidence that is not really relevant in establishing the claim for which they are arguing. Before you have completed this chapter, you will have studied ten of the most common Fallacies of Irrelevance.

The Fallacies of Presumption make unwarranted assumptions in their premises. With these fallacies the problem is not that the evidence has no bearing on the claim we are trying to establish. Instead, it is that we are presuming something we shouldn't be presuming. By the end of this chapter you will have studied fifteen Fallacies of Presumption.

Our final group of fallacies, the Fallacies of Ambiguity, is the most difficult to recognize. They all involve a mistake in reasoning that is based on a misunderstanding about meaning. Given their difficulty, you can be thankful that you will only be studying five Fallacies of Ambiguity.

The fallacies you will be studying in this chapter are:

FALLACIES OF IRRELEVANCE

1. Argumentum ad Hominem
2. Argumentum ad Baculum
3. Argumentum ad Populum
4. Tu Quoque Fallacy
5. Fallacy of Poisoning the Well
6. Argumentum ad Ignorantiam
7. Argumentum ad Misericordiam
8. Fallacy of Denying the Antecedent
9. Fallacy of Affirming the Consequent
10. Red Herring Fallacy

FALLACIES OF PRESUMPTION

11. Fallacy of Composition
12. Fallacy of Division
13. Fallacy of Hasty Generalization
14. Fallacy of Accident
15. Fallacy of Bifurcation
16. Argumentum ad Verecundiam
17. Masked Man Fallacy
18. Straw Man Fallacy
19. Begging the Question Fallacy
20. Fallacy of Complex Question
21. Slippery Slope Fallacy
22. Fallacy of False Analogy
23. False Cause Fallacy
24. Special Pleading Fallacy
25. Gambler's Fallacy

FALLACIES OF AMBIGUITY

26. Fallacy of Equivocation
27. Fallacy of Amphiboly
28. Fallacy of Accent
29. Fallacy of Hypostatization
30. Quantifier Fallacy

THE FALLACIES OF IRRELEVANCE

1. *Argumentum ad Hominem*: The *Argumentum ad Hominem* is an easy fallacy to recognize. It consists in an attack (i.e., an insult) on the person who disagrees with us. The Latin translates as "an argument to the man." We prefer, however, to call it an attack on the man, or against the man.

AN EXAMPLE

BULLFINCH: I believe logic is an extremely important and useful subject.

MARTHA: That is because you're just an idiot, Bullfinch.

NOTE: To see how irrelevant Martha's evidence is here, suppose the premise is true (i.e., suppose Bullfinch is an idiot). Does it follow from this that logic is not an important subject? Surely it does not.

2. *Argumentum ad Baculum*: Like the *Argumentum ad Hominem*, the *Argumentum ad Baculum* is an attack on an individual or group of individuals. Instead of verbal abuse, however, the appeal here is to force. The structure of the fallacy is Premise: A threat. So, Conclusion: The claim I am arguing for is correct. The force the person who is committing the fallacy is appealing to might be physical in nature, or it might be economic.

AN EXAMPLE

BULLFINCH: I think I could write a better book on birds than yours, Martha.

MARTHA: That is just bull, Finch! You want your right arm don't you? You want your head to stay attached to your shoulders don't you? For the sake of your own well-being, I really think you should worry about something else.

3. *Argumentum ad Populum*: The *Argumentum ad Populum* consists in an attempt to justify a claim by appealing to sentiments that large groups of people have in common. Three versions of this fallacy are especially important. The first we call "Flag Waving." It appeals to the sentiment of nationalism (or patriotism). The second version of this fallacy is "Snob Appeal." It plays on our desire to be a little superior to, or better than, others. Finally, the third version we call "Bandwagoning." It appeals to our feeling of wanting to belong to the crowd.

AN EXAMPLE

BULLFINCH: Did you really need such an expensive computer, Martha?

