

8. Congresswoman Michele Bachmann argues in favor of drilling for oil in the Arctic National Wildlife Refuge. But consider this. Bachmann is a total moron, a complete idiot who wouldn't recognize an oil well if she bumped into one. Clearly her arguments are ridiculous.
9. If plastic guns are sold to the public, then terrorists will carry them aboard airliners undetected. If plastic guns are sold to the public, then airline hijackings will increase. Therefore, if terrorists carry plastic guns aboard airliners undetected, then airline hijackings will increase.
- ★10. Some corporate mergers are arrangements that produce layoffs. Some arrangements that produce layoffs are social catastrophes. Therefore, some corporate mergers are social catastrophes.

3.2

Fallacies of Relevance

The **fallacies of relevance** share the common characteristic that the arguments in which they occur have premises that are *logically* irrelevant to the conclusion. Yet the premises may appear to be *psychologically* relevant, so the conclusion may *seem* to follow from the premises, even though it does not follow logically. In a good argument the premises provide genuine evidence in support of the conclusion. In an argument that commits a fallacy of relevance, on the other hand, the connection between premises and conclusion is emotional. To identify a fallacy of relevance, therefore, one must be able to distinguish genuine evidence from various forms of emotional appeal.

1. Appeal to Force

(*Argumentum ad Baculum*: Appeal to the “Stick”)

The fallacy of **appeal to force** occurs whenever an arguer poses a conclusion to another person and tells that person either implicitly or explicitly that some harm will come to him or her if he or she does not accept the conclusion. The fallacy always involves a threat by the arguer to the physical or psychological well-being of the listener or reader, who may be either an individual or a group of people. Obviously, such a threat is logically irrelevant to the subject matter of the conclusion, so any argument based on such a procedure is fallacious. The *ad baculum* fallacy often occurs when children argue with one another:

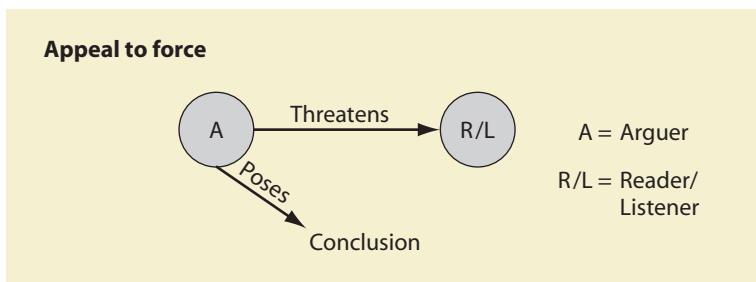
Child to playmate: Sesame Street is the best show on TV; and if you don't believe it, I'm going to call my big brother over here and he's going to beat you up.

But it occurs among adults as well:

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'm sure you wouldn't want her to find out what's been going on between you and that sexpot client of yours.

The first example involves a physical threat, the second a psychological one. While neither threat provides any genuine evidence that the conclusion is true, both provide evidence that someone might be injured. If the two types of evidence are confused with each other, both arguer and listener may be deluded into thinking that the conclusion is supported by evidence, when in fact it is not.

The appeal to force fallacy usually accomplishes its purpose by psychologically impeding the reader or listener from acknowledging a missing premise that, if



acknowledged, would be seen to be false or at least questionable. The two examples just given can be interpreted as concealing the following premises, both of which are most likely false:

If my brother forces you to admit that *Sesame Street* is the best show on TV, then *Sesame Street* is in fact the best show.

If I succeed in threatening you, then I deserve a raise in salary.

The conclusion of the first argument is that *Sesame Street* is the best show on TV. But just because someone is forced into saying that it is does not mean that such is the case. Similarly, the conclusion of the second argument is that the secretary deserves a raise in salary. But if the boss is threatened into raising the secretary's salary, this does not mean that the secretary deserves a raise. Many of the other informal fallacies can be interpreted as accomplishing their purpose in this way.

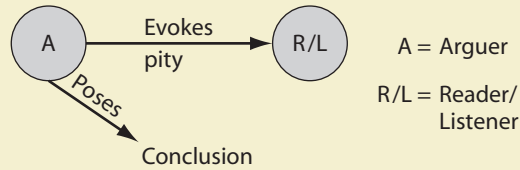
2. Appeal to Pity (*Argumentum ad Misericordiam*)

The **appeal to pity** fallacy occurs when an arguer attempts to support a conclusion by merely evoking pity from the reader or listener. This pity may be directed toward the arguer or toward some third party. Example:

Taxpayer to judge: Your Honor, I admit that I declared thirteen children as dependents on my tax return, even though I have only two. But if you find me guilty of tax evasion, my reputation will be ruined. I'll probably lose my job, my poor wife will not be able to have the operation that she desperately needs, and my kids will starve. Surely I am not guilty.

The conclusion of this argument is "Surely I am not guilty." Obviously, the conclusion is not *logically* relevant to the arguer's set of pathetic circumstances, although it

Appeal to pity



is *psychologically* relevant. If the arguer succeeds in evoking pity from the listener or reader, the latter is likely to exercise his or her desire to help the arguer by accepting the argument. In this way the reader or listener may be fooled into accepting a conclusion that is not supported by any evidence. The appeal to pity is quite common and is often used by students on their instructors at exam time and by lawyers on behalf of their clients before judges and juries.

Of course, some arguments that attempt to evoke sympathetic feelings from the reader or listener are not fallacious. We might call them *arguments from compassion*. Such arguments differ from the fallacious appeal to pity in that, in addition to evoking compassion on behalf of some person, they supply information about why that person is genuinely deserving of help or special consideration. Whenever possible these nonfallacious arguments should show that the person in question is a victim of circumstances and not responsible for the dire straits he finds himself in, that the recommended help or special consideration is not illegal or inappropriate, and that it will genuinely help the person in question. In contrast to such arguments, the appeal to pity proceeds by ignoring all of these considerations and attempts to support a conclusion by merely evoking pity from the reader or listener.

3. Appeal to the People (*Argumentum ad Populum*)

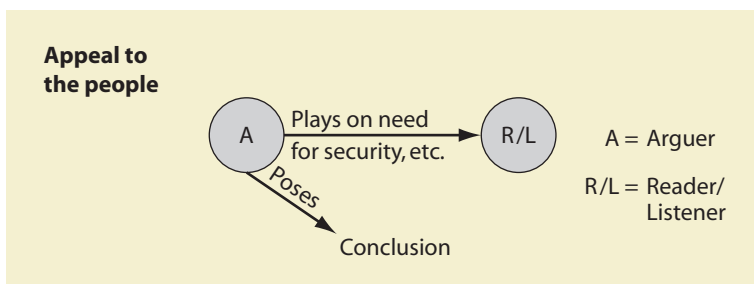
Nearly everyone wants to be loved, esteemed, admired, valued, recognized, and accepted by others. The **appeal to the people** uses these desires to get the reader or listener to accept a conclusion. Two approaches are involved: one of them direct, the other indirect.

The *direct approach* occurs when an arguer, addressing a large group of people, excites the emotions and enthusiasm of the crowd to win acceptance for his or her conclusion. The objective is to arouse a kind of mob mentality. This is the strategy used by nearly every propagandist and demagogue. Adolf Hitler was a master of the technique, but speech makers at Democratic and Republican national conventions also use it with some measure of success. Waving flags and blaring music add to the overall effect. Because the individuals in the audience want to share in the camaraderie, the euphoria, and the excitement, they find themselves accepting a variety of conclusions with ever-increasing fervor.

An appeal to negative emotions, such as suspicion and fear, can also generate a mob mentality. These emotions have produced many lynchings, and they led to the internment of Japanese Americans during World War II. Also, the direct approach is

not limited to oral discourse. The same effect can be accomplished in writing. By using such emotionally charged phrasing as “fighter of communism,” “champion of the free enterprise system,” and “defender of the working man,” polemicists can awaken the same kind of mob mentality as they would if they were speaking.

In the *indirect approach* the arguer aims his or her appeal not at the crowd as a whole but at one or more individuals separately, focusing on some aspect of their relationship to the crowd. The indirect approach includes such specific forms as the bandwagon argument, the appeal to vanity, and the appeal to snobbery. All are standard techniques of the advertising industry.



Here is an example of the **bandwagon argument**:

Of course you want to buy Zing toothpaste. Why, 90 percent of America brushes with Zing.

The idea is that you will be left behind or left out of the group if you do not use the product.

The **appeal to vanity** often associates the product with someone who is admired, pursued, or imitated, the idea being that you, too, will be admired and pursued if you use it. The recent television and billboard ads for the U.S. Marine Corps provide an example. The ads show a strong, handsome man in uniform holding a gleaming sword, and the caption reads:

The Few, the Proud, the Marines.

The message is that if you join the Marines, then you, too, will be admired and respected, just like the handsome man in the uniform.

The **appeal to snobbery** depends on a similar kind of association.

A Rolls-Royce is not for everyone. If you qualify as one of the select few, this distinguished classic may be seen and driven at British Motor Cars, Ltd. (By appointment only, please.)

Needless to say, the indirect approach is used not only by advertisers:

Mother to child: You want to grow up and be just like Wonder Woman, don't you?
Then eat your liver and carrots.

These examples illustrate how the indirect version of the appeal to the people can overlap the false cause fallacy, which is presented in Section 3.3. Thus, the previous example might be interpreted to suggest that eating liver and carrots will *cause* one to become just like Wonder Woman. If so, the fallacy could be identified as false cause.

Both the direct and indirect approaches of the *ad populum* fallacy have the same basic structure:

You want to be accepted/included in the group/loved/esteemed.... Therefore, you should accept XYZ as true.

In the direct approach the arousal of a mob mentality produces an immediate feeling of belonging. Each person feels united with the crowd, and this feeling evokes a sense of strength and security. When the crowd roars its approval of the conclusions that are then offered, anyone who does not accept them automatically cuts himself or herself off from the crowd and risks the loss of his or her security, strength, and acceptance. The same thing happens in the indirect approach, but the context and technique are somewhat subtler.

4. Argument Against the Person (*Argumentum ad Hominem*)

This fallacy always involves two arguers. One of them advances (either directly or implicitly) a certain argument, and the other then responds by directing his or her attention not to the first person's argument but to the first person *himself*. When this occurs, the second person is said to commit an **argument against the person**.

The argument against the person occurs in three forms: the *ad hominem* abusive, the *ad hominem* circumstantial, and the *tu quoque*. In the ***ad hominem* abusive**, the second person responds to the first person's argument by verbally abusing the first person. Example:

Television entertainer Bill Maher argues that religion is just a lot of foolish nonsense. But Maher is an arrogant, shameless, self-righteous pig. Obviously his arguments are not worth listening to.

The author of this argument ignores the substance of Maher's argument and instead attacks Maher himself. However, because Maher's personal attributes are irrelevant to whether the premises of his religion argument support the conclusion, the argument attacking him is fallacious.

Not all cases of the *ad hominem* abusive are so blunt, but they are just as fallacious. Example:

Secretary of State Hillary Clinton argues that Israel should hold the line on new settlements in Palestine. But Clinton is not Jewish, and she has never had any great affection for Israel. Thus, her arguments are worthless.

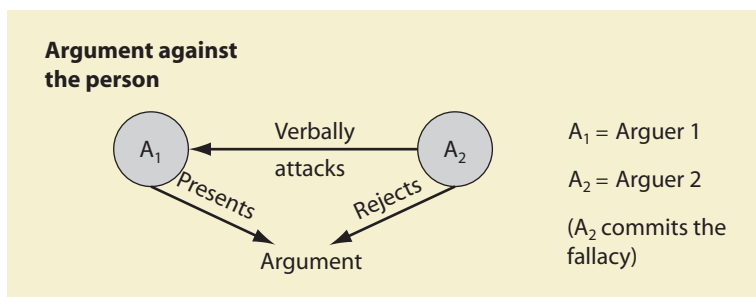
Again, whether Hillary Clinton is Jewish and whether she does or does not have any great affection for Israel have nothing to do with whether her premises support her conclusion.

The ***ad hominem* circumstantial** begins the same way as the *ad hominem* abusive, but instead of heaping verbal abuse on his or her opponent, the respondent attempts to discredit the opponent's argument by alluding to certain circumstances that affect the opponent. By doing so the respondent hopes to show that the opponent is predisposed to argue the way he or she does and should therefore not be taken seriously.

Here is an 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. Therefore, we should reject his arguments.

The author of this argument ignores the substance of the Dalai Lama's argument and attempts to discredit it by calling attention to certain circumstances that affect the Dalai Lama—namely, that he wants to return to Tibet as its leader. But the fact that the Dalai Lama happens to be affected by these circumstances is irrelevant to whether



his premises support a conclusion. The *ad hominem* circumstantial is easy to recognize because it always takes this form: “Of course Mr. X argues this way; just look at the circumstances that affect him.”

The *tu quoque* (“you too”) fallacy begins the same way as the other two varieties of the *ad hominem* argument, except that the second arguer attempts to make the first appear to be hypocritical or arguing in bad faith. The second arguer usually accomplishes this by citing features in the life or behavior of the first arguer that conflict with the latter's conclusion. The fallacy often takes the form, “How dare you argue that I should stop doing X; why, you do (or have done) X yourself.” Example:

Political operative Newt Gingrich has argued about the need to preserve family values. But who is he to talk? Gingrich has been married three times. He divorced his first wife while she was hospitalized for cancer, and he engaged in an extramarital affair while he was married to his second wife. Clearly, Gingrich's arguments are trash.

Again, the details of Gingrich's personal life are irrelevant to whether his premises support his conclusion. Thus, this argument is fallacious.

Keep in mind that the purpose of an *ad hominem* argument is to discredit another person's argument by placing its author in a bad light. Thus, for the fallacy to be committed, there must always be two arguers (at least implicitly). If it should turn out that the person being attacked is not an arguer, then the personal comments made by the attacker may well be relevant to the conclusion that is drawn. In general, personal observations are relevant to conclusions about what kind of person someone is (good, bad, stingy, trustworthy, and so forth) and whether a person has done something. Example:

Zimbabwe's president Robert Mugabe has tortured, murdered and terrorized the people of his own country, corrupted elections, and stolen millions of dollars from the public treasury. Mugabe is therefore a thoroughly disgusting and despicable human being.

The conclusion is not that Mugabe's argument is bad but that Mugabe himself is bad. Because the premises give relevant support to this conclusion, the argument commits no fallacy. Another example:

Shakespeare cannot possibly have written the thirty-six plays attributed to him, because the real Shakespeare was a two-bit country businessman who barely finished the fourth grade in school and who never left the confines of his native England.

The conclusion is not that some argument of Shakespeare's is bad but that Shakespeare did not write certain plays. Again, since the premises are relevant to this conclusion, the argument commits no *ad hominem* fallacy.

Determining what kind of person someone is includes determining whether that person is trustworthy. Thus, personal comments are often relevant in evaluating whether a person's proclamations or statements, unsupported by evidence, warrant our belief. Examples of such statements include promises to do something, testimony given by a witness, and testimonials in support of a product or service. Here is an example of an argument that discredits a witness:

Mickey has testified that he saw Freddy set fire to the building. But Mickey was recently convicted on ten counts of perjury, and he hates Freddy with a passion and would love to see him sent to jail. Therefore, you should not believe Mickey's testimony.

This argument commits no fallacy. The conclusion is not that you should reject Mickey's argument but rather that you should reject his testimony. Testimony is not argument, and the fact that the witness is a known liar and has a motive to lie now is relevant to whether we should believe him. Furthermore, note that the conclusion is not that Mickey's statement is literally false but rather that we should not *believe* the statement. It is quite possible that Mickey really did see Freddy set fire to the building and that Mickey's statement to that effect is true. But if our only reason for believing this statement is the mere fact that Mickey has made it, then given the circumstances, we are not justified in that belief. Personal factors are never relevant to truth and falsity as such, but they are relevant to believability.

Yet there is often a close connection between truth and believability, and this provides one of the reasons why *ad hominem* arguments are often effective. In evaluating any argument there are always two issues to be considered: the quality of the reasoning and the truth of the premises. As noted, both are irrelevant to the personal characteristics of the arguer. But whether we *accept* the premises as true may depend on the credibility of the arguer. Knowing that the arguer is biased or has a motive to lie may provide good grounds for distrusting the premises. Another reason why *ad hominem* arguments are effective is that they engage the emotions of readers and listeners and thereby motivate them to transfer their negative feelings about the arguer onto the argument.

5. Accident

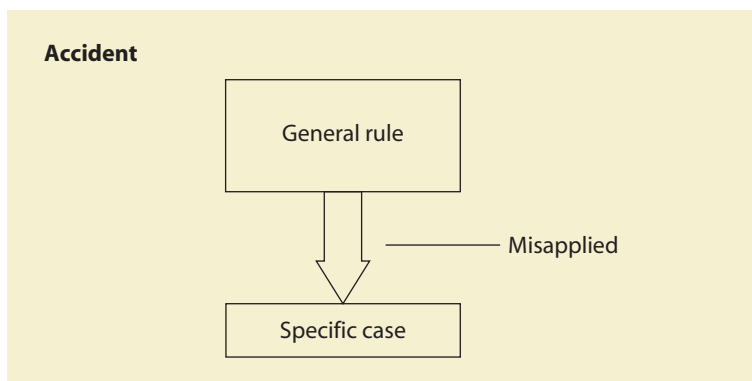
The fallacy of **accident** is committed when a general rule is applied to a specific case it was not intended to cover. Typically, the general rule is cited (either directly or

implicitly) in the premises and then wrongly applied to the specific case mentioned in the conclusion. Two examples:

Freedom of speech is a constitutionally guaranteed right. Therefore, John Q. Radical should not be arrested for his speech that incited the riot last week.

People are obligated to keep their promises. When Jessica married Tyler, she promised to stay with him for life. Therefore, she should stay with him now, even though he has become an abusive spouse addicted to gambling and drugs.

In the first example, the general rule is that freedom of speech is normally guaranteed, and the specific case is the speech made by John Q. Radical. Because the speech incited a riot, the rule does not apply. In the second example, the general rule is that people are obligated to keep their promises, and the specific case is that Jessica should keep her promise to stay with Tyler. The rule does not apply because Tyler is no longer the same person that Jessica made her promise to.



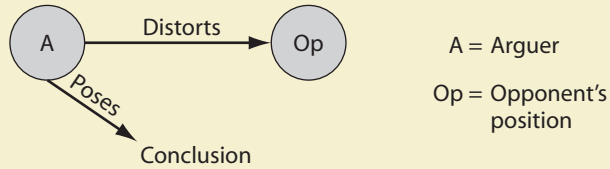
The fallacy of accident gets its name from the fact that one or more accidental features of the specific case make it an exception to the rule. In the first example the accidental feature is that the speech incited a riot; in the second example the accidental features are that Tyler has become an abusive spouse and is addicted to gambling and drugs.

6. Straw Man

The **straw man** fallacy 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. By so doing, the arguer is said to have set up a straw man and knocked it down, only to conclude that the real man (opposing argument) has been knocked down as well. Example:

Mr. Goldberg has argued against prayer in the public schools. Obviously Mr. Goldberg 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. Goldberg's argument is nonsense.

Straw man



Like the argument against the person fallacy, the straw man fallacy involves two arguers. Mr. Goldberg, who is the first arguer, has presented an argument against prayer in the public schools. The second arguer then attacks Goldberg's argument by equating it with an argument for atheism. He then attacks atheism and concludes that Goldberg's argument is nonsense. Since Goldberg's argument had nothing to do with atheism, the second argument commits the straw man fallacy.

As this example illustrates, the kind of distortion the second arguer resorts to is often an attempt to exaggerate the first person's argument or make it look more extreme than it really is. Here are two more examples:

The garment workers have signed a petition arguing for better ventilation on the work premises. Unfortunately, air-conditioning is expensive. Air ducts would have to be run throughout the factory, and a massive heat exchange unit installed on the roof. Also, the cost of operating such a system during the summer would be astronomical. In view of these considerations the petition must be rejected.

The student status committee has presented us with an argument favoring alcohol privileges on campus. What do the students want? Is it their intention to stay boozed up from the day they enter as freshmen until the day they graduate? Do they expect us to open a bar for them? Or maybe a chain of bars all over campus? Such a proposal is ridiculous!

In the first argument, the petition is merely for better ventilation in the factory—maybe a fan in the window during the summer. The arguer exaggerates this request to mean an elaborate air-conditioning system installed throughout the building. He then points out that this is too expensive and concludes by rejecting the petition. A similar strategy is used in the second argument. The arguer distorts the request for alcohol privileges to mean a chain of bars all over campus. Such an idea is so patently outlandish that no further argument is necessary.

