

Chapter 5: Informal Fallacies II

*Reasoning is the best guide we have to the truth....Those who offer alternatives to reason are either mere hucksters, mere claimants to the throne, or there's a case to be made for them; and of course, that is an appeal to reason. Michael Scriven, **Reasoning***

Why don't you ever see a headline, "Psychic wins lottery"? Internet Joke

News Item, June 16, 2010: A six story statue of Jesus in Monroe city, Ohio was struck by lightning and destroyed. An adult book store across the street was untouched.

Introduction

In the last chapter we examined one of the major causes of poor reasoning, getting off track and not focusing on the issues related to a conclusion. In our general discussion of arguments (Chapters 1-3), however, we saw that arguments can be weak in two other ways:

1. In deductive reasoning, arguments can be valid, but have false or questionable premises, or in both deductive and inductive reasoning, arguments may involve language tricks that mislead us into presuming evidence is being offered in the premises when it is not.
2. In weak inductive arguments, arguments can have true and relevant premises but those premises can be insufficient to justify a conclusion as a reliable guide to the future.

Fallacies that use deductive valid reasoning, but have premises that are questionable or are unfair in some sense in the truth claims they make, we will call **fallacies of questionable premise**. As a subset of fallacies of questionable premise, fallacies that use tricks in the way the premises are presented, such that there is a danger of presuming evidence has been offered when it has not, we will call **fallacies of presumption**. Fallacies that involve very weak, but often psychologically persuasive inductions, we will call **fallacies of weak induction**. We also noted in Chapter 4 that fallacies can be analyzed in terms of being weak (1) in the reasoning, (2) by having questionable premises, or (3) by having suppressed evidence. In the majority of cases the most important distinction is between that of weak reasoning and questionable premises. Fallacies of relevance and fallacies of weak induction are all weak in the reasoning. With the exception of the fallacy of Suppressed Evidence, fallacies of questionable premise and presumption are weak in the premise or premises.

It is important to remember what this distinction means. When we claim that the reasoning of an argument is weak, the focus of criticism should be on the inference *from* the premise or premises to the conclusion. In this case, we need not criticize the premises in terms of their truth claims, but instead should argue that *even if* the premises are true we do not have good grounds for accepting the conclusion. On the other hand, when we claim that the premise or premises are weak, the focus of criticism should not be on the reasoning but should instead focus on a claim that the premise or premises are false, questionable and unreliable, presumptive, or unfair in some sense.

At this point these distinctions and various categorizations may seem very abstract, but it is important to grasp them as part of our general theme and strategy of applying the proper focus when arguing. Like becoming an expert surgeon it is important to learn not to wander around with one's knife. Proper analysis and criticism should stay on track; as we have seen there is enough unfocused thinking in the realm of human discourse. If an argument involves a particular fallacy, and one makes a claim that one should not accept the conclusion, then the criticism should focus, first and foremost, on the standard problem of that fallacy. For instance, as we have seen in the cases of Appeal to Popularity and Questionable Cause, the standard problem in both of these fallacies is in the reasoning. Given any particular passage that may commit either of these fallacies, there might be a lot more going on that we could criticize. We might doubt the truth of the premises as well. However, if the charge is one of these fallacies, then the analysis should start by criticizing the reasoning, not the claim made in the premises. Furthermore, the goal of criticism is not criticism for its own sake, but to force everyone to have better arguments and make our beliefs more reliable. The proper focus is important in determining what would make poor arguments better. In the case of Appeal to Popularity, because the premise is irrelevant to the conclusion, a follow-up discussion would involve identifying relevant facts that would support the conclusion if they were true. In the case of Questionable Cause, the premise is relevant to the conclusion but insufficient, and a follow-up discussion would involve identifying more inductive evidence of the same type as that claimed in the premise.

Remember that identifying an argument as invalid, unsound, or as a weak induction does not mean the conclusion is false and must be banned from rational consideration forever. Similarly, calling an argument a fallacy may only mean that after identifying why the argument is weak, follow-up discussion will enable us to better support the conclusion. Like the cigarette research example and making follow-up controlled experiments better, criticism of an argument potentially helps make the next argument better. To do this we must focus our attention based upon the proper categorization.

Finally, as is the case in all formalizations and abstractions, proper categorizations save a lot of time and intellectual energy. Once we know the recipe of a fallacy, how it "fits" with these distinctions and categorizations, we only have to think about it once, so to speak. To help make the major contrast clear between fallacies that are weak in the reasoning and fallacies that are weak in the premise, let's first contrast the fallacies of relevance covered in the Chapter 4 with some examples of fallacies of questionable premise.