MARTHA: Of course. Everybody else in the neighborhood has one. [Bandwagoning] Besides, it's the American thing to do. [Flag waving]

4. *Tu Quoque* Fallacy: We usually commit the *Tu Quoque* (or *You're Another*) when we are trying to get ourselves off the moral hook. The form it takes is "You do it too. So it's okay for me to do it." In some ways it resembles the *Argumentum ad Hominem*, *Poisoning the Well*, and *Bandwagoning*. However, although many logicians are inclined to include it as a version of one of these other fallacies, we think it is important enough to label separately. Politicians whose hands were in the cookie jar often commit it. People also frequently use it in the work place when they are engaging in minor theft.

AN EXAMPLE

BULLFINCH: I really thought you were a little rude to Mrs. Bainbright.

MARTHA: Why are you criticizing me? She was rude to me first.

5. *Fallacy of Poisoning the Well*: The *Fallacy of Poisoning the Well* occurs when we try to prevent another person from contributing anything to the discussion, because of the circumstances in which they find themselves. We reason, for example, that he is a general in the Army, so he will naturally have a certain bias. We can, therefore, discard his testimony.

This fallacy is often used along with the ad Hominem; for example, "You are just a stupid kid." Some logicians even describe it as a circumstantial ad Hominem. We believe, however, it is best to identify it as a separate fallacy.

AN EXAMPLE

BULLFINCH: I think logic is at least as useful, for most people, as mathematics.

MARTHA: You would say that. You've been listening to Master McFluff too long. Besides, you are a logician, and you need to make a living.

6. Argumentum ad Ignorantiam: The form the Argumentum ad Ignorantiam, or Argument from Ignorance, has is: No one has ever proven that it's this way. Therefore, it must be the other way. For example, "No one has ever established that Fermat's Last Theorem is really a theorem. So it must not be one."

There may be one circumstance in which we can allow this kind of reasoning, though even that is open to debate. It might be permissible in reasoning to the nonexistence of something. For example, "No one has ever confirmed that there is an abominable snowman, so there isn't one," may be acceptable. On the other hand, it is a commission of this fallacy to reason the other way around. We cannot legitimately argue that no one has ever shown that there isn't an abominable snowman, so there must be one.

EXAMPLES

(1)

In spite of all the investigating that reporters did during the Watergate scandal, no one has found any hard evidence showing that Nixon ordered the break in. So he didn't.

(2)

MARTHA: Do you want to know what I think, Bulldog? I think McDuff isn't in Egypt at all. I think he's just afraid to show his face around here after the last rotten tutorial he gave. After all, when we went to his apartment, did we see any signs of plane reservations, or any books about Egypt? Did any of the neighbors we talked to mention one thing about his going to Egypt?

7. Argumentum ad Misericordiam: The Argumentum ad Misericordiam, or Appeal to Pity, is surely an easily recognized fallacy. Its premises simply consist in verbal crying. From this we are supposed to conclude whatever the arguer asks us to.

AN EXAMPLE

BULLFINCH: You can't have a cigarette now, Martha. The hospital has a rule against smoking when you're in an oxygen tent.

MARTHA: You've just got to let me have one, Bullfinch. You can't believe what those doctors have done to me. My life the last three days has been a living nightmare.

8. Fallacy of Denying the Antecedent: A conditional statement is a statement that sets a condition (called the "antecedent") down, and then goes on (in the "consequent") to talk about what is the case if that condition is met.

The Fallacy of Denying the Antecedent has the following form: One premise asserts a conditional statement. Another premise simply denies the antecedent of that conditional statement. From this the denial of the consequent is supposed to follow (i.e., "If P, then Q. Not-P. Therefore, not-Q.")

AN EXAMPLE

MARTHA: I guess I wasn't learning much from the course I was taking. The teacher said that if we did better on the second test than we did on the first, it meant we had learned something. I did worse on the second test, however.

9. Fallacy of Affirming the Consequent: Like the Fallacy of Denying the Antecedent, the Fallacy of Affirming the Consequent contains one premise that sets a condition (viz., the "antecedent") down, and then goes on (in the "consequent") to talk about what happens if the antecedent is met. Here, however, instead of the premise going on to deny the antecedent of the condition, it affirms the consequent. Thus, the form of this fallacy is: "If P, then Q. Q. Therefore, P."