7. Missing the Point (*Ignoratio Elenchi*)

All the fallacies we have discussed thus far have been instances of cases where the premises of an argument are irrelevant to the conclusion. **Missing the point** illustrates a special form of irrelevance. This fallacy occurs when the premises of an argument support one particular conclusion, but then a different conclusion, often vaguely related to the correct conclusion, is drawn. Whenever one suspects that such a fallacy

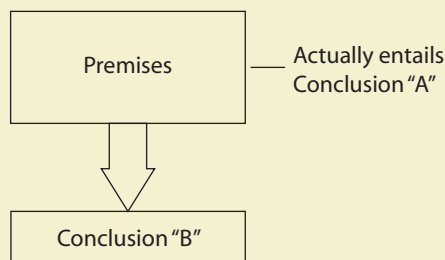
is being committed, he or she should be able to identify the *correct* conclusion, the conclusion that the premises *logically* imply. This conclusion must be significantly different from the conclusion that is actually drawn. Examples:

Crimes of theft and robbery have been increasing at an alarming rate lately. The conclusion is obvious: We must reinstate the death penalty immediately.

Abuse of the welfare system is rampant nowadays. Our only alternative is to abolish the system altogether.

At least two correct conclusions are implied by the premise of the first argument: either “We should provide increased police protection in vulnerable neighborhoods” or “We should initiate programs to eliminate the causes of the crimes.” Reinstating the death

Missing the point



penalty is not a logical conclusion at all. Among other things, theft and robbery are not capital crimes. In the second argument the premises logically suggest some systematic effort to eliminate the cheaters rather than eliminating the system altogether.

Ignoratio elenchi means “ignorance of the proof.” The arguer is ignorant of the logical implications of his or her own premises and, as a result, draws a conclusion that misses the point entirely. The fallacy has a distinct structure all its own, but in some ways it serves as a catchall for arguments that are not clear instances of one or more of the other fallacies. An argument should not be identified as a case of missing the point, however, if one of the other fallacies fits.

8. Red Herring

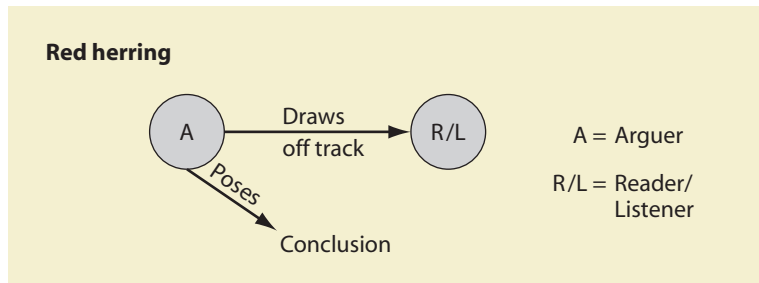
This fallacy is closely associated with missing the point (*ignoratio elenchi*). The **red herring** fallacy is committed when the arguer diverts the attention of the reader or listener by changing the subject to a different but sometimes subtly related one. He or she then finishes by either drawing a conclusion about this different issue or by merely presuming that some conclusion has been established. By so doing, the arguer purports to have won the argument. The fallacy gets its name from a procedure used to train hunting dogs to follow a scent. A red herring (or bag of them) is dragged across the trail with the aim of leading the dogs astray. Since red herrings have an especially

potent scent (caused in part by the smoking process used to preserve them), only the best dogs will follow the original scent.

To use the red herring fallacy effectively, the arguer must change the original subject of the argument without the reader or listener noticing it. One way of doing this is to change the subject to one that is subtly related to the original subject. Here are two examples of this technique:

Environmentalists are continually harping about the dangers of nuclear power. Unfortunately, electricity is dangerous no matter where it comes from. Every year hundreds of people are electrocuted by accident. Since most of these accidents are caused by carelessness, they could be avoided if people would just exercise greater caution.

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 and grapefruit have lots of vitamin C.



Both arguments commit the red herring fallacy. In the first, the original issue is whether nuclear power is dangerous. The arguer changes this subject to the danger of electrocution and proceeds to draw a conclusion about that. The new subject is clearly different from the possibility of nuclear explosion or meltdown, but the fact that both are related to electricity facilitates the arguer's goal of leading someone off the track. In the second argument, the original issue is pesticides, and the arguer changes it to the value of fruits and vegetables in one's diet. Again, the fact that the second topic is related to the first assists the arguer in committing the fallacy. In neither case does the arguer draw a conclusion about the original topic, but by merely diverting the attention of the reader or listener, the arguer creates the presumption of having won the argument.

A second way of using the red herring effectively is to change the subject to some flashy, eye-catching topic that is virtually guaranteed to distract the listener's attention. Topics of this sort include sex, crime, scandal, immorality, death, and any other topic that might serve as the subject of gossip. Here is an example of this technique:

Professor Conway complains of inadequate parking on our campus. But did you know that last year Conway carried on a torrid love affair with a member of the English Department? The two used to meet every day for clandestine sex in the copier room. Apparently they didn't realize how much you can see through that fogged glass window. Even the students got an eyeful. Enough said about Conway.

The red herring fallacy can be confused with the straw man fallacy because both have the effect of drawing the reader/listener off the track. This confusion can usually be avoided by remembering the unique ways in which they accomplish this purpose. In the straw man, the arguer begins by distorting an opponent's argument and concludes by knocking down the distorted argument. In the red herring, the arguer ignores the opponent's argument (if there is one) and subtly changes the subject. Thus, to distinguish the two fallacies, one should attempt to determine whether the arguer has knocked down a distorted argument or simply changed the subject. Also keep in mind that straw man always involves two arguers, at least implicitly, whereas a red herring often does not.

Both the red herring and straw man fallacies are susceptible of being confused with missing the point, because all three involve a similar kind of irrelevancy. To avoid this confusion, one should note that both red herring and straw man proceed by generating a new set of premises, whereas missing the point does not. Straw man draws a conclusion from new premises that are obtained by distorting an earlier argument, and red herring, if it draws any conclusion at all, draws one from new premises obtained by changing the subject. Missing the point, however, draws a conclusion from the original premises. Also, in the red herring and straw man, the conclusion, if there is one, is *relevant* to the premises from which it is drawn; but in missing the point, the conclusion is *irrelevant* to the premises from which it is drawn. Finally, remember that missing the point serves in part as a kind of catchall fallacy, and a fallacious argument should not be identified as a case of missing the point if one of the other fallacies clearly fits.

Exercise 3.2

- I. Identify the fallacies of relevance committed by the following arguments, giving a brief explanation for your answer. If no fallacy is committed, write "no fallacy."
 - ★1. The position open in the accounting department should be given to Frank Thompson. Frank has six hungry children to feed, and his wife desperately needs an operation to save her eyesight.
 2. Erica Evans, who takes orders at the local Taco Bell, argues persuasively in favor of increasing the minimum wage. But this is exactly what you would expect. Erica is paid the minimum wage, and if the minimum wage is increased, then her own salary will go up. Obviously Erica's arguments are worthless.
 3. The school board argues that our schools are in desperate need of repair. But the real reason our students are falling behind is that they spend too much time with their computers. Becoming educated means a lot more than learning how to point and click. The school board should send a letter to the parents urging them to monitor their kids' computer time.
 - ★4. Whoever thrusts a knife into another person should be arrested. But surgeons do precisely this when operating. Therefore, surgeons should be arrested.

5. You should read Irving Stone's latest novel right away. It's sold over a million copies, and practically everyone in the Manhattan cocktail circuit is talking about it.
6. Friedrich Nietzsche's philosophy is not worth the paper it's printed on. Nietzsche was an immoral reprobate who went completely insane from syphilis before he died.
- ★7. Surely you welcome the opportunity to join our protective organization. Think of all the money you will lose from broken windows, overturned trucks, and damaged merchandise in the event of your not joining.
8. Senator Barrow advocates increased Social Security benefits for the poor. It is regrettable that the senator finds it necessary to advocate socialism. Socialism defeats initiative, takes away promised rewards, and leads directly to inefficiency and big government. It was tried for years in Eastern Europe, and it failed miserably. Clearly, socialism is no good.
9. Something is seriously wrong with high school education these days. After ten years of decline, SAT scores are still extremely low, and high school graduates are practically incapable of reading and writing. The obvious conclusion is that we should close the schools.
- ★10. The editors of the *Daily Register* have accused our company of being one of the city's worst water polluters. But the *Daily Register* is responsible for much more pollution than we are. After all, they own the Western Paper Company, and that company discharges tons of chemical residue into the city's river every day.
11. If 20 percent of adult Americans are functionally illiterate, then it's no wonder that morons get elected to public office. In fact, 20 percent of adult Americans *are* functionally illiterate. Therefore, it's no wonder that morons get elected to public office.
12. Ladies and gentlemen, today the lines of battle have been drawn. When the din of clashing armor has finally died away, the Republican party will emerge victorious! We are the true party of the American people! We embody the values that all real Americans hold sacred! We cherish and protect our founding fathers' vision that gave birth to the Constitution! We stand for decency and righteousness; for self-determination and the liberty to conduct our affairs as each of us freely chooses! In the coming election, victory will be ours, so help us God!
- ★13. We've all heard the argument that too much television is the reason our students can't read and write. Yet many of today's TV shows are excellent. *Grey's Anatomy* unveils the personal lives of interns at an urban hospital, *Gossip Girl* explores the world of privileged teenagers at an elite private school, and *American Idol* uncovers hidden musical talent. Today's TV is just great!
14. Surely architect Norris is not responsible for the collapse of the Central Bank Tower. Norris has had nothing but trouble lately. His daughter eloped with a child molester, his son committed suicide, and his alcoholic wife recently left for Las Vegas with his retirement savings.

15. The First Amendment to the Constitution prevents the government from interfering with the free exercise of religion. The liturgical practice of the Religion of Internal Enlightenment involves human sacrifice. Therefore, it would be wrong for the government to interfere with this religious practice.
- ★16. Dan Marino, former quarterback for the Miami Dolphins, argues that Nutri-System is a great weight loss program. But that's exactly what you would expect, given that Marino owns stock in NutriSystem. Thus, you shouldn't take his arguments seriously.
17. Professor Pearson's arguments in favor of the theory of evolution should be discounted. Pearson is a cocaine-snorting sex pervert and, according to some reports, a member of the Communist party.
18. Rudolf Höss, commandant of the Auschwitz concentration camp, confessed to having exterminated one million people, most of whom were Jews, in the Auschwitz gas chamber. We can only conclude that Höss was either insane or an extremely evil person.
- ★19. TV commentator Larry Kudlow argues that government should get off the back of the American businessman. Obviously, Kudlow wants to abolish government altogether. Yet without government there would be no defense, no judicial system, no Social Security, and no health and safety regulations. None of us wants to forgo these benefits. Thus, we can see that Kudlow's argument is absurd.
20. I know that some of you oppose the appointment of David Cole as the new sales manager. On further consideration, however, I am confident you will find him well qualified for the job. If Cole is not appointed, it may become necessary to make severe personnel cutbacks in your department.
21. Animal rights activists say that animals are abused in biomedical research labs. But consider this: Pets are abused by their owners every day. Probably 25 percent of pet owners should never get near animals. Some cases of abuse are enough to make you sick.
- ★22. Of course you want to buy a pair of Slinky fashion jeans. Slinky jeans really show off your figure, and all the Hollywood starlets down on the Strip can be seen wearing them these days.
23. Actress Andie MacDowell says that it's healthy to drink milk. But the dairy industry pays MacDowell thousands of dollars to make these ads. Therefore, we should not take her testimonials too seriously.
24. Dr. Morrison has argued that smoking is responsible for the majority of health problems in this country and that every smoker who has even the slightest concern for his or her health should quit. Unfortunately, however, we must consign Dr. Morrison's argument to the trash bin. Only yesterday I saw none other than Dr. Morrison himself smoking a cigar.
- ★25. Mr. Rhodes is suffering from amnesia and has no recollection whatever of the events of the past two weeks. We can only conclude that he did not commit the crime of murdering his wife a week ago, as he has been accused of doing.

II. Answer “true” or “false” to the following statements:

1. In the appeal to force, the arguer physically attacks the listener.
2. In the direct variety of the appeal to the people, the arguer attempts to create a kind of mob mentality.
3. If an arguer attempts to discredit court room testimony or a promise by pointing out that the witness or the person making the promise is a liar, then the arguer commits an *argumentum ad hominem* (argument against the person) fallacy.
4. The *argumentum ad hominem* always involves two arguers.
5. In the *argumentum ad hominem* circumstantial, the circumstances cited by the second arguer are intended precisely to malign the character of the first arguer.
6. In the *tu quoque* fallacy, the arguer threatens the reader or listener.
7. In the fallacy of accident, a general rule is applied to a specific case where it does not fit.
8. In the straw man fallacy, an arguer often distorts another person’s argument by making it look more extreme than it really is.
9. Whenever one suspects that a missing the point fallacy is being committed, one should be able to state the conclusion that is logically implied by the premises.
10. In the red herring fallacy, the arguer attempts to lead the reader or listener off the track.

III. Identify the arguments in the following dialogue, then discuss each of them in terms of the fallacies presented in this section. You should be able to find at least one case of each fallacy.

Fallacy Cafe

“Thanks for saving us a seat,” Jodie says to her friend Frank, as she and Liz sit down with coffee cups in hand in the crowded cafeteria.

“No problem,” Frank says.

“We were late getting out of Professor Conklin’s social problems class,” Jodie says disgustedly. “He’s such a jerk! He always keeps us late, and he’s the most arrogant snob I’ve ever met.”

“I’ve heard that,” Frank says. “What’s he covering in class now?”

“Sexual harassment in the workplace,” Jodie replies. “But that is a real problem these days.”

“How so?”

“Well, my friend Amelia is a dispatcher for a trucking company, and she’s told me about dozens of times she’s been a victim of sexual harassment. The truckers have *Playboy* centerfolds tacked up all over the place, they constantly leer at her, they’re always asking her for dates. One of them even pats her rear when she leans over at the drinking fountain.”

Frank laughs. “Well, there is such a thing as the First Amendment, which supposedly guarantees freedom of expression. You wouldn’t want to deny these guys their freedom of expression, would you?”

"Freedom of expression, my eye!" explodes Jodie, looking incredulously at Frank. "Patting someone's rear isn't freedom of expression, it's abusive physical contact. So it's not protected by the First Amendment. Men! The trouble with you, Frank, is you're a typical man. If you were a woman, you'd see these things for what they are," she says, looking at Liz for support.

Liz nods her head in strong agreement.

"Well," says Frank, "I think your friend is lucky to have a job, what with all the people out of work these days. I've got a friend who's spent half his retirement savings just putting food on the table for his family, after losing his job. He was in the construction business, which is dead right now. And in other parts of the country it's even worse. You should tell Amelia to quit complaining."

"Stop giving me the runaround," demands Jodie, offended. "The trouble with you men is, you always look at women as sex objects. That makes sexual harassment inevitable."

"What do you mean?" protests Frank. "It's you women who treat us men like sex objects. What about all your makeup and perfume? And the tight pants and all the see-through stuff you wear? You think men are just a pack of animals—nothing but instinct—and you think that will make us fall for you. Isn't that how you see us?"

"I won't dignify that with a reply," fumes Jodie. "Anyone who isn't blind can see that Amelia's being victimized by those truckers. If you can't see it, maybe pouring this hot coffee over your thick head will wake you up!" she threatens.

"Calm down," says Frank with a startled look. "Everyone is beginning to stare at us. Okay, suppose I agree that Amelia is a victim. The question is, what do we do about it?"

"To begin with," says Jodie firmly, "the trucking company should transfer Amelia out of dispatch and give her a better job, like executive secretary in the regional office. Her husband ran out on her recently, leaving her with all five kids—and little Tommy needs braces. She could really use the extra money."

"You're joking!" Frank laughs sarcastically. "Didn't you tell me once that Amelia never finished high school and is functionally illiterate? She could never handle a job like that."

Thinking for a moment, Jodie then replies, "Well, maybe you're right. But at least the company should adopt a policy forbidding all forms of sexual harassment. Maybe that would make the truckers see how abusive they are, and then they might stop acting that way. Practically every company in the country has such a policy, but Amelia's bosses are dragging their feet."

"Okay. But then how do you define sexual harassment?" Frank asks. "'Cause if you can't define it, any policy is useless."

"Well, I don't exactly know," Jodie hesitates. "I'll have to think about that."

"Aha! I knew it!" exclaims Frank, triumphantly. "You can't define it, which means you don't even know if it exists! If you weren't such a radical feminist, you would see that all these claims of sexual harassment are hokey."

"Me, radical?" Jodie explodes. "The truth is you're a radical sexist. What you're saying is, women are only chattel, like they were 200 years ago, and men can use or abuse them any way they please. Liz, that's what he's saying, isn't it?"

"Absolutely," Liz affirms.

"What a crazy argument," says Frank scornfully. "What you're saying is, we should abolish all distinctions between men and women and create a unisex society in which everyone acts like a bunch of robots. Isn't that right, Liz?"

"No, not at all," insists Liz. "She's trying to—"

"You're completely insane, Frank," Jodie interrupts, rising determinedly from her chair, "and your arguments are wacko!" She then throws the remains of her coffee at Frank. The other students who have been listening to the heated argument rise up shouting, "Right on, Jodie!" Some begin chanting, "End sex harassment! End sex harassment!" As more students join the demonstration, they surround Frank, gesturing crudely.

Angry and humiliated, he breaks away and dashes out the door.

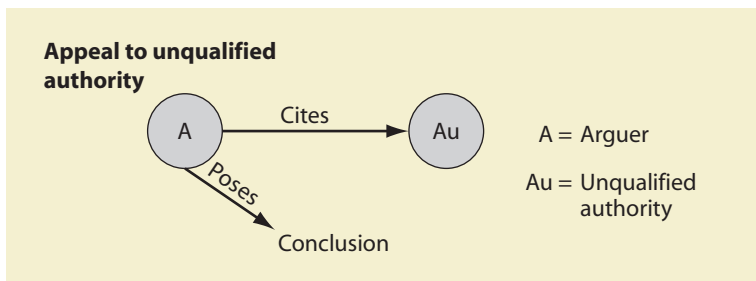
3.3

Fallacies of Weak Induction

The **fallacies of weak induction** occur not because the premises are logically irrelevant to the conclusion, as is the case with the eight fallacies of relevance, but because the connection between premises and conclusion is not strong enough to support the conclusion. In each of the following fallacies, the premises provide at least a shred of evidence in support of the conclusion, but the evidence is not nearly good enough to cause a reasonable person to believe the conclusion. Like the fallacies of relevance, however, the fallacies of weak induction often involve emotional grounds for believing the conclusion.

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

We saw in Chapter 1 that an argument from authority is an inductive argument in which an arguer cites the authority or testimony of another person in support of some conclusion. The **appeal to unqualified authority** fallacy is a variety of the argument from authority and occurs when the cited authority or witness lacks credibility. There are several reasons why an authority or witness might lack credibility. The person might lack the requisite expertise, might be biased or prejudiced, might have a motive to lie or disseminate "misinformation," or might lack the requisite ability to perceive or recall. The following examples illustrate these reasons:



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

This conclusion deals with nuclear physics, and the authority is a family physician. Because it is unlikely that a physician would be an expert in nuclear physics, the argument commits an appeal to unqualified authority.

David Duke, former Grand Wizard of the Ku Klux Klan, has stated, "Jews are not good Americans. They have no understanding of what America is." On the basis of Duke's authority, we must therefore conclude that the Jews in this country are un-American.

As an authority, David Duke is clearly biased, so his statements cannot be trusted.

James W. Johnston, Chairman of R. J. Reynolds Tobacco Company, testified before Congress that tobacco is not an addictive substance and that smoking cigarettes does not produce any addiction. Therefore, we should believe him and conclude that smoking does not in fact lead to any addiction.

If Mr. Johnston had admitted that tobacco is addictive, it would have opened the door to government regulation, which could put his company out of business. Thus, because Johnston had a clear motive to lie, we should not believe his statements.

Old Mrs. Furguson (who is practically blind) has testified that she saw the defendant stab the victim with a bayonet while she was standing in the twilight shadows 100 yards from the incident. Therefore, members of the jury, you must find the defendant guilty.

Here the witness lacks the ability to perceive what she has testified to, so her testimony is untrustworthy.

Of course if an authority is credible, the resulting argument will contain no fallacy. Example:

The county tax collector issued a press release stating that property tax revenues are higher this year than last. Therefore, we conclude that these revenues are indeed higher this year.

Normally a county tax collector would be considered a qualified expert in the area of tax revenues, so assuming the tax collector has no reason to lie, this argument is inductively strong.

In deciding whether a person is a qualified authority, one should keep two important points in mind. First, the person might be an authority in more than one field. For example, a chemist might also be an authority in biology, or an economist might also be an authority in law. The second point is that there are some areas in which practically no one can be considered an authority. Such areas include politics, morals, and religion. For example, if someone were to argue that abortion is immoral because a certain philosopher or religious leader has said so, the argument would be weak regardless of the authority's qualifications. Many questions in these areas are so hotly contested that there is no conventional wisdom an authority can depend on.