Fallacies of Questionable Premise

As noted above, fallacies of questionable premise are valid. If the premises were true we would be locked into the conclusion. Recall, however, from Chapter 2 that in passages of the form "X, because Y," to distinguish arguments from explanations, in arguments Y should be less controversial than X. In general to rationally persuade someone to accept a conclusion we should start with relatively accepted, inductively confirmed, or noncontroversial premises. Normally, in good reasoning we are attempting to move (infer) from what we think we know (relatively non-controversial premises) to what we do not know (a statement that is controversial or uncertain, the conclusion). Fallacies of questionable premise violate this guideline by offering what a little common sense reflection will show to be obviously controversial or unfair premises.

Slippery Slope

In our discussion of deductive and inductive reasoning, we noted that many of the premises used in deductive arguments are based upon inductive reasoning. In our discussion of inductive reasoning, we noted that we can never be absolutely certain of any belief that is the result of inductive reasoning. We are faced therefore with the reality of always living with an uncomfortable, insecure, and risky situation. The best we can do is be intellectually honest, admit our ultimate ignorance, and try to put together reliable, but tentative beliefs based upon strong inductions. A slippery slope is a psychologically persuasive way of arguing that takes advantage of the fact that we live in an uncertain world and that many things are possible. In particular it takes advantage of the fact that people naturally fear what might happen when we choose to do something different or new. A **Slippery Slope** fallacy is committed when a mere possible chain of events (one event causing another) is asserted in the premises with no supporting evidence offered that the chain of events is likely to happen.

Consider this example of a politician commenting negatively on a proposed initiative in San Francisco to abolish the vice squad.

5-1

If this passes, San Francisco will be the whorehouse of the nation. There'll be soliciting on the steps of city hall and lovemaking on Market Street, organized crime will profit and residents and businesses will be affected. It will be a signal that "anything goes" in San Francisco.

The issue before the voters was whether the city needed a special division in the police department devoted to enforcement of laws related to prostitution, drugs, pornography, public decency, and so on, or if given budget priorities enforcement of these laws could be the responsibility of the entire police department. A related issue was the priority of law enforcement. Those who were for the initiative felt that the police department should spend more time and tax supported resources on robbery and violent crime rather than interfering with what liberal supporters considered matters of privacy. Supporters argued

actions that infringed on the rights of others could be handled by the police in general; those that did not should not be dealt with at all or should be dealt with through education.

The more conservative politician is concluding that the abolition of the vice squad is wrong, and the evidence offered is that if the vice squad is abolished terrible things will happen. The terrible things he cites may happen. However, they also may not happen. He is offering us a slippery slope in his premises, that once a first step is taken a number of other steps are inevitable. Because the chain of terrible events he cites are offered as premises and no evidence is offered to support them, we would be justified in asking what evidence he has that these terrible events will actually happen. These premises are weak or questionable in the sense that they are controversial and no evidence is offered to support the claim that once the vice squad is abolished the chain of events cited is inevitable. The mere creative assertion of a possible chain of events cannot support the conclusion unless we have some reason to believe that the chain of events is likely to happen. We could just as well create a positive possible chain of events—also unsubstantiated—that abolishing the vice squad will save money and restructure police law-enforcement priorities, that this will free up more money for education, and that this will make people stop using drugs.

Here is a complete formal analysis of this argument.

5-1a

Conclusion: (implied) Don't abolish the vice squad. (Or, Don't vote for this initiative.)

Premise 1: If you do, San Francisco will be the whorehouse of the nation. There'll be soliciting on the steps of city hall and lovemaking on Market Street, organized crime will profit and residents and businesses affected. It will be a signal that "anything goes" in San Francisco.

Premise 2: (implied) A signal that anything goes in San Francisco is not good.

Label & Description: Slippery Slope. There is a slippery slope generalization in the premise.

Argument Analysis: The premise is questionable and unfair. Although the reasoning is valid, the premise asserts a number of controversial possible causal connections for which no evidence is cited. There is also reason to doubt the truth of this premise. The police department in general will not be abolished, nor will the laws against prostitution, and such. So, it is unlikely that even if the vice squad is abolished the police would not do something about an obvious violation of the law, such as prostitutes soliciting on the steps of city hall. Finally, no inductive evidence is offered for the generalized predictions made in the premises. No other city or community is noted where abolishing the vice squad was tried and disastrous events resulted.