AN EXAMPLE

BULLFINCH: I'm really sorry about the ballooning accident, Martha.
MARTHA: You don't make a good liar, Bullfinch. When you lie, your face gets red. And it's red now.

10. Red Herring Fallacy: The Red Herring Fallacy is often a difficult fallacy to spot. In order for it to be committed, the premises of the argument must really be doing some work toward establishing something. However, the trouble is that the person presenting the argument does not draw that conclusion. Instead he comes up with a completely different one, and one for which the premises provide no support. The fallacy probably gets its name from the fact that escaped convicts smear herring on their bodies, in an attempt to throw the dogs off the scent.

AN EXAMPLE

MARTHA: The newspaper pointed out that he had been convicted of burglary on three earlier occasions. The editor must not like him very much.

THE FALLACIES OF PRESUMPTION

11. Fallacy of Composition: The Fallacy of Composition is committed when we mistakenly reason that what is true of the parts must, therefore, be true of the whole. No doubt we can sometimes correctly reason in this way. For example, we may correctly reason that since the dog's head is brown, and his back and legs are brown, the dog is brown. In such cases, we are not committing any fallacy. It is, however, a presumption to think that this kind of reasoning is always correct.

Frequently people have trouble identifying the Fallacy of Composition. They are likely to confuse it with the Fallacy of Division, or the Fallacy of Hasty Generalization. Composition and Division are alike in the sense that they are both concerned with reasoning about parts and wholes. While Division goes from whole to parts, however, Composition reasons from a thing's parts to its whole. Composition and Hasty Generalization both reason from something specific to something general. However, with Hasty Generalization the reasoning is not about parts and wholes. (Instead, Hasty Generalization involves faulty generalizations based on specific and uncharacteristic situations.)

AN EXAMPLE

BULLFINCH: What is that awful looking sandwich you are eating, Martha?
MARTHA: Peanut butter, strawberry jelly, and bananas.
BULLFINCH: I think I'm going to be sick.
MARTHA: Why? You like peanut butter don't you? You like strawberry jelly don't you? Moreover, I happen to know you like bananas too. What are you complaining about?

12. Fallacy of Division: The Fallacy of Division is committed when we mistakenly reason that what is true of the whole must, therefore, be true of the parts. We sometimes can correctly reason in this way (e.g., "The building contains nothing but bricks, and since the whole building is red, the bricks must also be red.") Often, however, this type of reasoning is fallacious.

AN EXAMPLE

MARTHA: Why do you go to that club, instead of the one that is close?
BULLFINCH: It has been around since the turn of the century.
MARTHA: Really Bullfinch, you should spend more time with people who are your own age.

13. Fallacy of Hasty Generalization: The Fallacy of Hasty Generalization, as its name suggests, occurs when we reason that what was true in a weird special case must, therefore, be generally true. We believe this fallacy is among the reasons people develop prejudices. They meet an unpleasant person from one group, and then generalize in a hasty way about everyone in that group.

No doubt there are instances where this fallacy overlaps with the Fallacy of Composition. It is important, however, to keep the two fallacies distinct.

AN EXAMPLE

MARTHA: Never do I get in another balloon with you, Bullwench. That was the most harrowing experience I have ever had in my life.

14. Fallacy of Accident: The Fallacy of Accident is committed when we reason from a general principle to a weird special case. It resembles the Fallacy of Hasty Generalization. Instead of reasoning from specific to general, however, as the Fallacy of Hasty Generalization does, the Fallacy of Accident goes from something general to something specific.

We often confuse this fallacy with the Fallacy of Division. Though there are cases where it overlaps with the Fallacy of Division, the Fallacy of Accident does not deal with reasoning from whole to parts.

AN EXAMPLE

BULLFINCH: What are you doing trying to walk around without crutches, Martha?

MARTHA: What is everybody making such a fuss about? I never needed crutches before.