10. Appeal to Ignorance

(*Argumentum ad Ignorantiam*)

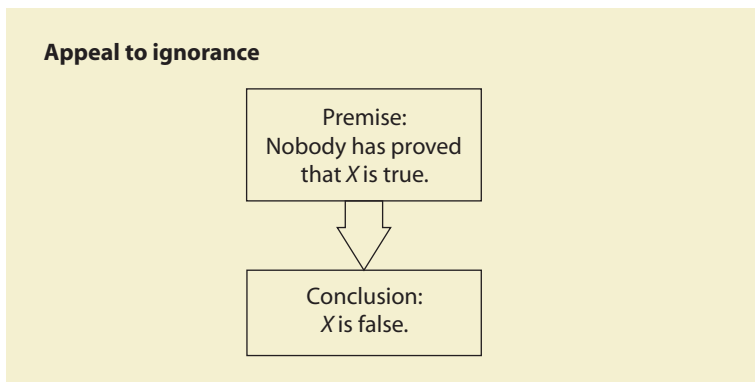
When the premises of an argument state that nothing has been proved one way or the other about something, and the conclusion then makes a definite assertion about that thing, the argument commits an **appeal to ignorance**. The issue usually involves something that is incapable of being proved or something that has not yet been proved. Example:

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 nonsense.

Conversely, the following argument commits the same fallacy.

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

The premises of an argument are supposed to provide positive evidence for the conclusion. The premises of these arguments, however, tell us nothing about astrology; rather, they tell us about what certain unnamed and unidentified people have tried unsuccessfully to do. This evidence may provide some slight reason for believing the conclusion, but certainly not sufficient reason.



These examples do, however, lead us to the first of two important exceptions to the appeal to ignorance. The first stems from the fact that if qualified researchers investigate a certain phenomenon within their range of expertise and fail to turn up any evidence that the phenomenon exists, this fruitless search by itself constitutes positive evidence about the question. Consider, for example, the following argument:

Teams of scientists attempted over several decades to detect the existence of the luminiferous aether, and all failed to do so. Therefore, the luminiferous aether does not exist.

The premises of this argument are true. Given the circumstances, it is likely that the scientists in question would have detected the aether if in fact it did exist. Since they

did not detect it, it probably does not exist. Thus, we can say that the given argument is inductively strong (but not deductively valid).

As for the two arguments about astrology, if the attempts to prove or disprove the astrological claims had been done in a systematic way by qualified experts, the arguments would more likely be good. Exactly what is required to qualify someone to investigate astrological claims is, of course, difficult to say. But as these arguments stand, the premises state nothing about the qualifications of the investigators, and so the arguments remain fallacious.

It is not always necessary, however, that the investigators have *special* qualifications. The kinds of qualifications needed depend on the situation. Sometimes the mere ability to see and report what one sees is sufficient. Example:

No one has ever seen Mr. Andrews drink a glass of wine, beer, or any other alcoholic beverage. Probably Mr. Andrews is a nondrinker.

Because it is highly probable that if Mr. Andrews were a drinker, somebody would have seen him drinking, this argument is inductively strong. No special qualifications are needed to be able to see someone take a drink.

The second exception to the appeal to ignorance relates to courtroom procedure. In the United States and a few other countries, a person is presumed innocent until proven guilty. If the prosecutor in a criminal trial fails to prove the guilt of the defendant beyond reasonable doubt, counsel for the defense may justifiably argue that his or her client is not guilty. Example:

Members of the jury, you have heard the prosecution present its case against the defendant. Nothing, however, has been proved beyond a reasonable doubt. Therefore, under the law, the defendant is not guilty.

This argument commits no fallacy because “not guilty” means, in the legal sense, that guilt beyond a reasonable doubt has not been proved. The defendant may indeed have committed the crime of which he or she is accused, but if the prosecutor fails to prove guilt beyond a reasonable doubt, the defendant is considered “not guilty.”

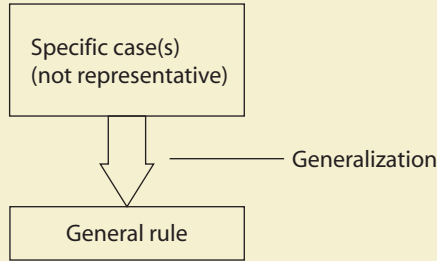
11. Hasty Generalization (Converse Accident)

Hasty generalization is a fallacy that affects inductive generalizations. In Chapter 1 we saw that an inductive generalization is an argument that draws a conclusion about all members of a group from evidence that pertains to a selected sample. 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. Here are two examples:

Today’s money managers are a pack of thieves, every last one of them. Look at Bernie Madoff and Robert Allen Stanford. They ripped off billions of dollars from thousands of trusting clients. And Raj Rajaratnam profited to the tune of millions of dollars through illegal insider trading.

Before the last presidential election, three residents of Harlem were quoted as saying they supported Barack Obama even though they knew nothing about his policies. Obviously the issues played no role in the outcome of that election.

Hasty generalization



In these arguments a conclusion about a whole group is drawn from premises that mention only a few instances. Because such small, atypical samples are not sufficient to support a general conclusion, each argument commits a hasty generalization.

The mere fact that a sample is small, however, does not necessarily mean that it is atypical. On the other hand, the mere fact that a sample is large does not guarantee that it is typical. In the case of small samples, various factors may intervene that render such a sample typical of the larger group. Examples:

Ten milligrams of substance Z was fed to four mice, and within two minutes all four went into shock and died. Probably substance Z, in this amount, is fatal to mice in general.

On three separate occasions I drank a bottle of Figowitz beer and found it flat and bitter. Probably I would find every bottle of Figowitz beer flat and bitter.

Neither of these arguments commits the fallacy of hasty generalization, because in neither case is there any likelihood that the sample is atypical of the group. In the first argument the fact that the mice died in only two minutes suggests the existence of a causal connection between eating substance Z and death. If there is such a connection, it would hold for other mice as well. In the second example the fact that the taste of beer typically remains constant from bottle to bottle causes the argument to be strong, even though only three bottles were sampled.

In the case of large samples, if the sample is not random, it may not be typical of the larger group. Example:

One hundred thousand voters from Orange County, California, were surveyed on their choice for governor, and 68 percent said they intend to vote for the Republican candidate. Clearly the Republican candidate will be elected.

Even though the sample cited in this argument is large, the argument commits a hasty generalization. The problem is that Orange County is overwhelmingly Republican, so the mere fact that 68 percent intend to vote for the Republican candidate is no indication of how others in the state intend to vote. In other words, the survey was not conducted randomly, and for this reason the argument is fatally flawed. The need for randomness in samples is discussed further in Chapter 12 of this book.

Hasty generalization is otherwise called “converse accident” because it proceeds in a direction opposite to that of accident. Whereas accident proceeds from the general to the particular, converse accident moves from the particular to the general. The premises cite some characteristic affecting one or more atypical instances of a certain class, and the conclusion then applies that characteristic to all members of the class.

12. False Cause

The fallacy of **false cause** occurs whenever the link between premises and conclusion depends on some imagined causal connection that probably does not 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. Examples:

During the past two months, every time that the cheerleaders have worn blue ribbons in their hair, the basketball team has been defeated. Therefore, to prevent defeats in the future, the cheerleaders should get rid of those blue ribbons.

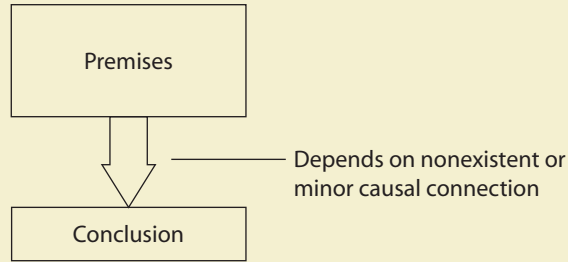
Successful business executives are paid salaries in excess of \$100,000. Therefore, the best way to ensure that Ferguson will become a successful executive is to raise his salary to at least \$100,000.

There are more laws on the books today than ever before, and more crimes are being committed than ever before. Therefore, to reduce crime we must eliminate the laws.

The first argument depends on the supposition that the blue ribbons caused the defeats, the second on the supposition that a high salary causes success, and the third on the supposition that laws cause crime. In no case is it likely that any causal connection exists.

The first argument illustrates a variety of the false cause fallacy called *post hoc ergo propter hoc* (“after this, therefore on account of this”). This variety of the fallacy presupposes that just because one event precedes another event, the first event causes the second. Obviously, mere temporal succession is not sufficient to establish a causal connection. Nevertheless, this kind of reasoning is quite common and lies behind most forms of superstition. (Example: “A black cat crossed my path and later I tripped and sprained my ankle. It must be that black cats really are bad luck.”)

The second and third arguments illustrate a variety of the false cause fallacy called *non causa pro causa* (“not the cause for the cause”). This variety is committed when what is taken to be the cause of something is not really the cause at all and the mistake is based on something other than mere temporal succession. In reference to the second argument, success as an executive causes increases in salary—not the other way around—so the argument mistakes the cause for the effect. In reference to the third argument, the increase in crime is, for the most part, only coincidental with the increase in the number of laws. Obviously, the mere fact that one event is coincidental with another is not sufficient reason to think that one caused the other.

False cause

A third variety of the false cause fallacy, and one that is probably committed more often than either of the others in their pure form, is *oversimplified cause*. This variety occurs when a multitude of causes is responsible for a certain effect but the arguer selects just one of these causes and represents it as if it were the sole cause. Here are some examples:

The quality of education in our grade schools and high schools has been declining for years. Clearly, our teachers just aren't doing their job these days.

Today, all of us can look forward to a longer life span than our parents and grandparents. Obviously we owe our thanks to the millions of dedicated doctors who expend every effort to ensure our health.

In reference to the first argument, the decline in the quality of education is caused by many factors, including lack of discipline in the home, lack of parental involvement, too much television, and drug use by students. Poor teacher performance is only one of these factors and probably a minor one at that. In the second argument, the efforts of doctors are only one among many factors responsible for our longer life span. Other, more important factors include a better diet, more exercise, reduced smoking, safer highways, and more stringent occupational safety standards.

The oversimplified cause fallacy is usually motivated by self-serving interests. Sometimes the arguer wants to take undeserved credit for himself or herself or give undeserved credit to some movement with which he or she is affiliated. At other times, the arguer wants to heap blame on an opponent or shift blame from himself or herself onto some convenient occurrence. Instances of the fallacy can resemble either the *post hoc* or the *non causa pro causa* varieties in that the alleged cause can occur either prior to or concurrently with the effect. It differs from the other varieties of false cause fallacy in that the single factor selected for credit or blame is often partly responsible for the effect, but responsible to only a minor degree.

The last variety of false cause we will consider is called the *gambler's fallacy*. This fallacy is committed whenever the conclusion of an argument depends on the

supposition that independent events in a game of chance are causally related. Here is an example:

A fair coin was flipped five times in a row, and each time it came up heads. Therefore, it is extremely likely that it will come up tails on the next flip.

In fact, it is no more likely that the coin will come up tails on the next flip than it was on the first flip. Each flip is an independent event, so earlier flips have no causal influence on later ones. Thus, the fact that the earlier flips came up heads does not increase the likelihood that the next flip will come up tails.

For the gambler's fallacy to be committed, the events must be independent or nearly independent. Such events include rolls of a pair of fair (unloaded) dice, spins of a fair roulette wheel, and selections of lottery winning numbers. Events are not completely independent whenever the skill of the gambler affects the outcome. Thus, poker, blackjack, and horse-race betting provide less-than-perfect candidates for the gambler's fallacy.

The false cause fallacy is often convincing because it is often difficult to determine whether two phenomena are causally related. A lengthy time lapse between the operation of the cause and the occurrence of the effect can exacerbate the problem. For example, the thirty-year interval between exposure to asbestos and the onset of asbestosis impeded the recognition of a causal connection. Also, when two events are causally related, determining the degree of relatedness may be hard. Thus, there may be some connection between the electromagnetic field produced by high voltage transmission lines and leukemia, but the connection may be extremely slight. Finally, when a causal connection is recognized, it may be difficult to determine which is the cause and which is the effect. For example, an allergic reaction may be connected with an episode of anxiety, but it may be hard to tell if the reaction causes the anxiety or if the anxiety causes the reaction.

The realm of human action constitutes another area in which causal connections are notoriously difficult to establish. For example, the attorneys for accused murderer Dan White argued that Twinkies, Coke, and potato chips caused him to kill San Francisco mayor George Moscone. Other attorneys have blamed their clients' crimes on PMS, rap music, childhood abuse, mental retardation, and hallucinations. The complex nature of human motivation renders all such causal claims difficult to evaluate. The situation may become even worse when a whole nation of people are involved. Thus, the recent drop in crime rates has been attributed to "three strikes" laws, but it is difficult to say whether this or some other factor is really responsible.

One point that should be kept in mind when establishing causal connections is that statistical correlations by themselves often reveal little about what is actually going on. For example, if all that we knew about smoking and lung cancer was that the two frequently occur together, we might conclude any number of things. We might conclude that both have a common cause, such as a genetic predisposition, or we might conclude that lung cancer is a disease contracted early in life and that it manifests itself in its early stages by a strong desire for tobacco. Fortunately, in this case we have more evidence than a mere statistical correlation. This additional evidence inclines us to believe that the smoking is a cause of the cancer.

13. Slippery Slope

The fallacy of **slippery slope** is a variety of the false cause fallacy. It occurs when the conclusion of an argument rests on an alleged chain reaction and there is not sufficient reason to think that the chain reaction will actually take place. Here is an example:

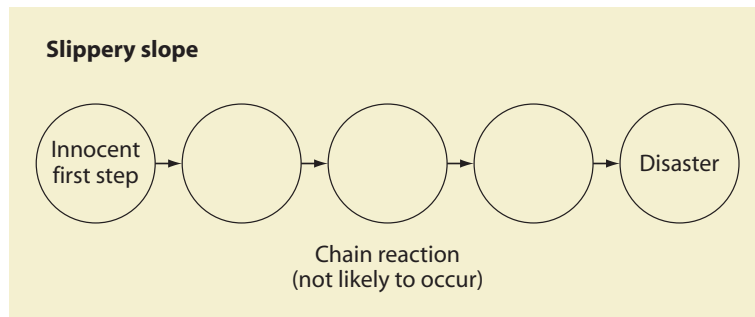
Immediate steps should be taken to outlaw pornography once and for all. The continued manufacture and sale of pornographic material will almost certainly lead to an increase in sex-related crimes such as rape and incest. This in turn will gradually erode the moral fabric of society and result in an increase 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. An equally fallacious counterargument is as follows:

Attempts to outlaw pornography threaten basic civil rights and should be summarily abandoned. If pornography is outlawed, censorship of newspapers and news magazines is only a short step away. After that there will be censorship of textbooks, political speeches, and the content of lectures delivered by university professors. Complete mind control by the central government will be the inevitable result.

Both arguments attempt to persuade the reader or listener that the welfare of society rests on a “slippery slope” and that a single step in the wrong direction will result in an inevitable slide all the way to the bottom.

The slippery slope fallacy can involve various kinds of causality. For example, someone might argue that removing a single brick from a building would set off a chain reaction leading to the destruction of the building, or that chopping down a tall tree would set off a cascade of falling trees leading to the destruction of the forest. These arguments depend on pure physical causality. On the other hand, someone might argue that starting a rumor about the health of the economy would set off a chain reaction leading to the collapse of the stock market. Such an argument would depend on the kind of causality found in interpersonal communications. Or someone might argue that planting a seed of doubt in a person’s mind about the faithfulness of his or her spouse would gnaw away at that person, leading to the breakup of the marriage. Such an argument would depend on the kind of causality that links mental states.



Deciding whether a slippery slope fallacy has been committed can be difficult when one is uncertain whether the alleged chain reaction will or will not occur. This question is discussed in Section 3.5. But many slippery slopes rest on a mere emotional conviction on the part of the arguer that a certain action or policy is bad, and the arguer attempts to trump up support for his or her position by citing all sorts of dire consequences that will result if the action is taken or the policy followed. In such cases there is usually little problem in identifying the argument as a slippery slope.

14. Weak Analogy

This fallacy affects inductive arguments from analogy. As we saw in Chapter 1, 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. The fallacy of **weak analogy** is committed when the analogy is not strong enough to support the conclusion that is drawn. Example:

Amber's dog is similar in many ways to Kyle's cat. Both like being petted, they enjoy being around people, they beg for food at the dinner table, and they sleep with their owners. Amber's dog loves to romp on the beach with Amber. Therefore, Kyle's cat probably loves to romp on the beach with Kyle.

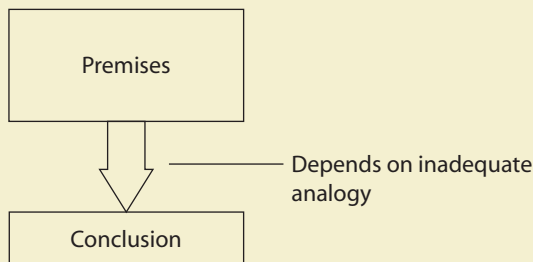
In this argument the similarities cited between Amber's dog and Kyle's cat probably have nothing to do with the cat's attitude toward romping on the beach. Thus, the argument is fallacious.

The basic structure of an argument from analogy is as follows:

Entity A has attributes a , b , c , and z .
Entity B has attributes a , b , c .
Therefore, entity B probably has attribute z also.

Evaluating an argument having this form requires a two-step procedure: (1) Identify the attributes a , b , c , . . . that the two entities A and B share, and (2) determine how the attribute z , mentioned in the conclusion, relates to the attributes a , b , c , . . . If some causal or systematic relation exists between z and a , b , or c , the argument is strong; otherwise, it is weak. In the given example, the two entities share the attributes of

Weak analogy



Eminent Logicians

William of Ockham *ca.* 1285–1347

3

The English philosopher and theologian, William of Ockham, was born in or near the village of Ockham not far from London. Little is known about his childhood, and his biographers are not even certain about the year of his birth, with estimates running from 1280 to 1290. However, they are certain that while Ockham was still a small boy, his parents delivered him to the nearest Franciscan monastery to be brought up in the monastic way of life. His parents' intentions were realized when he entered the Franciscan Order and was ordained in 1306.

Ockham studied theology at Oxford, possibly under Duns Scotus, and he lectured there. He also studied and taught at the University of Paris, where he wrote extensively on theology and philosophy. Ockham's theological views generated controversy among theologians of the day, some of whom vehemently opposed him. In 1324, he was called to Avignon, then the location of the papal court, to answer charges of heresy.

A panel of scholars had been appointed to review the charges made against Ockham, and he was obliged to remain at a Franciscan house in Avignon throughout the investigation, which lasted four years. During this time, the Franciscan minister general, Michael of Cesena, was called to Avignon, because he had become embroiled in a controversy with Pope John XXII over the issue of the poverty of Jesus and the apostles. Michael held that Jesus and the apostles did not own property but instead survived through goodwill offerings of people in the community. The Franciscans regarded themselves as emulating the model set by Jesus and the apostles, but the pope, who lived in luxury, obviously disagreed.

Though Ockham had more than enough problems of his own, the minister general asked him

to research the issue to see which position was right—the pope's or the minister general's. Ockham ultimately came out on the side of the minister general, claim-

ing that the pope was a heretic and had no business even being pope. This got the Avignon Franciscans into a great deal of trouble, and to extricate themselves they purloined several horses and rode out of town in the middle of the night. Ludwig of Bavaria, the Holy Roman Emperor, gave them protection, and Ockham lived out the rest of his life in Munich. While there he turned his attention to politics and political philosophy. He was a staunch advocate of the separation of church and state, claiming that the pope had no right to intervene in state affairs. The pope retaliated by excommunicating him.

Ockham is best known for endorsing a principle of parsimony that has come to be called "Ockham's razor." This principle states that, among alternative explanations, the simplest one is the best. Ockham emphasized the importance of keeping the number of entities hypothesized in an explanation to an absolute minimum. In the area of logic, he is known for his theory of truth conditions for categorical propositions, for work in the foundations of inductive reasoning, for preliminary work on a three-valued logic, and for developing a close approximation to what would later come to be known as De Morgan's rule.



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liking to be petted, enjoying people, begging for food, and sleeping with their owners. Because it is highly probable that none of these attributes is systematically or causally related to romping on the beach, the argument is fallacious.

As an illustration of when the requisite systematic or causal relation does and does not exist, consider the following arguments:

The flow of electricity through a wire is similar to the flow of water through a pipe.

Obviously a large-diameter pipe will carry a greater flow of water than a pipe of small diameter. Therefore, a large-diameter wire should carry a greater flow of electricity than a small-diameter wire.

The flow of electricity through a wire is similar to the flow of water through a pipe.

When water runs downhill through a pipe, the pressure at the bottom of the hill is greater than it is at the top. Thus, when electricity flows downhill through a wire, the voltage should be greater at the bottom of the hill than at the top.

The first argument is good and the second is fallacious. Both arguments depend on the similarity between water molecules flowing through a pipe and electrons flowing through a wire. In both cases there is a systematic relation between the diameter of the pipe/wire and the amount of flow. In the first argument this systematic relation provides a strong link between premises and conclusion, and so the argument is a good one. But in the second argument a causal connection exists between difference in elevation and increase in pressure that holds for water but not for electricity. Water molecules flowing through a pipe are significantly affected by gravity, but electrons flowing through a wire are not. Thus, the second argument is fallacious.