Note that this argument is valid. If the premises are true or probable, if we had good reasons to believe that these events would actually happen by abolishing the vice squad, and if we do not want these things to happen, then the conclusion would follow -- we should not abolish the vice squad. The focus for criticism and discussion, then, should be on the premises. The problem with the argument is that it violates the principle that in general we should start arguments with noncontroversial premises whenever possible. Because the slippery slope premises predict a possible causal chain of events, inductive evidence should be cited to support these premises. For instance, if it could be shown that another city had abolished the vice squad and this city had an increase in drug use and prostitution, probably as a consequence of abolishing the vice squad, then the argument would not be a Slippery Slope fallacy. This better argument might not be conclusive, but at least it would draw attention to what should be discussed: whether or not the chain of events predicted is likely to be true. The persuasiveness of Slippery Slope is due not only to its valid reasoning, but in the scare tactics involved in the premises and the fact that we live in an uncertain world. The message of Chapter 3, however, is that with effort we can have reliable beliefs even in an uncertain world. The problem with Slippery Slope fallacies is that no effort is made to establish the predictive claims as reliable beliefs.

Here is the formal essence/recipe for all Slippery Slope fallacies.

5-1b

Conclusion: Don't do A. (Most often implied.)

Premise #1: Because if we do A, then B will happen. If B happens, then C will happen. And if C happens, then D happens. (The chain here does not need to be exactly this long, but usually it at least involves an A, B, and C.)

Premise #2: D is bad (usually implied).

Label & Description: Slippery Slope. There is an unsupported slippery slope in the premises. One of the premises claims that once a first step is taken a number of other steps are inevitable.

Argument Analysis: The premise is questionable and unfair. Although the reasoning is valid, an unsupported and controversial prediction is made in the premises regarding a possible chain of causal events. Without some evidence presented to support the connections asserted in the premise, the mere assertion of a possible chain of events cannot support the conclusion. Focus on whether the premise is a reliable belief. Argue that it is at least questionable by offering evidence that the chain is not likely to happen. Point out that the argument could be stronger if inductive evidence was offered to support this premise.

Note that Slippery Slope involves causation. For this reason students will often confuse it with a Questionable Cause fallacy. But Questionable Cause is a fallacy of weak induction, the causation claim is always in the conclusion, and some relevant evidence

for the conclusion is always offered in the premise. Slippery Slope has the causal claim in the premise and offers no evidence at all for this claim. This is an important distinction, for it reminds us what to focus on if we want to make these arguments better.

Here are some famous examples of Slippery Slope.

5-1c

Former comedian and movie star Bob Hope supporting U.S. military involvement in the Vietnam War:

"Everyone I talked to there (Vietnam) wants to know why they can't go in and finish it. And don't let anybody kid you about why we're there. If we weren't, those Commies would have the whole thing (the rest of Southeast Asia), and it wouldn't be long until we'd be looking off the coast of Santa Monica (California)."

5-1d

Anita Bryant arguing against giving gays the same constitutional protection against discrimination as that of other minorities:

"If we give homosexuals the civil rights issue, then next year we will have to give it to prostitutes. Then it will be for child molesters, then bestiality, then necrophilia..."

5-1e

Argument against the Obama plan to repeal the "don't ask, don't tell" military policy, paraphrased from arguments of Senator Saxby Chambliss of Georgia and the Family Research Council.

We should not repeal the "don't ask, don't tell" policy for gay service men and women in our military. If we do, it will lead to a decadent atmosphere brimming with alcohol use, adultery, fraternization, and body art. It will just be a matter of time before we have an explosion of homosexual assaults in which sleeping soldiers would be the victims of fondling and fellatio by gay predators. It will weaken our ability to fight our enemies and destroy our military.

Bob Hope's argument is a version of Slippery Slope called the domino theory. The role of U.S. military involvement in Vietnam was complex and controversial, and one of the issues was whether the conflict between North and South Vietnam was basically a civil war or part of a worldwide communist movement. Hope was assuming that what was at stake was stopping a world-wide communist movement, and that if we didn't fight in Vietnam and the communists won, other southeast Asian countries, such as Cambodia, Burma (Myanmar), and Thailand, would fall to communism. But this is precisely the issue Hope should have addressed with evidence before he assumed that the domino chain of events was inevitable.

Anita Bryant is addressing an issue that many states faced in the 1980s and early 1990s. Should gay people be protected against job and housing discrimination? Should they be allowed to marry? Take for instance a high school history teacher. Suppose this teacher has won awards for his teaching and he is very popular with his students. Suppose there is no question about his job competency. Suppose, however, that the high school principal finds out that the teacher is gay, and because of pressure from the local PTA, he fires the teacher. Suppose also that when this becomes known, the teacher's landlord evicts him from his apartment. Should these actions be legal? Bryant is arguing that they should be and that gays should not be protected, because this will set a precedent for giving similar protection to child molesters, people who have sex with animals and dead people (necrophilia)! Note: as late as February 2011, conservative talk radio host Rush Limbaugh commented on his show about gay marriage proposals becoming popular in many states. He said that if one is allowed to abandon traditional marriage, if it no longer matters, then "you could marry your dog."