15. Fallacy of Bifurcation: The Fallacy of Bifurcation -- also sometimes called "the Black and White Fallacy," "the Fallacy of False Dichotomy," or "the Either/Or Fallacy" -- is another of the very few fallacies that are valid arguments. It has the form: "Either P, or Q. Not-P. Therefore, Q." The fallacy is committed when the first premise is false because there is another alternative the arguer has failed to consider. Ordinarily this fallacy occurs when the "Either P, or Q" claim involved considers only extremes and fails to take a third (or the middle) choice into account.

AN EXAMPLE

MARTHA: Let me put it this way, Bullfinch. You're either a genius or an idiot. After the balloon incident, however, I know you're no genius.

16. Argumentum ad Verecundiam: In our complex world, we obviously can't be experts on every subject. As a result, we frequently resort to reasoning that something is true because someone said so. This may never be an especially great argument, since anyone, despite his or her expertise, can make a mistake. It is not a fallacy, though, unless the person we appeal to as an authority is either not one at all, or not one in the appropriate area. When we do reason in this way, we are committing the fallacy known as Argumentum ad Verecundiam, or Appeal to (false) Authority.

AN EXAMPLE

MARTHA: I'm really worried about the "Greenhouse Effect" Bullfinch. Merv Griffin says that the polar icecaps will be melting soon.

17. Masked Man Fallacy: The Masked Man Fallacy is primarily a child's fallacy. It has the form: "I know who (or what) X is. I don't know who (or what) Y is. So X and Y must be different."

AN EXAMPLE

MARTHA: My neighbor can't be the person who wrote the nasty note to me. I know who my neighbor is, but I don't know who wrote the nasty note complaining about my dog barking all night.

18. Straw Man Fallacy: The Straw Man Fallacy is committed when we try to argue for our own view by attacking the opposing positions. It occurs when we distort the other person's view, whether intentionally or not. It often is a favorite tactic of politicians during campaigns. Thus, Johnson used it successfully against Goldwater during the 1964 Presidential campaign by making it appear that a vote for Goldwater was a vote for nuclear war.

AN EXAMPLE

MARTHA: I'm opposed to consumer rights groups. I don't care how many air bags and seat belts you install in a car. If you drive it at a brick wall at 150 M.P.H., it isn't going to be a pleasant experience for the passengers.

19. Begging the Question Fallacy: The Fallacy of Begging the Question (also called "Petitio Principii," and frequently described as arguing in a circle) is, like Bifurcation, another example of a fallacy that is a valid argument. The arguer commits it when he presupposes exactly the claim he is arguing for.

AN EXAMPLE

MARTHA: Of course I know that the operation was successful.

BULLFINCH: How do you know that?

MARTHA: The doctor told me so, and he wouldn't have told me that, if it wasn't successful.

20. Fallacy of Complex Question: The Fallacy of Complex Question occurs when, within the context of arguing, we raise a question that makes a presupposition that doesn't hold, and then reason based on this. The most famous example of a complex question is "Have you stopped beating your wife yet?" This question makes several assumptions, perhaps the most important of which is that you used to beat her. You cannot really answer the question unless the presupposition is correct. If you imagine this sort of question being asked within the context of an argument, then the Fallacy of Complex Question is being committed.

AN EXAMPLE

MARTHA: He must be guilty. When I asked him why he did it, he didn't answer me.

21. Slippery Slope Fallacy: There are two different versions of the Slippery Slope Fallacy. One version of it, sometimes called the "Domino Theory," consists in a sequence of unjustified causal claims of the sort, "P causes Q. Q causes R. R causes S." From these, the arguer concludes that things are going to go to heck in a hand basket, since P is going to cause S. The argument would be acceptable, if not for the fact that the causal claims in the premises are unsubstantiated.

AN EXAMPLE

MARTHA: If we let the communists take over El Salvador, the next thing you know they'll be in Mexico. Once they take over Mexico, however, they'll head for Texas and it is just a matter of time before we are all communists.