The theory and evaluation of arguments from analogy is one of the most complex and elusive subjects in all of logic. Additional material on arguments from analogy appears in Section 3.5 and Chapter 9 of this text.

Exercise 3.3

- I. Identify the fallacies of weak induction committed by the following arguments, giving a brief explanation for your answer. If no fallacy is committed, write “no fallacy.”
 - ★1. The *Daily News* carried an article this morning about three local teenagers who were arrested on charges of drug possession. Teenagers these days are nothing but a bunch of junkies.
 2. If a car breaks down on the freeway, a passing mechanic is not obligated to render emergency road service. For similar reasons, if a person suffers a heart attack on the street, a passing physician is not obligated to render emergency medical assistance.
 3. There must be something to psychical research. Three famous physicists—Oliver Lodge, James Jeans, and Arthur Stanley Eddington—took it seriously.

- ★4. The secretaries have asked us to provide lounge areas where they can spend their coffee breaks. This request will have to be refused. If we give them lounge areas, next they'll be asking for spas and swimming pools. Then it will be racquet ball courts, tennis courts, and fitness centers. Expenditures for these facilities will drive us into bankruptcy.
5. The accumulation of pressure in a society is similar to the buildup of pressure in a boiler. If the pressure in a boiler increases beyond a critical point, the boiler will explode. Accordingly, if a government represses its people beyond a certain point, the people will rise up in revolt.
6. A few minutes after Governor Harrison finished his speech on television, a devastating earthquake struck southern Alaska. For the safety of the people up there, it is imperative that Governor Harrison make no more speeches.
- ★7. No one has ever been able to prove the existence of extrasensory perception. We must therefore conclude that extrasensory perception is a myth.
8. Lester Brown, universally respected author of the yearly *State of the World* report, has said that the destruction of tropical rain forests is one of the ten most serious worldwide problems. Thus, it must be the case that this is indeed a very serious problem.
9. The abstinence only policy for birth control just doesn't work. After all, it didn't work for Jamie Lynn Spears, and it didn't work for Bristol Palin, either.
- ★10. Iranian President Mahmoud Amadinejad says there are no homosexuals in Iran. Not a single one. Therefore, given Amadinejad's obvious acquaintance with the people of his own country, we must conclude that no gay people live in Iran.
11. Probably no life exists on Venus. Teams of scientists have conducted exhaustive studies of the planet's surface and atmosphere, and no living organisms have been found.
12. We don't dare let the animal rights activists get their foot in the door. If they sell us on the idea that dogs, cats, and dolphins have rights, next it will be chickens and cows. That means no more chicken Kiev or prime rib. Next it will be worms and insects. This will lead to the decimation of our agricultural industry. The starvation of the human race will follow close behind.
- ★13. No one would buy a pair of shoes without trying them on. Why should anyone be expected to get married without premarital sex?
14. No one has proved conclusively that America's nuclear power plants constitute a danger to people living in their immediate vicinity. Therefore, it is perfectly safe to continue to build nuclear power plants near large metropolitan centers.
15. There are more churches in New York City than in any other city in the nation, and more crimes are committed in New York City than anywhere else. So, if we are to eliminate crime, we must abolish the churches.

II. Answer “true” or “false” to the following statements:

1. If an arguer cites a statement by a recognized expert in support of a conclusion and the statement falls within the expert’s range of expertise, then the arguer commits an appeal to unqualified authority.
2. If an arguer cites a statement in support of a conclusion and the statement reflects the strong bias of its author, then the arguer commits an appeal to unqualified authority.
3. In the appeal to ignorance, the arguer accuses the reader or listener of being ignorant.
4. If an attorney for the defense in an American or Canadian criminal trial argues that the prosecution has proved nothing beyond a reasonable doubt about the guilt of the defendant, then the attorney commits an appeal to ignorance.
5. Hasty generalization always proceeds from the particular to the general.
6. The *post hoc ergo propter hoc* variety of the false cause fallacy presumes that *X* causes *Y* merely because *X* happens before *Y*.
7. If an argument concludes that *X* causes *Y* simply because *X* and *Y* occur over the same time interval, then the argument commits the *non causa pro causa* variety of the false cause fallacy.
8. If the conclusion of an argument depends on the occurrence of a chain reaction of events, and there is good reason to believe that the chain reaction will actually occur, the argument commits a slippery slope fallacy.
9. The fallacy of weak analogy always depends on an alleged similarity between two things or situations.
10. If an argument from analogy depends on a causal or systematic relationship between certain attributes, and there is good reason to believe that this relationship exists, then the argument commits no fallacy.

III. Identify the fallacies of relevance and weak induction committed by the following arguments. If no fallacy is committed, write “no fallacy.”

- ★1. On our first date, George had his hands all over me, and I found it nearly impossible to keep him in his place. A week ago Tom gave me that stupid line about how, in order to prove my love, I had to spend the night with him. Men are all alike. All any of them want is sex.
2. Tagging by graffiti artists has become a terrible problem in recent years. Obviously our schools are stifling the creative spirit of these young people.
3. Before he was elected, Barack Obama promised that his administration would be completely transparent and that he would keep no secrets from the American people. But President Obama is first and foremost a politician, just like all the others. Therefore, we shouldn’t trust this promise for a minute.
- ★4. Naomi Klein, the best-selling author, argues at length that capitalism exploits disasters and upheavals to advance radical privatization and worsen the plight of the poor. But it’s clear that Klein says these outlandish things

only to sell more books. Therefore, her arguments on this issue really have no merit.

5. What the farmer sows in the spring he reaps in the fall. In the spring he sows \$8-per-bushel soybeans. Therefore, in the fall he will reap \$8-per-bushel soybeans.
6. World-renowned physicist Stephen Hawking claims that black holes do not gobble up everything that falls into them without leaving a trace, but that something is always left behind. Given Hawking's stature as a scientist and the many years he has worked on this problem, we should conclude that this is indeed the case.
- ★7. Emily has bought over 100 tickets on the weekly state lottery, and she has never won anything. Therefore, the likelihood increases every week that she will win something if she continues to buy tickets.
8. Johnny, of course I deserve the use of your bicycle for the afternoon. After all, I'm sure you wouldn't want your mother to find out that you played hooky today.
9. Practically everyone downloads music free of charge from the Internet these days. Therefore, you should have no qualms about doing this yourself.
- ★10. Ellen Quinn has argued that logic is not the most important thing in life. Apparently Ellen advocates irrationality. It has taken two million years for the human race to achieve the position that it has, and Ellen would throw the whole thing into the garbage. What utter nonsense!
11. When water is poured on the top of a pile of rocks, it always trickles down to the rocks on the bottom. Similarly, when rich people make lots of money, we can expect this money to trickle down to the poor.
12. Extensive laboratory tests have failed to prove any deleterious side effects of the new painkiller lexaprone. We conclude that lexaprone is safe for human consumption.
- ★13. Environmentalists accuse us of blocking the plan to convert Antarctica into a world park. In fact, nothing could be further from the truth. Antarctica is a huge continent teeming with life. It is the home of millions of penguins, seals, sea birds, and sea lions. Also, great schools of finfish and whales inhabit its coastal waters.
14. Media host Howard Stern claims that leaders of the religious right are nothing but a pack of racketeers bent on destroying every vestige of free speech, and he gives numerous reasons to support this claim. But Stern is just a vulgar, smut-mouthed freak who will say anything for shock value. Nobody should listen to this nonsense.
15. The operation of a camera is similar in many ways to the operation of an eye. If you are to see anything in a darkened room, the pupils of your eyes must first dilate. Accordingly, if you are to take a photograph (without flash) in a darkened room, the aperture of the camera lens must first be increased.

- ★16. Certainly Miss Malone will be a capable and efficient manager. She has a great figure, a gorgeous face, and tremendous poise and she dresses very fashionably.
- 17. James Dobson, director of Focus on the Family, says that men have the divine obligation to lead their families, and women have the divine obligation to submit to their husband's authority. Given Dobson's apparent ability to receive messages from God, we must conclude that this statement is absolutely true.
- 18. Dear Internal Revenue Service: I received a notice that my taxes are being audited for last year. But you have no right to do this. The deadline for filing a return was April 15, and I filed my tax return on April 12—a full three days before the deadline.
- ★19. To prevent dangerous weapons from being carried aboard airliners, those seeking to board must pass through a magnetometer and submit to a possible pat-down search. Therefore, to prevent alcohol and drugs from being carried into rock concerts, those entering should submit to similar search procedures.
- 20. Mr. Flemming's arguments against the rent control initiative on the September ballot should be taken with a grain of salt. As a landlord he would naturally be expected to oppose the initiative.
- 21. India is suffering a serious drought, thousands of children are dying of starvation in their mothers' arms, and homeless beggars line the streets of the major cities. Surely we must give these poor downtrodden people the chance of bettering their condition in America, the land of wealth and opportunity.
- ★22. Members of the jury, you have heard Shirley Gaines testify that the defendant did not offer to perform acts of prostitution for the undercover police officer. But Gaines is a known prostitute herself and a close friend of the defendant. Also, only a year ago she was convicted of twelve counts of perjury. Therefore, you should certainly discount Gaines's testimony.
- 23. It is ridiculous to hear that man from Peru complaining about America's poverty. Peru has twice as much poverty as America has ever had.
- 24. Angela complains that the problems on the algebra test were too hard. But have you ever seen the way Angela flirts with that good-looking quarterback on the football team? She's constantly batting those long, black eyelashes at him, and her tight-fitting sweaters leave nothing to the imagination. Angela should pay more attention to her studies.
- ★25. Nobody has ever proved that immoral behavior by elected officials erodes public morality. Therefore, we must conclude that such behavior does not erode public morality.
- 26. Freedom of speech is guaranteed by the First Amendment. Therefore, your friend was acting within his rights when he shouted "Fire! Fire!" in that crowded theater, even though it was only a joke.
- 27. No one, on encountering a watch lying on a forest trail, would expect that it had simply appeared there without having been made by someone. For the same reason, no one should expect that the universe simply appeared without having been made by some being.

- ★28. On Monday I drank ten rum and Cokes, and the next morning I woke up with a headache. On Wednesday I drank eight gin and Cokes, and the next morning I woke up with a headache. On Friday I drank nine bourbon and Cokes, and the next morning I woke up with a headache. Obviously, to prevent further headaches I must give up Coke.
- 29. Radio entertainer Rush Limbaugh claims there is not a shred of evidence to prove that nicotine is addictive or that cigarettes cause emphysema, lung cancer, or any other disease. Given Limbaugh's apparent expertise in medical science, we can only conclude that what he says about nicotine and cigarettes is true.
- 30. Some of the parents in our school district have asked that we provide bilingual education in Spanish. This request will have to be denied. If we provide this service, then someone will ask for bilingual education in Greek. Then it will be German, French, and Hungarian. Polish, Russian, Chinese, Japanese, and Korean will follow close behind. We certainly can't accommodate all of them.

IV. Identify the arguments in the following dialogue, then discuss each of them in terms of the fallacies presented in this section and the previous section. You should be able to find at least one case of each fallacy.

The Alien Hypothesis

"Hi! Glad you could make it," Ralph says to his friend Claudia at a Friday night party. "Hey, you just missed a great discussion that Tom, Ruben, and I were having about abduction by extraterrestrials. Ruben just left, but he said he's been reading this book by Whitley Strieber—I think it's called *Transformation*—in which Strieber describes being kidnapped by creatures from outer space."

"Good grief! You don't actually believe that nonsense, do you?" Claudia asks incredulously.

"Well, I don't think Strieber would lie. Also, Ruben told us an amazing personal story. He was out camping a year ago, and after he'd killed off a couple of six-packs of Moosehead, he says he saw a UFO. So, I think we have to conclude there really are UFOs."

"What a joke!" Claudia laughs scornfully. "Ruben was probably hallucinating. By the way, didn't he fail most of his classes last semester? His parents are spending a fortune for his education, and all he does is party, sleep, and ignore his studies. I think that's immoral. As for Strieber, does he give any evidence?"

"As a matter of fact, he does," Ralph replies smugly. "Apparently, a few years ago, he was driving with his wife on some country road, when both of them experienced an unusual blackout. When they woke up, they were thirty-five miles further down the road, and they had no recollection of how they got there. Later, both began having dreams about extraterrestrials performing experiments on them while they were on board their spacecraft. Extraterrestrials must have abducted them, then hypnotized them so they wouldn't remember what had happened."

"Oh yeah, now I remember who Strieber is," answers Claudia, caustically. "He's that weirdo who dreams up all kinds of fantastic stories just so he can write books about them and make lots of money. If you give that sickie one minute of your time, then you're crazier than he is."

"I think you're prejudiced," Ralph says. "Why, recent surveys show that 64 percent of the American public believe in UFOs, and the number is growing every day. That alone should convince you they're real."

"You've got to be kidding," Claudia mutters, shaking her head in disbelief.

"Well then, consider this," insists Ralph. "There are hundreds of people out there who've had similar dreams and the same unaccounted-for time lapses. They can't all be fantasizing."

"I know that Strieber is a kook," Claudia persists, "so all the others must be, too."

"Now, now, aren't we jumping to conclusions?" her friend asks condescendingly.

"Not at all. First it was UFOs and little green men. Now those little creatures are abducting people and experimenting on them. Before long they'll be manipulating our genes and trying to infiltrate the human race. In the end, everyone will suspect everyone else of being an alien, mass terror will prevail, and civilization will collapse!" Claudia exclaims in mock horror.

"Don't be a fool!" Ralph barks, irritated. "The problem with you is, you're an agnostic. Obviously, you're saying we should refuse to believe in anything we can't clearly see or touch. So, logically, God doesn't exist, and there is no immortal soul. Tom, that's what she's saying, isn't it?"

"More or less," Tom agrees halfheartedly.

"Again, not at all," Claudia responds. "What I'm saying is, people have to be just a little bit critical about what they believe. Apparently you believe any cockamamie story that comes your way. You're just so gullible. If you keep it up, everyone and their dog will take you for a ride."

"Oh yeah? If I were you, I'd take a close look at my own beliefs," Ralph gibes. "Didn't I see you reading the astrology column just the other day? Nobody in their right mind believes in astrology. Maybe I should start screaming 'Claudia believes in astrology! Claudia believes in astrology!' Then everyone will gawk at you, and that sexy physics major you're dying to get a date with will think you're a nut."

"Oh, shut up!" says Claudia, blushing. "I may read the astrology column, but I certainly don't believe it. I just read it for fun. But, the fact is, during the past twenty-five years there have been thousands of alleged sightings of UFOs, and not a single one has led to any solid evidence of their existence. What do you make of that?"

"I think we should look at this situation the other way around," Ralph says. "Up until now, nobody has shown that UFOs *don't* exist, so I think we should give those people who claim they have seen them the benefit of the doubt. We should believe in UFOs and extraterrestrials until the sightings are proved false."

"Well, okay. Let's suppose, just for the sake of argument, that I admit the existence of UFOs and their little green drivers. How are we supposed to respond to them? What are we supposed to do?" Claudia asks.

"For starters, we should extend an open invitation to them," answers Ralph. "They may come from a dying planet where millions of their compatriots desperately struggle for survival. Their sun may be burning out, their water supply exhausted, and

their soil poisoned with toxic chemicals. Surely they deserve a second chance on a new planet.”

“Maybe so,” Claudia says in a patronizing tone. “And now that you mention it, we probably have a legal obligation to let them in. Our current immigration laws say that we have to admit at least ten thousand applicants annually, from every major nation. If those aliens would just sign the right papers, we’d have to give them permanent residency. However, what worries me is, they may have the wrong intentions. After all, didn’t they conduct experiments on those people they abducted?”

“Yes, but don’t we experiment on animals? If the animals don’t complain, why should we? Also, medical experimentation often leads to wonderful new cures. I’m certain we have nothing to worry about,” says Ralph, proud of his logic.

“Humph! I hope you’re right. Well, I’ve got to go now—and don’t let any green men kidnap you,” Claudia says with a barb.

“And you, either,” Ralph answers.

3

3.4

Fallacies of Presumption, Ambiguity, and Grammatical Analogy

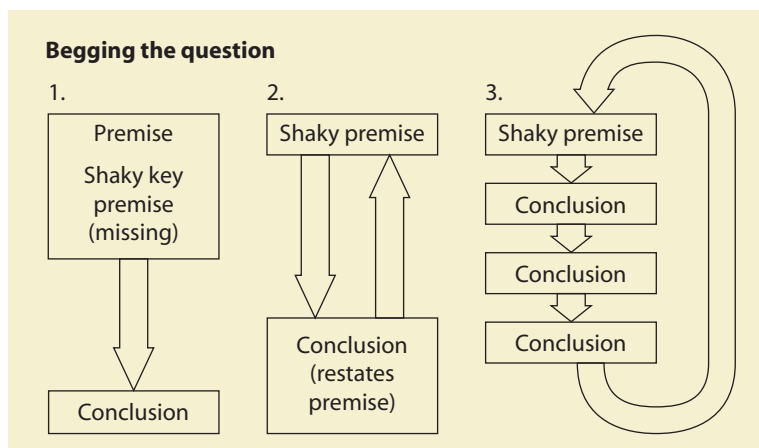
The **fallacies of presumption** include begging the question, complex question, false dichotomy, and suppressed evidence. These fallacies arise not because the premises are irrelevant to the conclusion or provide insufficient reason for believing the conclusion but because the premises presume what they purport to prove. *Begging the question* presumes that the premises provide adequate support for the conclusion when in fact they do not, and *complex question* presumes that a question can be answered by a simple “yes,” “no,” or other brief answer when a more sophisticated answer is needed. *False dichotomy* presumes that an “either . . . or . . .” statement presents jointly exhaustive alternatives when in fact it does not, and *suppressed evidence* presumes that no important evidence has been overlooked by the premises when in fact it has.

The **fallacies of ambiguity** include *equivocation* and *amphiboly*. These fallacies arise from the occurrence of some form of ambiguity in either the premises or the conclusion (or both). As we saw in Section 2.1, an expression is ambiguous if it is susceptible to different interpretations in a given context. The words “light” and “bank” are ambiguous, as is the statement “Tuna are biting off the Washington coast.” When the conclusion of an argument depends on a shift in meaning of an ambiguous word or phrase or on the wrong interpretation of an ambiguous statement, the argument commits a fallacy of ambiguity.

The **fallacies of grammatical analogy** include *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 arguments may appear good yet be bad.

15. 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 possibly false (shaky) key premise, by restating a possibly false premise as the conclusion, 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 apparent, and so the argument is said to beg the question. After reading or hearing the argument, the observer is inclined to ask, “But how do you know X?” where X is the needed support.



The first, and most common, way of committing this fallacy is by leaving a possibly false key premise out of the argument while creating the illusion that nothing more is needed to establish the conclusion. Examples:

Murder is morally wrong. This being the case, it follows that abortion is morally wrong.

We know that humans are intended to eat lots of fruit because the human hand and arm are perfectly suited for picking fruit from a tree.

It's obvious that the poor in this country should be given handouts from the government. After all, these people earn less than the average citizen.

Clearly, terminally ill patients have a right to doctor-assisted suicide. After all, many of these people are unable to commit suicide by themselves.

The first of these arguments begs the question “How do you know that abortion is a form of murder?” The second begs the question “Does the structure and function of the human hand and arm tell us what humans should eat?” And the third and fourth beg the questions “Just because the poor earn less than the average citizen, does this imply that the government should give them handouts?” and “Just because terminally ill patients cannot commit suicide by themselves, does it follow that they have a right to a doctor’s assistance?”

These questions indicate that something has been left out of the original arguments. Thus, the first argument is missing the premise “Abortion is a form of murder”; the second is missing the premise “The structure and function of the human hand and arm tell us what humans should eat” and so on. These premises are crucial for the soundness of the arguments. If the arguer is unable to establish the truth of these premises, then the arguments prove nothing. However, in most cases of begging the question, this is precisely the reason why such premises are left unstated. The arguer is *not* able to establish their truth, and by employing rhetorical phraseology such as “of course,” “clearly,” “this being the case,” and “after all,” the arguer hopes to create the illusion that the stated premise, by itself, provides adequate support for the conclusion when in fact it does not.

The same form of begging the question often appears in arguments concerning religious topics to justify conclusions about the existence of God, the immortality of the soul, and so on. Example:

The world in which we live displays an amazing degree of organization. Obviously this world was created by an intelligent God.

This argument begs the question “How do you know that the organization in the world could only have come from an intelligent creator?” Of course the claim that it did come from an intelligent creator may well be true, but the burden is on the arguer to prove it. Without supporting reasons or evidence, the argument proves nothing. Yet most people who are predisposed to believe the conclusion are likely to accept the argument as a good one. The same can be said of most arguments that beg the question, and this fact suggests another reason why arguers resort to this fallacy: Such arguments tend to reinforce preexisting inclinations and beliefs.