The other version of the fallacy is different. It reasons that since you can't make a sharp distinction between a pair of overlapping ideas (e.g., "mountain" and "foothill"), there is no difference between them.

EXAMPLES

(1)

You can't make a sharp distinction between a mountain and foothill. So Mt. Everest is just a gigantic foothill.

(2)

BULLFINCH: Brother, am I upset. That thief just stole my wallet.

MARTHA: We're all thieves, Bullwrench. We've all stolen something at sometime in our lives. What is the difference? One theft more, or less, can't make a difference between a thief and someone who isn't one.

22. Fallacy of False Analogy: The Fallacy of False Analogy proceeds by reasoning that since such and such applies to P, it will apply to Q as well, because Q is like P. The trouble is that P and Q are not analogous, as the arguer suggests.

AN EXAMPLE

BULLFINCH: I heard you finally quit smoking, Martha. Why?

MARTHA: I looked at the yellow stain on my finger yesterday and thought, if it does that to your fingers, imagine what it does to your lungs.

23. False Cause Fallacy: The False Cause Fallacy (also called "post hoc," or "post hoc, ergo propter hoc") has the form: "Phenomenon X has occurred, after which Y occurred. Therefore, X caused Y." As we will see, the fact that two phenomena have been found to occur in nature together is relevant in deciding that one of these is a cause of the other. It is a presumption, however, to believe that this is all the evidence we need to establish this claim.

AN EXAMPLE

BULLFINCH: How are you feeling today, Martha?

MARTHA: Every time you come by to see me, I feel worse. I might start feeling better if you stayed away for a few weeks.

24. Fallacy of Special Pleading: Like the Slippery Slope Fallacy, the Fallacy of Special Pleading can be viewed as two fallacies in one. One version of it is committed when a person argues for a view, or a course of action, while ignoring countervailing factors that he also needs to consider. The other version of the Fallacy of Special Pleading occurs when a person applies a different set of standards to himself than he applies to others.

AN EXAMPLE

MARTHA: You really shouldn't be drinking that stuff, Fullfinch. Why don't you leave it with me? I have a strong stomach and I can handle booze better than you can.

25. Gambler's Fallacy: The Gambler's Fallacy involves a mistake in reasoning about odds. More specifically, we commit this fallacy when we reason that what has happened in the past has an effect on the odds, in a way in which it doesn't. Though this is clearly a common fallacy among gamblers, others often commit it as well.

AN EXAMPLE

MARTHA: I've purchased eight lottery tickets in the last two weeks and I haven't had a winning ticket yet. Since the chances of winning are one in nine, my next ticket will most likely be a winner.

THE FALLACIES OF AMBIGUITY

26. Fallacy of Equivocation: The Fallacy of Equivocation occurs when, within the context of an argument, we use a word or phrase that has two or more meanings first to mean one thing and then another. The argument will seem valid if we fail to notice the shift in meaning. Of all of the fallacies, this is the most difficult one to spot.

AN EXAMPLE

MARTHA: How did McDuff ever come up with the title, "Master McDuff?"

BULLFINCH: Have you ever heard of Master Bateing, Martha?

MARTHA: I'm ashamed of you, Bullfinch. Your mind is always in the gutter.

27. Fallacy of Amphiboly: This fallacy resembles the Fallacy of Equivocation and the Fallacy of Amphiboly in involving a misunderstanding about meaning. With Amphiboly, however, the problem is due to poor sentence construction. The classic example of this fallacy concerns the ancient Greek king of Croesus. He went to the Oracle of Delphi for advice about whether he should go to war. When he asked for the Oracle's advice the Oracle responded, "If you go to war, you will destroy a mighty kingdom." Based on this advice Croesus went to war, but unfortunately, lost. When he complained, the Oracle's response was, "We told you that you would destroy a mighty kingdom and you did, your own."

AN EXAMPLE

BULLFINCH: Why are you drinking in the middle of the afternoon? I thought you said you were going to do some gardening.

MARTHA: My book on gardening says that these flowers are to be planted only after being potted.

NOTE: One might also view this as a commission of the Fallacy of Equivocation, since a shift in the meaning of the word "potted" occurs. This kind of overlap between fallacies is very common.

28. Fallacy of Accent: Some sentences can be interpreted differently when certain words are accented, instead of others. When this occurs in an argument, the Fallacy of Accent is committed. So, like the Fallacies of Equivocation and Amphiboly, the Fallacy of Accent involves a shift in meaning within the context of arguing.

AN EXAMPLE

MARTHA: My brother must have been fooling around on his wife because in his letter he says, "I don't really love her now."

NOTE: Martha is accenting the word "her." Try reading it again, but this time accent the word "really." Then read it again, but accent the word "now."

29. Fallacy of Hypostatization: The Fallacy of Hypostatization occurs when we treat a common noun, or an abstract word, as if it referred to an existing object in the same way that a proper noun does. For example, we treat a word like "nature," as if it referred to a thing. ("Nature always looks out for the young. She also works miracles.")

AN EXAMPLE

MARTHA: Russia is an evil empire, playing off the hearts of the poor and unhappy. She has a thirst for conquest, but does not care at all about those she conquers. Fortunately, like the rest of us, she must also one day grow old and die.

30. Quantifier Fallacy: The Quantifier Fallacy is involved when we reason that because everything is related to at least one thing (or exactly one thing), there must be at least one thing (exactly one thing) that everything is related to. Thus, for example, from the claim that everyone has exactly one mother, we might mistakenly conclude that there must be exactly one mother of us all.

AN EXAMPLE

BULLFINCH: Why are you so sure that God exists, Martha?

MARTHA: Well, even you admit that everything that happens has a cause. Surely, however, it follows from this that there must be a cause of everything. What else could that be but God?

This provides at least a brief sketch of the thirty fallacies we are going to be concerned with. It may seem like a lot to you, but in a sense, we have barely scratched the surface. There are many more fallacies that we might have mentioned. There are even entire books devoted to the topic. Of necessity, our discussion of the fallacies chosen has been brief.

EXERCISES

Instructions: Identify any fallacy or fallacies committed in each of the following passages.

1. Kings and Queens are short because they are rulers and rulers are only twelve inches.
2. You shouldn't vote for Clinton because he is a bozo.
3. If you do poorly in Dr. Jacob's class, you will start doing poorly in other classes too. The first thing you know, you'll end up on probation, and then you will get kicked out of college. Without a college degree, you won't get a good job, and you'll starve to death. So you had better do well in Dr. Jacob's class.
4. I'm moving to Connecticut because it is the richest state in the nation and I'm tired of being poor.
5. Argument in favor of the California school voucher amendment: "Fifteen years ago, Californians spent nine billion dollars on public schools. Today, we spend nearly \$29 billion. Can anyone claim that parents, kids, and taxpayers are \$20 billion better off today?"
6. I've always reckoned that looking at the new moon over your left shoulder is one of the carelesstest and foolishst things a body can do. Old Hank Bunker done it once, and bragged about it; and in less than two years he got drunk and fell off of the shot tower, and spread himself out so that he was just a kind of a layer, as you may say; and they slid him edgeways between two barn doors for a coffin, and buried him so, so they say, but I didn't see it. Pap told me. But anyway it all come of looking at the moon that way, like a fool. (Mark Twain, The Adventures of Huckleberry Finn)
7. If you want to lose your job and end up on the streets begging for work, just keep voting for Republicans.
8. Of course Mr. Sophisticate will like my new pink Chablot Merlis. He likes both red and white wines, doesn't he?
9. When I asked if I could have some tea they said, "You can't. You're just a pelican." When I asked if I could come and play they said, "You can't. You're just a pelican." So when they asked if I would come and fish, I said, "To hell I can. I'm just a pelican." Now their stomachs can't get food, but anytime it wants my belly can.
10. Turendot, your brain is not. It's turned to rot. You don't know squat, oh Turnedot.