The second form of *petitio principii* occurs when the conclusion of an argument merely restates a possibly false premise in slightly different language. In such an argument, the premise supports the conclusion, and the conclusion tends to reinforce the premise. Examples:

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.

Anyone who preaches revolution has a vision of the future for the simple reason that if a person has no vision of the future he could not possibly preach revolution.

In the first argument, saying that capital punishment is “justified” means the same thing as saying that it is “legitimate and appropriate,” and in the second argument the premise and the conclusion say exactly the same thing. However, by repeating the same thing in slightly different language, the arguer creates the illusion that independent evidence is being presented in support of the conclusion, when in fact it is not. Both arguments contain rhetorical phraseology (“hateful and inhuman,” “*simple* reason,” and “could not possibly”) that help effect the illusion. The first argument begs the question “How do you know that capital punishment really is legitimate and

appropriate?” and the second begs the question “How do you know that people who preach revolution really do have a vision of the future?”

The third form of *petitio principii* involves circular reasoning in a chain of inferences having a first premise that is possibly false. Example:

Verizon has the best cell phone service. After all, their phones have the clearest sound.
And we know this is so because customers hear better on Verizon phones. And this follows from the fact that Verizon has digital technology. But this is exactly what you would expect given that Verizon has the best cell phone service.

On encountering this argument, the attentive reader is inclined to ask, “Where does this reasoning begin? What is its source?” Since the argument goes in a circle, it has no beginning or source, and as a result it proves nothing. Of course, in this example the circularity is rather apparent, so the argument is not likely to convince anyone. Cases in which circular reasoning may convince involve long and complex arguments having premises that depend on one another in subtle ways and a possibly false key premise that depends on the conclusion.

In all cases of begging the question, the arguer uses some linguistic device to create the illusion that inadequate premises provide adequate support for a conclusion. Without such an illusion, the fallacy is not committed. Thus, the following arguments commit no fallacy:

No dogs are cats.
Therefore, no cats are dogs.

London is in England and Paris is in France.
Therefore, Paris is in France and London is in England.

In both of these examples, the premise amounts to little more than a restatement of the conclusion. Yet both arguments are sound because they are valid and have true premises. No fallacy is committed, because no illusion is created to make inadequate premises appear as adequate. We will study arguments of this sort in Chapters 4 and 7.

Here is another example:

Rome is in Germany or Rome is in Germany.
Therefore, Rome is in Germany.

This argument is valid, but it is unsound because it has a false premise. However, it commits no fallacy because, again, no illusion is created to cover anything up. Arguments having this form also appear in Chapter 7.

As with these examples, arguments that beg the question are normally valid. This is easy to see. Any argument that includes the conclusion as one of the premises is clearly valid, and those forms of the fallacy that leave a key premise out of the argument become valid when that key premise is introduced. The problem with arguments that beg the question is that they are usually unsound, or at least not clearly sound, because the premise needed to provide adequate support for the conclusion is, at best, of uncertain truth value. Because such arguments presume the truth of this premise, begging the question is called a fallacy of presumption.

16. Complex Question

The fallacy of **complex question** is committed when two (or more) questions are asked in the guise of a single question and a single answer is then given to both of them. Every complex question presumes the existence of a certain condition. When the respondent's answer is added to the complex question, an argument emerges that establishes the presumed condition. Thus, although not an argument as such, a complex question involves an implicit argument. This argument is usually intended to trap the respondent into acknowledging something that he or she might otherwise not want to acknowledge. Examples:

Have you stopped cheating on exams?

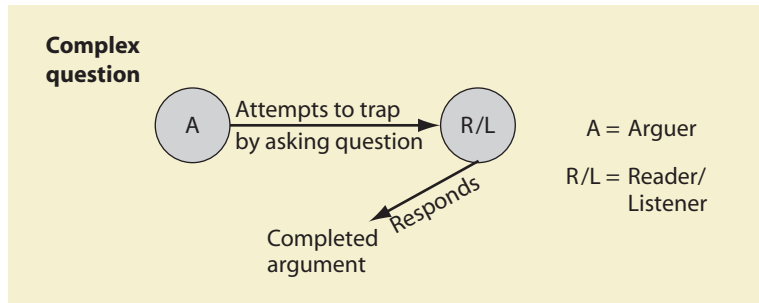
Where did you hide the marijuana you were smoking?

Let us suppose the respondent answers “yes” to the first question and “under the bed” to the second. The following arguments emerge:

You were asked whether you have stopped cheating on exams. You answered, “Yes.”
Therefore, it follows that you have cheated in the past.

You were asked where you hid the marijuana you were smoking. You replied, “Under the bed.” It follows that you were in fact smoking marijuana.

On the other hand, let us suppose that the respondent answers “no” to the first question and “nowhere” to the second. We then have the following arguments:



You were asked whether you have stopped cheating on exams. You answered, “No.”
Therefore, you continue to cheat.

You were asked where you hid the marijuana you were smoking. You answered, “Nowhere.” It follows that you must have smoked all of it.

Obviously, each of the questions is really two questions:

Did you cheat on exams in the past? If you did cheat in the past, have you stopped now?

Were you smoking marijuana? If you were smoking it, where did you hide it?

If respondents are not sophisticated enough to identify a complex question when one is put to them, they may answer quite innocently and be trapped by a conclusion

that is supported by no evidence at all; or, they may be tricked into providing the evidence themselves. The correct response lies in resolving the complex question into its component questions and answering each separately.

The fallacy of complex question should be distinguished from another kind of question known in law as a leading question. A *leading question* is one in which the answer is in some way suggested in the question. Whether or not a question is a leading one is important in the direct examination of a witness by counsel. Example:

Tell us, on April 9, did you see the defendant shoot the deceased?	(leading question)
Tell us, what did you see on April 9?	(straight question)

Leading questions differ from complex questions in that they involve no logical fallacies—that is, they do not attempt to trick the respondent into admitting something he or she does not want to admit. To distinguish the two, however, one sometimes needs to know whether prior questions have been asked. Here are some additional examples of complex questions:

Are you going to be a good little boy and eat your hamburger?
Is George Hendrix still telling lies?
How long must I put up with your snotty behavior?
When are you going to stop talking nonsense?

17. False Dichotomy

The fallacy of **false dichotomy** is committed when a disjunctive (“either . . . or . . .”) premise presents two unlikely alternatives as if they were the only ones available, and the arguer then eliminates the undesirable alternative, leaving the desirable one as the conclusion. Such an argument is clearly valid, but since the disjunctive premise is false, or at least probably false, the argument is typically unsound. The fallacy is often committed by children when arguing with their parents, by advertisers, and by adults generally. Here are three examples:

Either you let me attend the Dixie Chicks concert or I’ll be miserable for the rest of my life. I know you don’t want me to be miserable for the rest of my life, so it follows that you’ll let me attend the concert.

Either you use Ultra Guard deodorant or you risk the chance of perspiration odor. Surely you don’t want to risk the chance of perspiration odor. Therefore, you will want to use Ultra Guard deodorant.

Either you buy only American-made products or you don’t deserve to be called a loyal American. Yesterday you bought a new Toyota. It’s therefore clear that you don’t deserve to be called a loyal American.

In none of these arguments does the disjunctive premise present the only alternatives available, but in each case the arguer tries to convey that impression. For example, in the first argument, the arguer tries to convey the impression that he or she either goes to the concert or faces a lifetime of misery, and that no other alternatives are possible. Clearly, however, this is not the case.

The fallacious nature of false dichotomy lies in the illusion created by the arguer that the disjunctive premise presents jointly exhaustive alternatives. If it did, the premise would be true of necessity. For example, the statement “Either Reno is in Nevada, or it is not in Nevada” presents jointly exhaustive alternatives and is true of necessity. But in the fallacy of false dichotomy, not only do the two alternatives fail to be jointly exhaustive, but they are not even likely. As a result, the disjunctive premise is false, or at least probably false. Thus, the fallacy amounts to making a false or probably false premise appear true.

If one of the alternatives in the disjunctive premise is true, then the fallacy is not committed. For example, the following argument is valid and sound:

Either Seattle is in Washington, or it is in Oregon.
 Seattle is not in Oregon.
 Therefore, Seattle is in Washington

False dichotomy is otherwise called “false bifurcation” and the “either-or fallacy.” Also, in most cases the arguer expresses only the disjunctive premise and leaves it to the reader or listener to supply the missing statements:

Either you buy me a new mink coat, or I'll freeze to death when winter comes.
 Either I continue smoking, or I'll get fat and you'll hate to be seen with me.

The missing premise and conclusion are easily introduced.

18. Suppressed Evidence

Chapter 1 explained that a cogent argument is an inductive argument with good reasoning and true premises. The requirement of true premises includes the proviso that the premises not ignore some important piece of evidence that outweighs the presented evidence and entails a very different conclusion. If an inductive argument does indeed ignore such evidence, then the argument commits the fallacy of **suppressed evidence**. Consider, for example, the following argument:

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 us now.

If the arguer ignores the fact that the little dog is excited and foaming at the mouth (which suggests rabies), then the argument commits a suppressed evidence fallacy. This fallacy is classified as a fallacy of presumption because it works by creating the presumption that the premises are both true and complete when in fact they are not.

Perhaps the most common occurrence of the suppressed evidence fallacy appears in inferences based on advertisements. Nearly every ad neglects to mention certain negative features of the product advertised. As a result, an observer who sees or hears an advertisement and then draws a conclusion from it may commit the fallacy of suppressed evidence. Example:

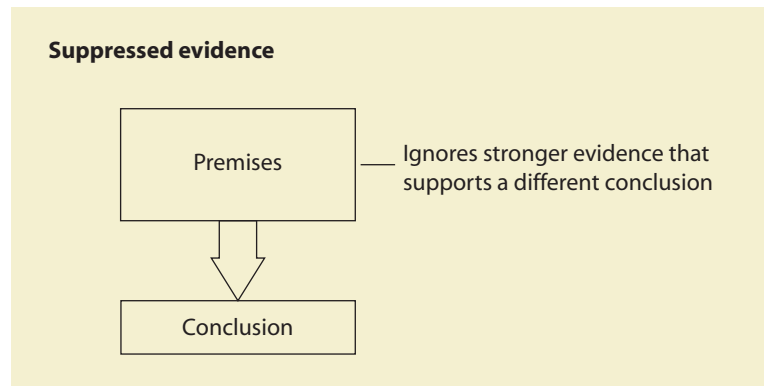
The ad for Kentucky Fried Chicken says, “Buy a bucket of chicken and have a barrel of fun!” Therefore, if we buy a bucket of that chicken, we will be guaranteed to have lots of fun.

The ad fails to state that the fun does not come packaged with the chicken but must be supplied by the buyer. Also, of course, the ad fails to state that the chicken is loaded with fat and that the buyer's resultant weight gain may not amount to a barrel of fun. By ignoring these facts, the argument based on the ad is fallacious.

Another way that an arguer can commit the suppressed evidence fallacy is by ignoring important events that have occurred with the passage of time that render an inductive conclusion improbable. Here is an example:

During the past sixty years, Poland has enjoyed a rather low standard of living. Therefore, Poland will probably have a low standard of living for the next sixty years.

This argument ignores the fact that Poland was part of the Soviet bloc during most of the past sixty years, and this fact accounts for its rather low standard of living. However, following the collapse of the Soviet Union, Poland became an independent nation, and its economy is expected to improve steadily during the next sixty years.



Yet another form of suppressed evidence is committed by arguers who quote passages out of context from sources such as the Bible, the Constitution, and the Bill of Rights to support a conclusion that the passage was not intended to support. Consider, for example, the following argument against gun control:

The Second Amendment to the Constitution states that the right of the people to keep and bear arms shall not be infringed. But a law controlling handguns would infringe the right to keep and bear arms. Therefore, a law controlling handguns would be unconstitutional.

In fact, the Second Amendment reads, “A well regulated militia being necessary to the security of a free state, the right of the people to keep and bear arms shall not be infringed.” In other words, the constitutional right to keep and bear arms is in some way related to the preservation of a well-regulated militia. Arguably a law controlling hand guns that is unrelated to the preservation of a well-regulated militia could be constitutional.

The suppressed evidence fallacy is similar to the form of begging the question in which the arguer leaves a key premise out of the argument. The difference is that suppressed evidence leaves out a premise that requires a *different* conclusion, while that

form of begging the question leaves out a premise that is needed to support the *stated* conclusion. However, because both fallacies proceed by leaving a premise out of the argument, there are cases where the two fallacies overlap.

19. Equivocation

The fallacy of **equivocation** occurs when the conclusion of an argument depends on the fact that a word or phrase is used, either explicitly or implicitly, in two different senses in the argument. Such arguments are either invalid or have a false premise, and in either case they are unsound. Examples:

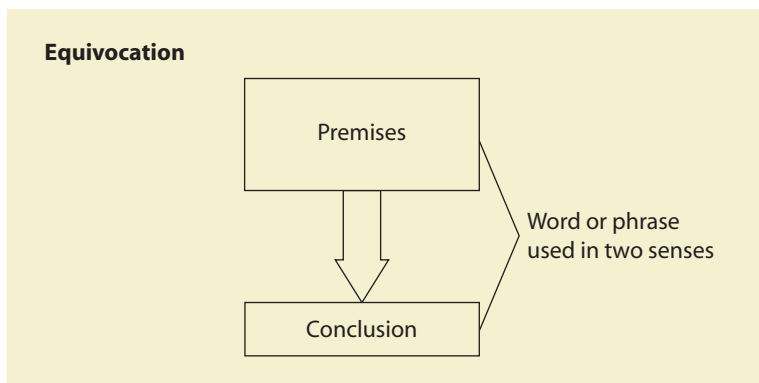
Some triangles are obtuse. Whatever is obtuse is ignorant. Therefore, some triangles are ignorant.

Any law can be repealed by the legislative authority. But the law of gravity is a law. Therefore, the law of gravity can be repealed by the legislative authority.

We have a duty to do what is right. We have a right to speak out in defense of the innocent. Therefore, we have a duty to speak out in defense of the innocent.

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

In the first argument “obtuse” is used in two different senses. In the first premise it describes a certain kind of angle, while in the second it means dull or stupid. The second argument equivocates on the word “law.” In the first premise it means statutory law, and in the second it means law of nature. The third argument uses “right” in two senses. In the first premise “right” means morally correct, but in the second it means a just claim or power. The fourth argument illustrates the ambiguous use of a relative word. The



word “large” means different things depending on the context. Other relative words that are susceptible to this same kind of ambiguity include “small,” “good,” “bad,” “light,” “heavy,” “difficult,” “easy,” “tall,” and “short.”

To be convincing, an argument that commits an equivocation must use the equivocal word in ways that are subtly related. Of the examples just given, only the third might fulfill this requirement. Since both uses of the word “right” are related to ethics,

the unalert observer may not notice the shift in meaning. Another technique is to spread the shift in meaning out over the course of a lengthy argument. Political speech makers often use phrases such as “equal opportunity,” “gun control,” “national security,” and “environmental protection” in one way at the beginning of a speech and in quite another way at the end. A third technique consists in using such phrases one way in a speech to one group and in a different way in a speech to an opposing group. If the same people are not present at both speeches, the equivocation is not detected.

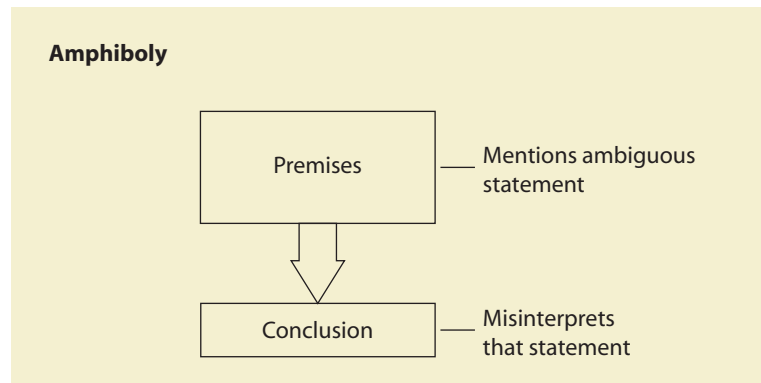
20. Amphiboly

The fallacy of **amphiboly** occurs when the arguer misinterprets an ambiguous statement and then draws a conclusion based on this faulty interpretation. The original statement is usually asserted by someone other than the arguer, and the ambiguity usually arises from a mistake in grammar or punctuation—a missing comma, a dangling modifier, an ambiguous antecedent of a pronoun, or some other careless arrangement of words. Because of this ambiguity, the statement may be understood in two clearly distinguishable ways. The arguer typically selects the unintended interpretation and proceeds to draw a conclusion based on it. Here are some examples:

The tour guide said that standing in Greenwich Village, the Empire State Building could easily be seen. It follows that the Empire State Building is in Greenwich Village.

John told Henry that he had made a mistake. It follows that John has at least the courage to admit his own mistakes.

Professor Johnson said that he will give a lecture about heart failure in the biology lecture hall. It must be the case that a number of heart failures have occurred there recently.



The premise of the first argument contains a dangling modifier. Is it the observer or the Empire State Building that is supposed to be standing in Greenwich Village? The factually correct interpretation is the former. In the second argument the pronoun “he” has an ambiguous antecedent; it can refer either to John or to Henry. Perhaps John told Henry that *Henry* had made a mistake. In the third argument the ambiguity concerns what takes place in the biology lecture hall; is it the lecture or the heart

failures? The correct interpretation is probably the former. The ambiguity can be eliminated by inserting commas (“Professor Johnson said that he will give a lecture, about heart failure, in the biology lecture hall”) or by moving the ambiguous modifier (“Professor Johnson said that he will give a lecture in the biology lecture hall about heart failure”). Ambiguities of this sort are called *syntactical ambiguities*.

Two areas where cases of amphiboly cause serious problems involve contracts and wills. The drafters of these documents often express their intentions in terms of ambiguous statements, and alternate interpretations of these statements then lead to different conclusions. Examples:

Mrs. Hart stated in her will, “I leave my 500-carat diamond necklace and my pet chinchilla to Alice and Theresa.” Therefore, we conclude that Alice gets the necklace and Theresa gets the chinchilla.

Mr. James signed a contract that reads, “In exchange for painting my house, I promise to pay David \$5,000 and give him my new Cadillac only if he finishes the job by May 1.” Therefore, since David did not finish until May 10, it follows that he gets neither the \$5,000 nor the Cadillac.

In the first example the conclusion obviously favors Alice. Theresa is almost certain to argue that the gift of the necklace and chinchilla should be shared equally by her and Alice. Mrs. Hart could have avoided the dispute by adding either “respectively” or “collectively” to the end of the sentence. In the second example, the conclusion favors Mr. James. David will argue that the condition that he finish by May 1 affected only the Cadillac and that he therefore is entitled to the \$5,000. The dispute could have been avoided by properly inserting a comma in the language of the promise.

Amphiboly differs from equivocation in two important ways. First, equivocation is always traced to an ambiguity in the meaning of a *word* or *phrase*, whereas amphiboly involves a syntactical ambiguity in a *statement*. The second difference is that amphiboly usually involves a mistake made by the arguer in interpreting an ambiguous statement made by someone else, whereas the ambiguity in equivocation is typically the arguer’s own creation. If these distinctions are kept in mind, it is usually easy to distinguish amphiboly from equivocation. Occasionally, however, the two fallacies occur together, as the following example illustrates:

The *Great Western Cookbook* recommends that we serve the oysters when thoroughly stewed. Apparently the delicate flavor is enhanced by the intoxicated condition of the diners.

First, it is unclear whether “stewed” refers to the oysters or to the diners, and so the argument commits an amphiboly. But if “stewed” refers to the oysters it means “cooked,” and if it refers to the diners it means “intoxicated.” Thus, the argument also involves an equivocation.

21. 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 onto the whole. In other words, the fallacy 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 question cannot be legitimately transferred from parts to whole. Examples:

Maria likes anchovies. She also likes chocolate ice cream. Therefore, it is certain that she would like a chocolate sundae topped with anchovies.

Each player on this basketball team is an excellent athlete. Therefore, the team as a whole is excellent.

Each atom in this teacup is invisible. Therefore, this teacup is invisible.

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

In these arguments the attributes that are transferred from the parts onto the whole are designated by the words “Maria likes,” “excellent,” “invisible,” and “deadly poison,” respectively. In each case the transference is illegitimate, and so the argument is fallacious.

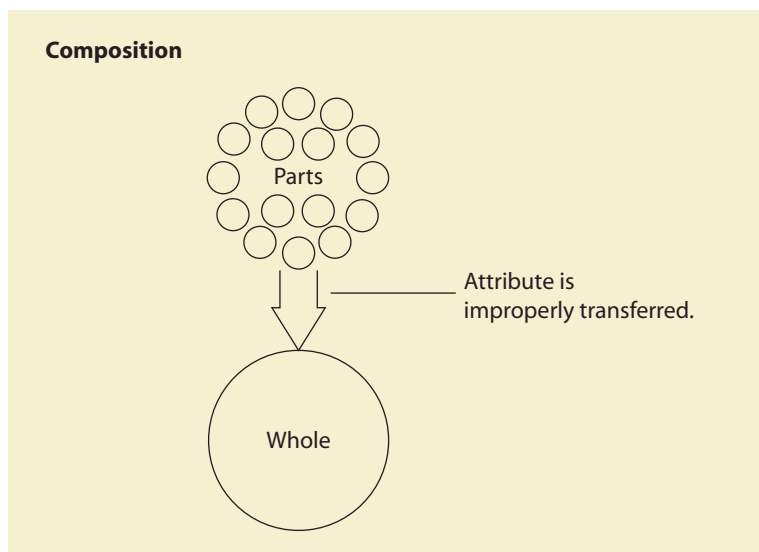
Not every such transference is illegitimate, however. Consider the following arguments:

Every atom in this teacup has mass. Therefore, this teacup has mass.

Every component in this picket fence is white. Therefore, the whole fence is white.

In each case an attribute (having mass, being white) is transferred from the parts onto the whole, but these transferences are quite legitimate. Indeed, the fact that the atoms have mass is the very reason *why* the teacup has mass. The same reasoning extends to the fence. Thus, the acceptability of these arguments is attributable, at least in part, to the *legitimate* transference of an attribute from parts onto the whole.

These examples illustrate the fact that the fallacy of composition is indeed an informal fallacy. It cannot be discovered by a mere inspection of the form of an argument—that is, by the mere observation that an attribute is being transferred from parts onto



the whole. In addition, detecting this fallacy requires a general knowledge of the situation and of the nature of the attribute being transferred. The critic must be certain that, given the situation, the transference of this particular attribute is not allowed.

Further caution is required by the fact that composition is sometimes confused with hasty generalization. The only time this confusion is possible is when the “whole” is a class (such as the class of people in a city or the class of trees in a forest), and the “parts” are the members of the class. In such a case composition proceeds from the members of the class to the class itself. Hasty generalization, on the other hand, proceeds from the specific to the general. Because it is sometimes easy to mistake a statement about a class for a general statement, composition can be mistaken for hasty generalization. Such a mistake can be avoided if one is careful to keep in mind the distinction between these two kinds of statements. This distinction falls back on the difference between the **collective** and the **distributive predication** of an attribute. Consider the following statements:

Fleas are small.

Fleas are numerous.

The first statement is a general statement. The attribute of being small is predicated distributively; that is, it is assigned (or distributed) to each and every flea in the class. Each and every flea in the class is said to be small. The second statement, on the other hand, is a statement about a class as a whole, or what we will call a “class statement.” The attribute of being numerous is predicated collectively; in other words, it is assigned not to the individual fleas but to the *class* of fleas. The meaning of the statement is not that each and every flea is numerous but that the class of fleas is large.

To distinguish composition from hasty generalization, therefore, the following procedure should be followed. Examine the conclusion of the argument. If the conclusion is a general statement—that is, 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—that is, a statement in which an attribute is predicated collectively to a class as a whole—the fallacy is composition. Example:

Less fuel is consumed by a car than by a fire truck. Therefore, less fuel is consumed in the United States by cars than by fire trucks.

At first sight this argument might appear to proceed from the specific to the general and, consequently, to commit a hasty generalization. But in fact the conclusion is not a general statement at all but a class statement. The conclusion states that the whole class of cars uses less fuel than does the whole class of fire trucks (which is false, because there are many more cars than fire trucks). Since the attribute of using less fuel is predicated collectively, the fallacy committed is composition.

22. 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 (or a class) onto its parts (or members). Examples:

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

This airplane was made in Seattle. Therefore, every component part of this airplane was made in Seattle.

The Royal Society is over 300 years old. Professor Thompson is a member of the Royal Society. Therefore, Professor Thompson is over 300 years old.

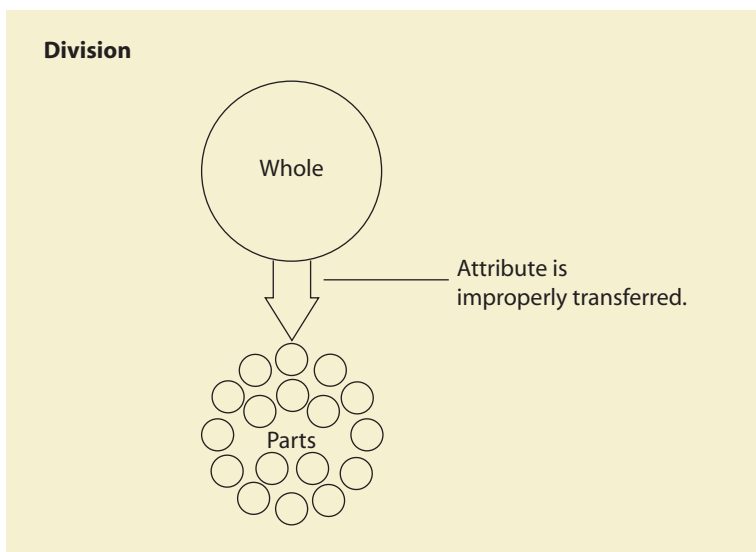
In each case the attribute, designated respectively by the terms “nonpoisonous,” “made in Seattle,” and “over 300 years old,” is illegitimately transferred from the whole or class onto the parts or members. As with the fallacy of composition, however, this kind of transference is not always illegitimate. The following arguments contain no fallacy:

This teacup has mass. Therefore, the atoms that compose this teacup have mass.

This field of poppies is uniformly orange. Therefore, the individual poppies are orange.

Obviously, one must be acquainted with the situation and the nature of the attribute being transferred to decide whether the fallacy of division is actually committed.

Just as composition can sometimes be confused with hasty generalization (converse accident), division can sometimes be confused with accident. As with composition, this confusion can occur only when the “whole” is a class. In such a case, division proceeds from the class to the members, whereas accident proceeds from the general to the specific. Thus, if a class statement is mistaken for a general statement, division may be mistaken for accident. To avoid such a mistake, one should analyze the premises



of the argument. If the premises contain a general statement, the fallacy committed is accident; but if they contain a class statement, the fallacy is division. Example:

Stanley Steamers have almost disappeared.
This car is a Stanley Steamer.
Therefore, this car has almost disappeared.

The first premise is not a general statement but a class statement. The attribute of having almost disappeared is predicated collectively. Accordingly, the fallacy committed is division, not accident.

This example also illustrates how cases of division that involve class statements can include a subtle form of equivocation. In the conclusion, the word “disappeared” means fading from vision, as when the lights are turned down; but in the first premise it means rarely seen. The equivocation is a kind of secondary fallacy that results from the primary fallacy, which is division.

The next example shows how division turns up in arguments dealing with averages.

The average American family has 2.5 children.
The Jones family is an average American family.
Therefore, the Jones family has 2.5 children.

The statement “The average American family has 2.5 children” is not a general statement, but rather a class statement. The sense of the statement is not that each and every family has 2.5 children, but that the class of families is reducible to about 55 percent children and 45 percent adults. Thus, once again, the fallacy is division, and not accident.

In our account of composition and division, we have presented examples of arguments that commit these fallacies in conjunction with other, structurally similar arguments that do not. Because of the structural similarity between arguments that do and do not commit these fallacies, composition and division are classified as fallacies of grammatical analogy.

Exercise 3.4

- I. Identify the fallacies of presumption, ambiguity, and grammatical analogy committed by the following arguments, giving a brief explanation for your answer. If no fallacy is committed, write “no fallacy.”
 - ★1. Either we require forced sterilization of Third World peoples or the world population will explode and all of us will die. We certainly don’t want to die, so we must require forced sterilization.
 2. Every sentence in this paragraph is well written. Therefore, the paragraph is well written.
 3. An athlete is a human being. Therefore, a good athlete is a good human being.

- ★4. James said that he saw a picture of a beautiful girl stashed in Stephen's locker. We can only conclude that Stephen has broken the rules, because girls are not allowed in the locker room.
- 5. Why is it so difficult for you to reach a decision?
- 6. Water will quench one's thirst. Water is composed of hydrogen and oxygen. Therefore, hydrogen will quench one's thirst, and so will oxygen.
- ★7. People who lack humility have no sense of beauty, because everyone who has a sense of beauty also has humility.
- 8. Butane is combustible. Therefore, it burns.
- 9. Twenty years ago, Kung Fong, the great sumo wrestler, could have yanked up one of the fir trees in the new municipal arboretum with a single pull. Therefore, since Mr. Fong is as strong today as he was then, he could just as easily pull up one of those trees today.
- ★10. If Thomas gives Marie a ring, then Thomas and Marie will be engaged. Thomas did give Marie a ring. In fact, he phoned her just the other night. Therefore, Thomas and Marie are engaged.
- 11. Alex, I heard your testimony in court earlier today. Tell me, why did you lie on the witness stand?
- 12. Johnson is employed by the General Services Administration, and everyone knows that the GSA is the most inefficient branch of the government. Therefore, Johnson must be an inefficient worker.
- ★13. All men are mortal. Therefore, some day man will disappear from the earth.
- 14. Each and every cell in this carrot is 90 percent water. Therefore, the entire carrot is 90 percent water.
- 15. George said that he was interviewing for a job drilling oil wells in the supervisor's office. We can only conclude that the supervisor must have an awfully dirty office.
- ★16. During the fifty years that Mr. Jones worked, he contributed \$90,000 to Social Security. Now that he is retired, he stands to collect \$200,000 from the system. Obviously he will collect a much greater monetary value than he contributed.
- 17. Either you marry me right now or I'll be forced to leave you and never speak to you again. I'm sure you wouldn't want me to do that. Therefore, you'll marry me right now.
- 18. Either Meg Ryan or Britney Spears is a popular singer. Meg Ryan is not a popular singer. Therefore, Britney Spears is a popular singer.
- ★19. Switzerland is 48 percent Protestant. Heidi Gilsing is a Swiss. Therefore, Heidi Gilsing is 48 percent Protestant.
- 20. Picasso is the greatest artist of the twentieth century. We know that this is so because art critics have described him in these terms. These art critics are correct in their assessment because they have a more keenly developed sense of appreciation than the average person. This is true because it takes a more

keenly developed sense of appreciation to realize that Picasso is the greatest artist of the twentieth century.

21. An atomic bomb causes more damage than a conventional bomb. Therefore, during World War II more damage was caused by atomic bombs than by conventional bombs.
- ★22. Sylvia, I saw you shopping for wine the other day. Incidentally, are you still drinking excessively?
23. The author warns about numerous computational errors in his accounting text. Therefore, he must have written it very carelessly.
24. Emeralds are seldom found in this country, so you should be careful not to misplace your emerald ring.
- ★25. Of course abortion is permissible. After all, a woman has a right to do as she pleases with her own body.

II. Answer “true” or “false” to the following statements:

1. Arguments that commit the fallacy of begging the question are normally valid.
2. The effect of begging the question is to hide the fact that a premise may not be true.
3. The correct way of responding to a complex question is to divide the question into its component questions and answer each separately.
4. False dichotomy always involves an “either . . . or . . .” statement, at least implicitly.
5. The fallacy of equivocation arises from a syntactical defect in a statement.
6. The fallacy of amphiboly usually involves the ambiguous use of a single word.
7. Amphiboly usually arises from the arguer’s misinterpreting a statement made by someone else.
8. The fallacy of composition always proceeds from whole to parts.
9. The fallacy of division always proceeds from parts to whole.
10. A general statement makes an assertion about each and every member of a class.
11. A class statement makes an assertion about a class as a whole.
12. In the statement “Divorces are increasing,” an attribute is predicated distributively.
13. In the statement “Waistlines are increasing,” an attribute is predicated distributively.
14. Composition and division involve the distributive predication of an attribute.
15. Equivocation and amphiboly are classified as fallacies of ambiguity.

III. Identify the fallacies of relevance, weak induction, presumption, ambiguity, and grammatical analogy committed by the following arguments, giving a brief explanation for your answer. If no fallacy is committed, write “no fallacy.”

- ★1. In his *History of the American Civil War*, Jeffry Noland argues that the war had little to do with slavery. However, as a historian from Alabama, Noland could not possibly present an accurate account. Therefore, his arguments should be discounted.
2. Mr. Wilson said that on July 4 he went out on the veranda and watched the fireworks go up in his pajamas. We conclude that Mr. Wilson must have had an exciting evening.
3. Sean Hannity, political commentator for Fox News, says that waterboarding is an effective interrogation technique that does not constitute torture. Therefore, we must conclude that it is morally acceptable to waterboard suspected terrorists.
- ★4. A crust of bread is better than nothing. Nothing is better than true love. Therefore, a crust of bread is better than true love.
5. Every member of the Delta Club is over 70 years old. Therefore, the Delta Club must be over 70 years old.
6. Of course you should eat Wheaties. Wheaties is the breakfast of champions, you know.
- ★7. Surely it's morally permissible to kill animals for food. If God didn't want us to eat animals, he wouldn't have made them out of meat.
8. The idea that black people in this country live in poverty is ridiculous. Look at Oprah Winfrey. She's a millionaire. And so are Denzel Washington, Morgan Freeman, and Michael Jordan.
9. No one has ever proved that the human fetus is not a person with rights. Therefore, abortion is morally wrong.
- ★10. California condors are rapidly disappearing. This bird is a California condor. Therefore, this bird should disappear any minute now.
11. When a car breaks down so often that repairs become pointless, the car is thrown on the junk heap. Similarly, when a person becomes old and diseased, he or she should be mercifully put to death.
12. The twenty-story Carson Building is constructed of concrete blocks. Each and every concrete block in the structure can withstand an earthquake of 9.5 on the Richter scale. Therefore, the building can withstand an earthquake of 9.5 on the Richter scale.
- ★13. Childhood obesity is a major problem these days. Obviously our public health officials have not been doing their job.
14. This administration is not anti-German, as it has been alleged. Germany is a great country. It has contributed immensely to the world's artistic treasury. Goethe and Schiller made magnificent contributions to literature, and Bach, Beethoven, Wagner, and Brahms did the same in music.
15. Paul, it was great to see you at the party the other night. Everyone there was doing crack. Incidentally, how long have you been dealing that stuff?

- ★16. Pope Benedict XVI says that the distribution of condoms in Africa aggravates the AIDS crisis. Therefore, we must conclude that programs to distribute condoms in Africa should be halted immediately.
17. Senator Barbara Boxer's arguments for the protection of wilderness areas should be ignored. Boxer is just another one of those tree-hugging liberals who supports such legislation only to please the environmental nuts in her home state of California.
18. Professor Andrews, surely I deserve a B in logic. I know that I have gotten Fs on all the tests, but if you give me an F for my final grade, I will lose my scholarship. That will force me to drop out of school, and my poor, aged parents, who yearn to see me graduate, will be grief stricken for the rest of their lives.
- ★19. Molecules are in constant random motion. The Statue of Liberty is composed of molecules. Therefore, the Statue of Liberty is in constant random motion.
20. Either we have prayer in our public schools or the moral fabric of society will disintegrate. The choice should be obvious.
21. White sheep eat more than black sheep (because there are more of them). Therefore, this white sheep eats more than that black sheep.
- ★22. If someone rents a piece of land and plants crops on it, the landlord is never permitted to come and take those crops for himself when harvest time arrives. Similarly, if couples enlist the services of a surrogate mother to provide them with a baby, the mother should never be allowed to welch on the deal and keep the baby for herself once it is born.
23. Motives and desires exert forces on people, causing them to choose one thing over another. But force is a physical quantity, governed by the laws of physics. Therefore, human choices are governed by the laws of physics.
24. Each and every brick in the completely brick-faced Wainright Building has a reddish brown color. Therefore, the Wainright Building has a reddish brown color.
- ★25. Humanitarian groups have argued in favor of housing for the poor. Unfortunately, these high-density projects have been tried in the past and have failed. In no time they turn into ghettos with astronomical rates of crime and delinquency. Clearly, these humanitarian arguments are not what they seem.
26. Pauline said that after she had removed her new mink coat from the shipping carton she threw it into the trash. We conclude that Pauline has no appreciation for fine furs.
27. We know that induction will provide dependable results in the future because it has always worked in the past. Whatever has consistently worked in the past will continue to work in the future, and we know that this is true because it has been established by induction.
- ★28. What goes up must come down. The price of food has been going up for years. Therefore, it will surely come down soon.

29. Mr. Prime Minister, I am certain you will want to release the members of our National Liberation Group whom you currently hold in prison. After all, I'm sure you will want to avoid having car bombs go off in the centers of your most heavily populated cities.
30. Recent studies have shown that non-organic food has the same vitamins, minerals, proteins, and other nutrients as organic food. Therefore, it's just as good to eat non-organic food as organic food.
- ★31. We've all heard the complaint that millions of Americans are without adequate health care. But America's doctors, nurses, and hospitals are among the best in the world. Thousands of people come from abroad every year to be treated here. Clearly there is nothing wrong with our health care system.
32. Real estate mogul Donald Trump argues that good management is essential to any business. But who is he to talk? Trump's own mismanagement drove Trump Entertainment Resorts into bankruptcy three times in eighteen years.
33. The farmers of our state have asked that we introduce legislation to provide subsidies for soybeans. Unfortunately, we will have to turn down their request. If we give subsidies to the soybean farmers, then the corn and wheat growers will ask for the same thing. Then it will be the cotton growers, citrus growers, truck farmers, and cattle raisers. In the end, the cost will be astronomical.
- ★34. The travel brochure states that walking up O'Connell Street, the statue of Parnell comes into view. Apparently that statue has no trouble getting around.
35. Criminals are basically stupid, because anyone who isn't basically stupid wouldn't be a criminal.
36. Professor Glazebrooks's theory about the origin of the Martian craters is undoubtedly true. Rudolph Orkin, the great concert pianist, announced his support of the theory in this morning's newspaper.
- ★37. Mr. Franklin has lost at the craps table for the last ten throws of the dice. Therefore, it is extremely likely that he will win on the next throw.
38. Raising a child is like growing a tree. Sometimes violent things, such as cutting off branches, have to be done to force the tree to grow straight. Similarly, corporal punishment must sometimes be inflicted on children to force them to develop properly.
39. Good steaks are rare these days, so don't order yours well done.
- ★40. The Book of Mormon is true because it was written by Joseph Smith. Joseph Smith wrote the truth because he was divinely inspired. We know that Joseph Smith was divinely inspired because the Book of Mormon says that he was, and the Book of Mormon is true.
41. The students attending Bradford College come from every one of the fifty states. Michelle attends Bradford College. Therefore, Michelle comes from every one of the fifty states.
42. Rhubarb pie is a dessert. Therefore, whoever eats rhubarb pie eats a dessert.

- ★43. The vast majority of car accidents occur within twenty miles of one's home. Apparently it is much more dangerous to drive close to home than far away from home.
- 44. Either you're with us or you're with the terrorists. The choice should be easy.
- 45. Nobody has ever proved that using cell phones causes brain tumors. Therefore, using cell phones does not cause brain tumors.
- ★46. On Friday I took Virginia out to dinner. She told me that if I wasn't interested in a serious relationship, I should forget about dating her. On Saturday I took Margie to a film. When we discussed it afterward over a drink, she couldn't understand why I wasn't interested in babies. Women are all alike. All they want is a secure marriage.
- 47. Dozens of species of plants and animals are being wiped out every year, even though we have laws to prevent it. Clearly, we should repeal the Endangered Species Act.
- 48. People are driving their cars like maniacs tonight. There must be a full moon.
- ★49. A line is composed of points. Points have no length. Therefore, a line has no length.
- 50. Are you in favor of the ruinous economic policy of the Democratic Platform Committee?

IV. Identify the arguments in the following dialogue, then discuss each of them in terms of the fallacies presented in this section and the previous section. You should be able to find at least one case of each fallacy.

Law and Disorder

"Thanks for giving me a lift home," Paul says to his friend Steve, as they head toward the freeway.

"No problem; it's on my way," says Steve.

"Uh oh," warns Paul suddenly, "watch out ahead. Looks like the police have pulled somebody over."

"Thanks," Steve says. "Hope they don't beat the guy up."

"Not a chance," says Paul. "Why would you say that?"

"You're an optimist," answers Steve. "Most cops are animals; they beat up on anybody they want to. You remember Rodney King, don't you? Those cops in L.A. put King in the hospital for no reason at all. That should prove I'm right."

"I think you're overreacting," Paul says. "Daryl Gates, the L.A. police chief at the time, said the King incident was an aberration. Since he was chief, I think we should take him at his word."

"But Gates was a lunatic who refused to acknowledge even our most basic rights," Steve persists. "Also, if you recall, he was forced to resign after the King incident. I know we don't live in L.A., but our police department is just as bad as theirs. So you can bet that our friend back there is just as abusive as any of them."

"Wait a minute," Paul argues. "As far as I know, nobody has ever proved that our police force is the slightest bit violent. You've no right to draw such a conclusion."

"Well, listen to this," Steve counters, as he changes lanes and turns onto the freeway. "About a week ago, I was with my friend Casey. When I left him, he was perfectly okay, but he was picked up for going through a stop sign on the way home. I saw him a couple of days later, and he had a big bruise under his right eye. The cop who stopped Casey must have hit him with his baton."

"Hold on. Did you ask Casey what happened?"

"No. I didn't have to," says Steve, a bit righteously. "I asked Casey's wife what happened between Casey and the cop, and she said he hit him. Those were her exact words, so that was good enough for me. I bet the cop's a maniac."

"Good grief," answers his friend. "How long will it take you to get over your warped view of things?"

"My way of looking at things isn't warped," Steve insists. "The problem is, you and I are both white. If you were black, you'd see things differently. Police brutality toward African Americans is way out of hand."

"Well," counters Paul, "a study done recently by an independent agency might interest you. According to that study, for every African American whom the police use force against, there's a white person they also use force against. That proves the police treat African Americans no worse than they do whites."

"I've never heard of that study, but it seems to me there must be something wrong with it," insists Steve.

"Well, the results of that study are borne out in my experience," says Paul. "I've been pulled over three or four times in the past couple of years, and the officers have always been extremely courteous. I can only conclude that the vast majority of these allegations of police brutality are the product of fertile imaginations."

"Again, your naïveté amazes me," Steve answers, dumbfounded. "First of all, you forget that you're white and you drive a new Mercedes. Don't you think that makes a difference? In fact, that's the trouble with all these arguments that downplay police brutality. They're all concocted by white people."

"Well, the fact remains that we have a major crime problem in this country," Paul argues. "Combating crime requires a few concessions, and you do want to combat crime, don't you?"

"Sure," Steve replies grudgingly, "but at what expense? Do innocent people have to get their heads bashed in?"

"Well, I think what it comes down to is this," says Paul. "Either you allow the police to use whatever force they find necessary, or the criminals will take over this country. Now you certainly don't want that to happen, do you?"

"No, but that's the crucial question," Steve says, exiting from the freeway. "When and how much force is necessary?"

"Well, you remember when the police apprehended that serial killer a few weeks ago? When the police made the arrest, the killer attacked them. So, the police can use force when attacked."

"I agree," responds Steve thoughtfully. "But what about the way the police treated those peaceful right-to-lifers who were demonstrating in front of the abortion clinic the other day? Many of them were elderly and posed no physical threat. But the cops used those contraptions—what do you call them, nimchucks, nomchucks, I don't know—to squeeze the old folks' wrists, causing great pain and injury, and they hit the old people on the head with their batons. Do you think that was necessary?"

"Of course it was," answers Paul, agitatedly. "Those people attacked the police—they hurled epithets at them."

"Honestly, I don't know how we've managed to stay friends all these years," Steve says with some frustration. "By the way, do you know what it says on the back of all police cars? It says 'To Protect and Serve.' Now if you hired a servant to take care of you, you'd get rid of him if he disobeyed you. Right?"

"Probably."

"Well, isn't it true," Steve asks, "that whenever a police officer disobeys one of us taxpayers, that officer should be fired?"

"That may be stretching it a bit," Paul laughs.

"But seriously," continues Steve, "I think what we need is some screening device to keep violent types from ever becoming cops."

"Well, you'll be happy to know that exactly such a device has been used for the past twenty-one years," Paul states. "Before entering the police academy, every applicant goes through a battery of psychological tests that positively eliminates all the macho types and the ones prone to violence. This ensures the individual officers are nonviolent, so we know the entire police force is nonviolent."

"Hmm. Maybe your so-called solution is really the problem," Steve suggests, as he pulls up in front of Paul's house. "We've had psychological testing for twenty-one years, and all that time, police violence has been on the rise. Perhaps we should get rid of the testing program."

"Well, I don't know about the logic of that," Paul muses, stepping out of the car. "But like you said, we've been friends for a long time, so I guess we can disagree. Thanks for the ride and the discussion. See you tomorrow!"

"Sure," Steve murmurs. "Tomorrow."

3.5

Fallacies in Ordinary Language

This section addresses two topics. The first concerns the challenge of detecting the fallacies of others in ordinary language, and the second relates to the goal of avoiding fallacies in one's own arguments.

Detecting Fallacies

Most of the informal fallacies that we have seen thus far have been clear-cut, easily recognizable instances of a specific mistake. When fallacies occur in ordinary usage, however, they are often neither clear-cut nor easily recognizable. The reason is that there are innumerable ways of making mistakes in arguing, and variations inevitably occur that may not be exact instances of any specifically named fallacy. In addition, one fallacious mode of arguing may be mixed with one or more others, and the strands of reasoning may have to be disentangled before the fallacies can be named.

Yet another problem arises from the fact that arguments in ordinary language are rarely presented in complete form. A premise or conclusion often is left unexpressed, which may obscure the nature of the evidence that is presented or the strength of the link between premises and conclusion.

Consider, for example, the following letter that appeared in a newspaper:

God, I am sick of “women’s rights”! Every time one turns on the news we hear about some form of discrimination against some poor female who wants to be a fireman—or some “remark” that suggests or implies women are inferior to men.

I, for one, do not want to be rescued by a “woman fireman,” especially if I am a 6-foot-2 male and she is a 5-foot-6 female.

Why is it that women find their “role” so degrading? What is wrong with being a wife and mother, staying home while the male goes out and “hunts for food” and brings it home to his family?

I don’t think women have proven themselves to be as inventive, as capable (on the average) of world leadership, as physically capable, or as “courageous” as men. They have yet to fight a war (the average American woman) and let’s face it ladies, who wants to?

Whether a person is female, black, white, handicapped—whatever—*ability* is what counts in the final analysis. Women cannot demand “equality”—no one can—unless it is earned.

When push comes to shove and a damsel is in distress, she is hard-pressed to protect herself and usually has to be rescued by a man. Until I can move a piano, beat off a potential robber or rapist, or fight a war, I am quite content to be a woman, thank you.

(Patricia Kelley)

This letter presents numerous fallacies. The phrase “poor female who wants to be a fireman” suggests a mild *ad hominem* abusive, and equating women’s rights in general with the right to be a firefighter suggests a straw man. The second paragraph commits another straw man fallacy by supposing that the job of firefighter inevitably entails such activities as climbing up ladders and rescuing people. Surely there are many male firefighters who cannot do this. The same paragraph also can be interpreted as begging the question: Do women who want to be firefighters want the specific job of rescuing tall men?

The third paragraph throws out a red herring. The issue is whether women have the right to be considered for a job of their choice and whether they must be paid as much as a man in the same situation. Whether there is something wrong with being a wife and mother is quite a different issue. Also, the reference to men hunting for food suggests a possible begging of the question: Are we still locked into a “hunter-gatherer” social structure?

The paragraph about whether women have proved themselves to be as inventive, capable, and courageous as men begs yet another question: Assuming, for the sake of argument, that this is true, have women been allowed to occupy roles in society where such inventiveness, capability, and courageousness can be demonstrated? Furthermore, this paragraph commits a red herring fallacy and/or misses the point: Even if women have not proved this, what does that have to do with the issue? Most

jobs do not require any high degree of inventiveness or courage or a capacity for world leadership.

The paragraph about ability begs yet another question: Is it in fact the case that women have less ability? I am not aware that anything of the sort has ever been proved. Finally, the last paragraph throws out another red herring. What does moving pianos and beating off rapists have to do with most jobs or the question of equal pay for equal work?

Probably the single most important requirement for detecting fallacies in ordinary language is alertness. The reader or listener must pay close attention to what the arguer is saying. What is the conclusion? What are the reasons given in support of the conclusion? Are the reasons relevant to the conclusion? Do the reasons support the conclusion? If the reader or listener is half asleep or lounging in that passive, drugged-out state that attends much television viewing, then none of these questions will receive answers. Under those circumstances the reader or listener will never be able to detect informal fallacies, and he or she will accept even the worst reasoning without the slightest hesitation.

Avoiding Fallacies

Why do people commit informal fallacies? Unfortunately, this question admits of no simple, straightforward answer. The reasons underlying the commission of fallacies are complex and interconnected. However, we can identify three factors that lead to most of the informal mistakes in reasoning. The first is intent. Many fallacies are committed intentionally. The arguer may know full well that his or her reasoning is defective but goes ahead with it anyway because of some benefit for himself or herself or some other person. All of the informal fallacies we have studied can be used for that purpose, but some of them are particularly well suited to it. These include the appeal to force, appeal to pity, appeal to the people, straw man, *ad hominem*, complex question, false dichotomy, and suppressed evidence. Here is such a case of appeal to force:

I deserve a chocolate sundae for dessert, and if you don't buy me one right now, I'll start screaming and embarrass you in front of all of the people in this restaurant.

And here is a case of false dichotomy that conveys the appearance of being intentionally committed:

Either you take me on a Caribbean cruise, or I'll have a nervous breakdown. It's up to you.

The key to avoiding fallacies that are intentionally committed probably lies in some form of moral education. The arguer must come to realize that using intellectually dishonest means to acquire something he or she does not deserve is just another form of cheating.

The situation becomes more complicated, however, when the sought-after goal is morally justified. Arguers sometimes use fallacious reasoning intentionally to trick a

person into doing something that is really for that person's own good. Here is a false dichotomy of that sort:

Either you control your eating and get regular exercise, or you'll have a heart attack and die. The choice is yours.

Given the beneficial consequences of controlled eating and regular exercise, some moral philosophers will find nothing wrong with this argument. Others will contend that manipulating someone into doing something violates human dignity. In either case, such arguments are logically unacceptable.

The second factor that leads to the commission of informal fallacies is a careless mental posture combined with an emotional disposition favoring or opposing some person or thing. The careless mental posture opens the door, so to speak, to fallacious reasoning, and the emotional disposition pushes the arguer through it. Even people who are thoroughly versed in the informal fallacies occasionally succumb to the deadly combination of mental carelessness and emotional impetus. For example, arguments such as the following *ad hominem* abusive can sometimes be heard in the halls of university philosophy departments:

Professor Ballard's argument in favor of restructuring our course offering isn't worth a hoot. But what would you expect from someone who publishes in such mediocre journals? And did you hear Ballard's recent lecture on Aristotle? It was total nonsense.

When people who should know better are confronted with the fact that their argument commits a common fallacy, they often admit with embarrassment that they have not been thinking and then revise their argument according to logical principles. In contrast, people who are not familiar with the distinction between good and fallacious reasoning will likely deny that there is anything wrong with their argument. Thus, the key to avoiding fallacies that arise from mental carelessness lies in developing a thorough familiarity with the informal fallacies, combined with a habitual realization of how emotions affect people's reasoning. Everyone should realize that unchecked emotions are an open invitation to illogical reasoning, and they can lead a person to commit quite blindly every one of the fallacies we have studied thus far.

The third factor that leads to the commission of informal fallacies is far more difficult to contend with than the first two. It consists in the influence of what we might call the "worldview" of the arguer. By worldview we mean a cognitive network of beliefs, attitudes, habits, memories, values, and other elements that conditions and renders meaningful the world in which we live. Beginning in infancy, our worldview emerges quietly and unconsciously from enveloping influences—culture, language, gender, religion, politics, and social and economic status. As we grow older, it continues to develop through the shaping forces of education and experience. Once it has taken root, our worldview determines how each of us sizes up the world in which we live. Given a set of circumstances, it indicates what is reasonable to believe and what is unreasonable.

In connection with the construction and evaluation of arguments, an arguer's worldview determines the answer to questions about importance, relevance, causal

connections, the qualifications of authorities, whether a sample is typical or atypical of a group, what can and cannot be taken for granted, and other factors. However, because these determinations inevitably involve unexamined presuppositions, the arguer's worldview can lead to the commission of informal fallacies. All of the fallacies we have studied so far are likely candidates, but the ones especially susceptible are appeal to pity, straw man, missing the point, appeal to unqualified authority, hasty generalization, false cause, slippery slope, weak analogy, begging the question, false dichotomy, and suppressed evidence.

Thus, a person with a victim mentality may think that his pathetic circumstances really justify some favorable treatment; an uncritical conservative may cite with complete confidence the authority of Rush Limbaugh; a person with a racist worldview may conclude that the errant behavior of a handful of Asians, African Americans, or Hispanics really is typical of the larger class; a person with a liberal worldview may quite innocently distort an opponent's argument by equating it with fascism; a pro-life arguer may consider it obvious that the fetus is a person with rights, while a pro-choice arguer may take it for granted that the fetus is not a person with rights, and so on. Consider, for example, the following argument from analogy:

A court trial is like a professional football game. In a professional football game, the most important thing is winning. Similarly, in a trial, the most important thing is winning.

This argument is consistent with the worldview of many, if not most, lawyers. Lawyers are trained as advocates, and when they enter a courtroom they see themselves going into battle for their clients. In any battle, winning is the most important objective. But this viewpoint presupposes that truth and justice are either unattainable in the courtroom or of secondary importance. Thus, while many lawyers would evaluate this argument as nonfallacious, many nonlawyers would reject it as a weak analogy.

For another example, consider the following causal inference:

After enslaving most of Eastern Europe for nearly fifty years, the evil Soviet empire finally collapsed. Obviously God listened to our prayers.

This argument reflects the worldview of many theists. It presupposes that there is a God, that God listens to prayers, that God is affected by prayers, that God has the power to influence the course of history, and that God does influence the course of history. While the theist is likely to consider this argument a good one, the atheist will reject it as a blatant case of false cause.

To avoid fallacies that arise from the influence of worldviews, the arguer must acknowledge and critique his or her presuppositions. Doing so inclines the arguer to couch his or her arguments in language that takes those presuppositions into account. The result is nearly always an argument that is more intelligently crafted, and, it is hoped, more persuasive. However, the task of recognizing and critiquing one's presuppositions is not easy. Presuppositions are intrinsically linked to one's worldview, and many people are not even aware that they have a worldview. The reason is that worldviews are formed through a process that is largely unconscious.

Thus, the arguer must first recognize that he or she has a worldview and must then exercise constant vigilance over the presuppositions it comprises.

Even after one's presuppositions have been exposed and thoroughly critiqued, however, there is no guarantee that one's arguments will agree with the arguments of others who have critiqued their worldviews. This is because a person's worldview reflects the unique perspective that person has on the world. No two people share exactly the same perspective. Nevertheless, disclosing and critiquing the presuppositions in one's worldview lays a foundation for meaningful communication with other reasonable arguers, and it provides a context of reasonableness for working out disagreements.

In summary, the three factors that are probably responsible for most informal fallacies are intent, mental carelessness combined with emotional dispositions, and unexamined presuppositions in the arguer's worldview. However, these factors rarely occur in isolation. In the vast majority of cases, two or all three conspire to produce fallacious reasoning. This fact exacerbates the difficulty in avoiding informal fallacies in one's own arguments and in detecting fallacies in the arguments of others.

Now let us consider some cases of real-life arguments in light of the factors we have just discussed. All are taken from letters to the editors of newspapers and magazines. The first relates to affirmative action programs:

I'm a nonracist, nonsexist, white male born in 1969, who has never owned a slave, treated anyone as inferior because of his or her race, or sexually harassed a female co-worker. In other words, I don't owe women or minorities a thing. Since when are people required to pay for the sins of their predecessors simply because they belong to the same race or gender?

(Ben Gibbons)

The author of this argument presupposes that racist and sexist patterns in society have not benefited him in any way. Among other things, he presupposes that his white ancestors in no way benefited from their being white and that none of these benefits passed down to him. On the other hand, given that he has received such benefits, he may presuppose that he is not obligated to pay any of them back. Of course, none of these things may have occurred, but the author should at least address these issues. Because he does not address them, the argument begs the question.

The next argument relates to second-hand smoke from cigarettes:

Now, besides lung cancer and other nasty business, second-hand smoke causes deafness and impotence. Was second-hand smoke a problem when people heated their homes solely by fireplaces? How about those romantic teepees with the smoke hole at the top? And what about fireplaces in new homes? Let's have some research about the problems caused by these as well as barbecues. A little cancer with your hot dog, anyone?

(Pat Sharp)

This argument seems to commit the fallacy of equivocation. The arguer begins by using "second-hand smoke" to refer to the smoke from burning tobacco, and then

uses the term to refer to the smoke from fireplaces, teepee fires, and barbecues. Smoke from burning tobacco is clearly not the same thing as smoke from burning wood or charcoal. Alternately, the argument might be seen to beg the question: “But do people burn tobacco in their fireplaces and barbecues?” These fallacies probably arise either from the intentions of the author or from carelessness in failing to distinguish the two kinds of second-hand smoke. In either event, the author is probably hostile to government efforts to control second-hand tobacco smoke in confined areas.

The next argument deals with gun control:

Detroit, the seventh largest city and one with strict gun laws, had 596 homicides last year. In the same year Phoenix, the ninth largest city and one that at the time did not require gun owners to be licensed, had 136 homicides. Criminals don't fear the toothless criminal-justice system, but they do fear armed citizens.

(Paul M. Berardi)

This argument commits a false cause fallacy. The author presupposes that the availability of guns caused Phoenix to have a lower homicide rate than Detroit. The arguer also presupposes that Detroit and Phoenix are comparable as to homicide rate merely because they are roughly the same size. As a result, the argument involves a weak analogy and also begs the question. The additional factors of emotion and intent may also be present. The arguer probably hates the prospect of gun control, and he may be fully aware of the fact that Phoenix and Detroit are not comparable for his purpose, but he went ahead with the comparison anyway.

The next argument deals with religious fundamentalism:

If we compromise God's word, we compromise the truth. To say that the fundamentalist is a loud shrill voice drowning out religious moderation implies that diluted truth is better than absolute truth.

(Gerald Gleason)

This argument begs the question. The arguer presupposes that there is a God, that God has spoken, that God has revealed his intentions to fundamentalist preachers, and that those preachers accurately report the word of God. The argument also seems to reflect an emotional disposition in favor of religious fundamentalism.

The last argument we will consider relates to English as the official U.S. language:

This great country has been held together for more than 200 years because of one simple thing: the English language. There are two things we must do: Make English the official language of the United States and do away with bilingual education.

(David Moisan)

This argument misses the point. The arguer presupposes that making English the official language would guarantee that all citizens speak it and that doing away with bilingual education would accelerate the learning process of immigrant children. The argument may also reflect the fear that many feel in connection with the changes U.S. society is experiencing as a result of recent immigration.

Exercise 3.5

3

I. Most of the following selections were taken from letters to the editors of newspapers and magazines. Identify any fallacies that may be committed, giving a brief explanation for your answer. Then, if a fallacy is identified, discuss the possible factors that led the arguer to commit the fallacy.

- ★1. Exporting cigarettes [to Asia] is good business for America; there is no reason we should be prohibited from doing so. Asians have been smoking for decades; we are only offering variety in their habit. If the Asians made tobacco smoking illegal, that would be a different situation. But as long as it is legal, the decision is up to the smokers. The Asians are just afraid of American supremacy in the tobacco industries.

(Pat Monohan)

2. When will these upper-crust intellectuals realize that the masses of working people are not in cozy, cushy, interesting, challenging, well-paying jobs, professions and businesses? My husband is now 51; for most of the last 33 years he has worked in the same factory job, and only the thought of retiring at 62 has sustained him. When he reaches that age in 11 years, who will tell him that his aging and physically wracked body must keep going another two years? My heart cries out for all the poor souls who man the assembly lines, ride the trucks or work in the fields or mines, or in the poorly ventilated, hot-in-summer, cold-in-winter factories and garages. Many cannot afford to retire at 62, 65, or even later. Never, never let them extend the retirement age. It's a matter of survival to so many.

(Isabel Fierman)

3. Women in military combat is insane. No society in its right mind would have such a policy. The military needs only young people and that means the only women who go are those in their child-bearing years. Kill them off and society will not be able to perpetuate itself.

(Jack Carman)

- ★4. Dear Ann: I've read that one aspirin taken every other day will reduce the risk of heart attack. Why not take two and double the protection?

(Boston)

5. The American Civil Liberties Union did a study that found that in the last 80 years it believes twenty-five innocent people have been executed in the United States. This is unfortunate. But, there are innocent people who die each year in highway accidents. Out of 40,000 deaths, how many deaths are related to driving while intoxicated? How many more thousands are injured and incur financial ruin or are invalids and handicapped for the remainder of their lives?

(Mahlon R. Braden)

6. Mexico's president expresses legitimate concern when he questions supplying oil to Americans who are unwilling to apply "discipline" in oil consumption. In view of the fact that his country's population is expected to double in only twenty-two years, isn't it legitimate for us to ask when Mexicans will apply the discipline necessary to control population growth and quit dumping their excess millions over our borders?

(Wayne R. Bartz)

- ★7. A parent would never give a ten-year-old the car keys, fix him or her a martini, or let him or her wander at night through a dangerous part of town. The same holds true of the Internet. Watch what children access, but leave the Net alone. Regulation is no substitute for responsibility.

(Bobby Dunning)

8. How would you feel to see your children starving and have all doors slammed in your face? Isn't it time that all of us who believe in freedom and human rights stop thinking in terms of color and national boundaries? We should open our arms and hearts to those less fortunate and remember that a time could come when we might be in a similar situation.

(Lorna Doyle)

9. A capital gains tax [reduction] benefits everyone, not just the "rich," because everyone will have more money to invest or spend in the private economy, resulting in more jobs and increasing prosperity for all. This is certainly better than paying high taxes to a corrupt, self-serving and incompetent government that squanders our earnings on wasteful and useless programs.

(David Miller)

- ★10. After reading "Homosexuals in the Churches," I'd like to point out that I don't know any serious, capable exegetes who stumble over Saint Paul's denunciation of homosexuality. Only a fool (and there seem to be more and more these days) can fail to understand the plain words of Romans, Chapter one. God did not make anyone "gay." Paul tells us in Romans 1 that homosexuals become that way because of their own lusts.

(LeRoy J. Hopper)

11. When will they ever learn—that the Republican Party is not for the people who voted for it?

(Alton L. Stafford)

12. Before I came to the United States in July, 1922, I was in Berlin where I visited the famous zoo. In one of the large cages were a lion and a tiger. Both respected each other's strength. It occurred to me that it was a good illustration of "balance of power." Each beast followed the other and watched each other's moves. When one moved, the other did. When one stopped, the other stopped.

In today's world, big powers or groups of powers are trying to maintain the status quo, trying to be as strong as or stronger than the other. They realize a conflict may result in mutual destruction. As long as the countries believe there is a balance of power we may hope for peace.

(Emilie Lackow)

- ★13. Doctors say the birth of a baby is a high point of being a doctor. Yet a medical survey shows one out of every nine obstetricians in America has stopped delivering babies.

Expectant mothers have had to find new doctors. In some rural areas, women have had to travel elsewhere to give birth.

How did this happen? It's part of the price of the lawsuit crisis.

The number of lawsuits Americans file each year is on the rise. Obstetricians are among the hardest hit—almost three out of four have faced a malpractice claim. Many have decided it isn't worth the risk.

(Magazine ad by the Insurance Information Institute)

14. The conservative diatribe found in campus journalism comes from the mouths of a handful of affluent brats who were spoon-fed through the '80s. Put them on an ethnically more diverse campus, rather than a Princeton or a Dartmouth, and then let us see how long their newspapers survive.

(David Simons)

15. I see that our courts are being asked to rule on the propriety of outlawing video games as a "waste of time and money."

It seems that we may be onto something here. A favorable ruling would open the door to new laws eliminating show business, spectator sports, cocktail lounges, the state of Nevada, public education and, of course, the entire federal bureaucracy.

(A. G. Dobrin)

- ★16. The death penalty is the punishment for murder. Just as we have long jail terms for armed robbery, assault and battery, fraud, contempt of court, fines for speeding, reckless driving and other numerous traffic violations, so must we have a punishment for murder. Yes, the death penalty will not deter murders any more than a speeding ticket will deter violating speed laws again, but it is the punishment for such violation!

(Lawrence J. Barstow)

17. Would you rather invest in our nation's children or Pentagon waste? The choice is yours.

(Political ad)

18. My gun has protected me, and my son's gun taught him safety and responsibility long before he got hold of a far more lethal weapon—the family car. Cigarettes kill many times more people yearly than guns and, unlike guns, have absolutely

no redeeming qualities. If John Lennon had died a long, painful and expensive death from lung cancer, would you have devoted a page to a harangue against the product of some of your biggest advertisers—the cigarette companies?

(Silvia A. DeFreitas)

- ★19. If the advocates of prayers in public schools win on this issue, just where will it end? Perhaps next they will ask for prayers on public transportation? Prayers by government workers before they start their job each day? Or maybe, mandatory prayers in public restaurants before starting each meal might be a good idea.

(Leonard Mendelson)

20. So you want to ban smoking in all eating establishments? Well, you go right ahead and do that little thing. And when the 40 percent of smokers stop eating out, the restaurants can do one of two things: close, or raise the price of a \$20 dinner 40 percent to \$28.

(Karen Sawyer)

21. Pigeons are forced to leave our city to battle for life. Their struggle is an endless search for food. What manner of person would watch these hungry creatures suffer from want of food and deny them their survival? These helpless birds are too often ignored by the people of our city, with not the least bit of compassion shown to them. Pigeons are God's creatures just as the so-called human race is. They need help.

(Leslie Ann Price)

- ★22. You take half of the American population every night and set them down in front of a box watching people getting stabbed, shot and blown away. And then you expect them to go out into the streets hugging each other?

(Mark Hustad)

23. So you think that putting the worst type of criminal out of his misery is wrong. How about the Americans who were sent to Korea, to Vietnam, to Beirut, to Central America? Thousands of good men were sacrificed supposedly for the good of our country. At the same time we were saving and protecting Charles Manson, Sirhan Sirhan [Robert Kennedy's murderer], and a whole raft of others too numerous to mention.

(George M. Purvis)

24. The fact is that the hype over "acid rain" and "global warming" is just that: hype. Take, for example, Stephen Schneider, author of *Global Warming*. In his current "study" he discusses a "greenhouse effect of catastrophic proportions," yet twenty years ago Schneider was a vocal proponent of the theory of a "new ice age."

(Urs Furrer)

- ★25. Just as our parents did for us, my husband and I rely solely on Christian Science for all the health needs of our four sons and find it invaluable for

the quick cure of whatever ailments and contagions they are subject to. One particular healing that comes to mind happened several years ago when our youngest was a toddler. He had a flu-type illness that suddenly became quite serious. We called a Christian Science practitioner for treatment and he was completely well the next morning.

(Ellen Austin)

26. As somebody who has experienced the tragedy of miscarriage—or spontaneous abortion—at eight weeks, I greatly resent the position that a fetus is not a baby. I went through the grief of losing a baby, and no one should tell me otherwise.

(Ann Fons)

27. How can we pledge allegiance to the flag of the United States of America and not establish laws to punish people who burn the flag to make a statement? We are a people who punish an individual who libels another person but will not seek redress from an individual who insults every citizen of this great country by desecrating the flag.

(William D. Lankford)

- ★28. The notion of “buying American” is as misguided as the notion of buying Wisconsin, or Oshkosh, Wisconsin, or South Oshkosh, Wisconsin. For the same reasons that Wisconsin increases its standard of living by trading with the rest of the nation, America increases its standard of living by trading with the rest of the world.

(Phillip Smith)

29. We’ve often heard the saying, “Far better to let 100 guilty men go free than to condemn one innocent man.” What happens then if we apply the logic of this argument to the question, “Is a fetus an unborn human being?” Then is it not better to let 100 fetuses be born rather than to mistakenly kill one unborn human being? This line of reasoning is a strictly humanist argument against abortion.

(James Sebastian)

30. In our society it is generally considered improper for a man to sleep, shower, and dress amid a group of women to whom he normally would be sexually attracted. It seems to me, then, to be equally unacceptable that a gay man sleep, shower, and dress in a company of men to whom, we assume, he would be no less sexually attracted.

(Mark O. Temple)

- ★31. I say “bravo” and “right on!” Now we have some real-life humane heroes to look up to! These brave people [a group of animal liberators] went up against the insensitive bureaucratic technology, and won, saving former pet animals from senseless torture.

If researchers want to experiment, let them use computers, or themselves—but not former pet animals! I know it’s bad enough they use monkeys and rats,

but if those animals are bred knowing nothing else but these Frankensteins abusing them it's different (but not better) than dogs or cats that have been loved and petted all their lives to suddenly be tortured and mutilated in the name of science. End all animal research! Free all research animals!

Right on, animal liberators!

(Linda Magee)

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32. Dear Ann: Recently I was shopping downtown in 20-below-zero weather. A stranger walked up to me and said, "I wonder how many beautiful rabbits died so you could have that coat?" I noticed she was wearing a down coat, so I asked if the geese they got the down from to make her coat were still alive. She looked surprised. Obviously she had never given it a thought.

If people are so upset about cruelty to animals, why don't they go after the folks who refuse to spend the money to have their pets neutered and spayed? Thousands of dogs are put to death every year because the animal pounds can't feed and house them. Talk about cruelty to animals—that's the best example there is.

("Baby It's Cold Outside")

33. I prayed for the U.S. Senate to defeat the prayer amendment—and it did. There is a God.

(Richard Carr)

- ★34. People of the Philippines, I have returned! The hour of your redemption is here! Rally to me! Let the indomitable spirit of Bataan and Corregidor lead on! As the lines of battle roll forward to bring you within the zone of operations, rise and strike! For future generations of your sons and daughters, strike! Let no heart be faint! Let every arm be steeled! The guidance of divine God points the way! Follow in his name to the Holy Grail of righteous victory!

(General Douglas MacArthur)

35. As the oldest of eleven children (all married), I'd like to point out our combined family numbers more than 100 who vote only for pro-life candidates. Pro-lifers have children, pro-choicers do not.

(Mrs. Kitty Reickenback)

36. I am 12 years old. My class had a discussion on whether police used unnecessary force when arresting the people from Operation Rescue.

My teacher is an ex-cop, and he demonstrated police holds to us. They don't hurt at all unless the person is struggling or trying to pull away. If anybody was hurt when they were arrested, then they must have been struggling with the officers trying to arrest them.

(Ben Torre-Bueno)

- ★37. As corporate farms continue to gobble up smaller family farms, they control a larger percentage of the grain and produce raised in the United States. Some have already reached a point in size where, if they should decide to withhold

their grain and produce from the marketplace, spot shortages could occur and higher prices would result. The choice is to pay us family farmers now or pay the corporations later.

(Delwin Yost)

38. If you buy our airline ticket now you can save 60 percent, and that means 60 percent more vacation for you.

(Radio ad)

39. Why all the flap about atomic bombs? The potential for death is always with us. Of course, if you just want something to worry about, go ahead. Franklin D. Roosevelt said it: “The only thing we have to fear is fear itself.”

(Lee Flemming Reese)

- ★40. September 17 marked the anniversary of the signing of the U.S. Constitution. How well have we, the people, protected our rights? Consider what has happened to our private-property rights.

“Property has divine rights, and the moment the idea is admitted into society that property is not as sacred as the laws of God, anarchy and tyranny begin.” John Quincy Adams, 1767–1848, Sixth President of the United States.

Taxes and regulations are the two-edged sword which gravely threatens the fabric of our capitalistic republic. The tyranny of which Adams speaks is with us today in the form of government regulators and regulations which have all but destroyed the right to own property. Can anarchy be far behind?

(Timothy R. Binder)

41. Evolution would have been dealt serious setbacks if environmentalists had been around over the eons trying to save endangered species.

Species are endangered because they just do not fit the bigger picture any more as the world changes. That’s not bad. It’s just life.

In most cases we have seen the “endangered species” argument is just a ruse; much deeper motives usually exist, and they are almost always selfish and personal.

(Tom Gable)

42. The problem that I have with the pro-choice supporters’ argument is that they make “choice” the ultimate issue. Let’s face facts. No one has absolute freedom of choice sanctioned by the law. One can choose to rob a bank, but it’s not lawful. Others can choose to kill their one-year-old child, but it is not legal. Why then should a woman have the legal right to take the life of her unborn child?

(Loretta S. Horn)

- ★43. If a car or truck kills a person, do politicians call for car control or truck control? And call in all cars/trucks?

If a child burns down a house do we have match control or child control and call in all of each?

Gun control and confiscation is equally as pathetic a thought process in an age of supposed intelligence.

(Pete Hawes)

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44. I was incensed to read in your article about the return of anti-Semitism that New York City Moral Majority Leader Rev. Dan C. Fore actually said that “Jews have a God-given ability to make money, almost a supernatural ability . . .” I find it incredibly ironic that he and other Moral Majority types conveniently overlook the fact that they, too, pack away a pretty tidy sum themselves through their fund-raising efforts. It is sad that anti-Semitism exists, but to have this prejudice voiced by leaders of religious organizations is deplorable. These people are in for quite a surprise come Judgment Day.

(John R. Murks)

45. Are Americans so stupid they don’t realize that every time they pay thousands of dollars for one of those new “economical” Japanese cars, they are simultaneously making the U.S. bankrupt and giving the Japanese enough money to buy all of America?

(Sylvia Petersen Young)

- ★46. Why are people so shocked that Susan Smith apparently chose to kill her children because they had become an inconvenience? Doesn’t this occur every day in abortion clinics across the country? We suspect Smith heard very clearly the message many feminists have been trying to deliver about the expendable nature of our children.

(Kevin and Diana Cogan)

47. What’s wrong with kids today? Answer: nothing, for the majority of them. They are great.

Witness the action of two San Diego teenage boys recently, when the Normal Heights fire was at its worst. They took a garden hose to the roof of a threatened house—a house belonging to four elderly sisters, people they didn’t even know. They saved the house, while neighboring houses burned to the ground.

In the Baldwin Hills fire, two teenage girls rescued a blind, retired Navy man from sure death when they braved the flames to find him, confused, outside his burning house. He would probably have perished if they hadn’t run a distance to rescue him.

(Theodore H. Wickham)

48. Now that Big Brother has decided that I must wear a seatbelt when I ride in a car, how long will it take before I have to wear an inner tube when I swim in my pool, a safety harness when I climb a ladder, and shoes with steel-reinforced toecaps when I carry out the garbage?

(G. R. Turgeon)

- ★49. Dear Ann: I was disappointed in your response to the girl whose mother used the strap on her. The gym teacher noticed the bruises on her legs and backside and called it “child abuse.” Why are you against strapping a child when the Bible tells us in plain language that this is what parents should do?

The Book of Proverbs mentions many times that the rod must be used. Proverbs 23:13 says: “Withhold not correction from the child for if thou beatest him with the rod he shall not die.” Proverbs 23:14 says: “Thou shalt beat him with the rod and shalt deliver his soul from death.”

There is no substitute for a good whipping. I have seen the results of trying to reason with kids. They are arrogant, disrespectful and mouthy. Parents may wish for a more “humane” way, but there is none. Beating children is God’s way of getting parents to gain control over their children.

(Davisville, W.Va.)

50. The Fourth Amendment guarantees our right to freedom from unreasonable search and seizure. It does not prohibit *reasonable* search and seizure. The matter of sobriety roadblocks to stop drunk drivers boils down to this: Are such roadblocks reasonable or unreasonable? The majority of people answer: “Reasonable.” Therefore, sobriety roadblocks should not be considered to be unconstitutional.

(Haskell Collier)

51. The Supreme Court recently ruled that a police department in Florida did not violate any rights of privacy when a police helicopter flew over the back yard of a suspected drug dealer and noticed marijuana growing on his property. Many people, including groups like the Anti-Common Logic Union, felt that the suspect’s right to privacy outweighed the police department’s need to protect the public at large.

The simple idea of sacrificing a right to serve a greater good should be allowed in certain cases. In this particular case the danger to the public wasn’t extremely large; marijuana is probably less dangerous than regular beer. But anything could have been in that back yard—a load of cocaine, an illegal stockpile of weapons, or other major threats to society.

(Matt Cookson)

- ★52. I am 79 and have been smoking for 60 years. My husband is 90 and has inhaled my smoke for some 50 years with no bad effects.

I see no reason to take further steps to isolate smokers in our restaurants and public places, other than we now observe.

Smokers have taken punishment enough from neurotic sniffers, some of whom belong in bubbles. There are plenty of injudicious fumes on our streets and freeways.

(Helen Gans)

53. The mainstream press finds itself left behind by talk radio, so they try to minimize its importance. Americans are finding the true spirit of democracy in community and national debate. Why should we be told what to believe by

a news weekly or the nightly news when we can follow public debate as it unfolds on talk radio?

(Adam Abbott)

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54. The issue is not whether we should subsidize the arts, but whether anyone should be able to force someone else to subsidize the arts. You and I are free to *give* any amount of our money to any artistic endeavor we wish to support. When the government gets involved, however, a group of bureaucrats is given the power to *take* our money and give it to the arts they wish to support. We are not consulted. That is not a way to promote a responsible culture. That is tyranny.

(Jerry Harben)

- ★55. Who are these Supreme Court justices who have the guts to OK the burning of our flag?

If the wife or daughter of these so-called justices were raped, could the rapist be exonerated because he took the First Amendment? That he was just expressing himself? How about murder in the same situation?

(Robert A. Lewis)

56. I have one question for those bleeding hearts who say we should not have used the atomic bomb: If the nation responsible for the Rape of Nanking, the Manchurian atrocities, Pearl Harbor and the Bataan Death March had invented the bomb first, don't you think they would have used it? So do I.

(Bill Blair)

57. Since when did military service become a right, for gays or anyone else? The military has always been allowed to discriminate against people who don't meet its requirements, including those who are overweight or too tall or too short. There is an adequate supply of personnel with the characteristics they need. And there is no national need for gays in the military.

(William R. Cnossen)

- ★58. There is something very wrong about the custom of tipping. When we go to a store, we don't decide what a product is worth and pay what we please; we pay the price or we leave. Prices in coffee bars and restaurants should be raised, waiters should be paid a decent wage, and the words "no tipping" should be clearly visible on menus and at counters.

(George Jochnowitz)

59. Most Americans do not favor gun control. They know that their well-being depends on their own ability to protect themselves. So-called "assault rifles" are used in few crimes. They are not the weapon of choice of criminals, but they are for people trying to protect themselves from government troops.

(Larry Herron)

60. Holding a gun, a thief robs John Q. Public of thousands of dollars. Holding a baby, an unmarried mother robs taxpayers of thousands of dollars. If one behavior is considered a crime, then so should the other.

(Louis R. Ward)

- II. Turn to the editorial pages of a newspaper or the letters column of a magazine and find an instance of a fallacious argument in the editorials or letters to the editor. Identify the premises and conclusion of the argument and write an analysis at least one paragraph in length identifying the fallacy or fallacies committed and the factors that may have led the arguer to commit them.

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Summary

Fallacy: A mistake in an argument that arises from defective reasoning or the creation of an illusion that makes a bad argument appear good. There are two kinds of fallacy:

- Formal fallacy: Detectable by analyzing the form of an argument
- Informal fallacy: Detectable only by analyzing the content of an argument

Fallacies of Relevance: The premises are not relevant to the conclusion:

- Appeal to Force: Arguer threatens the reader/listener.
- Appeal to Pity: Arguer elicits pity from the reader/listener.
- Appeal to the People: Arguer incites a mob mentality (direct form) or appeals to our desire for security, love, or respect (indirect form).
- Argument against the Person: Arguer personally attacks an opposing arguer by verbally abusing the opponent (*ad hominem* abusive), presenting the opponent as predisposed to argue as he or she does (*ad hominem* circumstantial), or by presenting the opponent as a hypocrite (*tu quoque*).

Note: For this fallacy to occur, there must be two arguers.

- Accident: A general rule is applied to a specific case it was not intended to cover.
- Straw Man: Arguer distorts an opponent's argument and then attacks the distorted argument.

Note: For this fallacy to occur, there must be two arguers.

- Missing the Point: Arguer draws a conclusion different from the one supported by the premises.

Note: Do not cite this fallacy if another fallacy fits.

- Red herring: Arguer leads the reader/listener off the track.

Fallacies of Weak Induction: The premises may be relevant to the conclusion, but they supply insufficient support for the conclusion:

- Appeal to Unqualified Authority: Arguer cites an untrustworthy authority.
- Appeal to Ignorance: Premises report that nothing is known or proved about some subject, and then a conclusion is drawn about that subject.
- Hasty Generalization: A general conclusion is drawn from an atypical sample.
- False Cause: Conclusion depends on a nonexistent or minor causal connection. This fallacy has four forms: *post hoc ergo propter hoc*, *non causa pro causa*, oversimplified cause, and the gambler's fallacy.
- Slippery Slope: Conclusion depends on an unlikely chain reaction of causes.
- Weak Analogy: Conclusion depends on a defective analogy (similarity).

Fallacies of Presumption: The premises presume what they purport to prove:

- Begging the Question: Arguer creates the illusion that inadequate premises are adequate by leaving out a key premise, restating the conclusion as a premise, or reasoning in a circle.
- Complex Question: Multiple questions are concealed as a single question.
- False Dichotomy: An "either...or..." premise hides additional alternatives.
- Suppressed Evidence: Arguer ignores important evidence that requires a different conclusion.

Fallacies of Ambiguity: The conclusion depends on some kind of linguistic ambiguity:

- Equivocation: Conclusion depends on a shift in meaning of a word or phrase.
- Amphiboly: Conclusion depends on an incorrect interpretation of an ambiguous statement made by someone other than the arguer.

Fallacies of Grammatical Analogy: A defective argument appears to be good as a result of its being grammatically similar to another argument that is not fallacious:

- Composition: An attribute is wrongly transferred from the parts to the whole.
- Division: An attribute is wrongly transferred from the whole to the parts.

Fallacies that occur in real-life argumentation may be hard to detect:

- They may not exactly fit the pattern of the named fallacies.
- They may involve two or more fallacies woven together in a single passage.

Three factors underlie the commission of fallacies in real-life argumentation:

- The intent of the arguer (the arguer may intend to mislead someone).
- Mental carelessness combined with unchecked emotions.
- Unexamined presuppositions in the arguer's worldview.