For 5-1e, the policy, in effect since the early 1990s, essentially said that gays can serve in the military provided that they not advertise their sexual orientation. The military will not ask and gays should not tell or advertise their sexual orientation. If it did become known that they are gay, they will be discharged from the military.

When president Obama announced his policy change in 2011, those who supported continuing the "don't ask, don't tell" policy claimed that although it had not been perfect, it had worked, and it was not the time to have a social experiment in the military as we attempt to fight two wars. They argued it would make the military less unified and effective. Some also argued that sexual orientation is not a civil rights issue like skin color; it is a lifestyle choice that is potentially disruptive to the military. Those who supported repealing the policy claimed that discrimination in the military against gays served no useful purpose. That many gays faced death daily and were rewarded with the fear that they could be kicked out of the military if anyone found out they were gay. They also pointed out that many gays have been kicked out of the military that had valuable skills, such as the ability to speak Arabic and Farsi. Plus, Canada, Britain, and Israel had allowed gays to serve openly by this time and this service had not weakened their militaries, and the armed forces needed every qualified person.

These three arguments will be exercises at the end of this chapter. In preparation for analyzing them, think of what kind of evidence Hope, Bryant, and those who opposed the Obama policy would need to support their slippery slope premises.

Questionable Dilemma

Black-and-white thinking is another way to avoid uncertainty. If the real world of confusing choices and tentative beliefs could be sliced up into just two nice categories of good guys and bad guys, how simple life would be. A **Questionable Dilemma** fallacy is committed when a major premise offers us only two choices, one of which is claimed to be bad, but a little common sense reflection reveals that a good case can be made that there are more than just these two choices.

During the early 1990s, the physician Jack Kevorkian was arrested in Michigan numerous times for assisting people in committing suicide. To clarify the law against assisted suicide the voters of Michigan were asked to vote on new language that would strengthen the legal case against Kevorkian. In campaigning against the new law, Kevorkian stated, "It's as simple as this: Are you going to vote for your right or are you going to vote it away?" Kevorkian has given us only two ways to look at the issue of euthanasia. It is a right we either accept or throw away. But opponents of euthanasia and assisted suicide were arguing for a third alternative—that the law should be strengthened because taking your own life is not an individual right. Kevorkian may have been correct that compassionate and painless suicide should be a right that we have in circumstances of excruciating pain and inevitable death, but in the above statement his appeal ignores the third alternative.

Here is a more in-depth example.

5-2

From Tim LaHaye, chairman of California for Biblical Morality.

"Either God exists and has given man moral guidelines by which to live, or God is a myth and man is left to determine his own fate. Your response to either position will determine your attitude toward such issues as abortion, voluntary school prayer, pornography, homosexuality, capital punishment, the priority you place on traditional family life, and many other social problems."

LaHaye is essentially claiming that either we believe in the traditional Christian God or we will likely be tolerant of abortion, pornography and homosexuality, be against capital punishment, and place a low priority on traditional family life. But he has not made a case that these are our only choices and a case can easily be made for other possible choices. Can't atheists, agnostics, or people who accept other religious beliefs (Hindus, Buddhists, Taoists) also place a high priority on traditional family life? It is also possible to believe in God and believe that we are responsible for our own fate. Religious humanism is such an alternative. The above argument assumes that humanists cannot be good persons because humanists believe that human beings can be good without the direct help of divine intervention from God. There is also a philosophical-religious position known as deism, which states that God exists, but that He is more like a grand clockmaker who created human beings and the universe but then withdrew from the day-to-day involvement with His creation. Followers of Eastern philosophies and religions, such as Buddhism and Taoism, believe that although a personal God does not exist, we are not entirely abandoned to chaos, that there is a grand pattern or flow to all creation, and that we can mold our behavior positively with this pattern and live an ethical life without any gods.

Here is an analysis of LaHaye's argument.

5-2a

Conclusion: The Christian God exists and has given humankind moral guidelines to live by.

Premise #1: *Either* this is true *or* God is a myth and we are left to determine our own fate.

Premise #2: If you believe the latter, then (implied) this is obviously wrong, because you are likely to be tolerant of pornography and homosexuality, against capital punishment, and place a low priority on traditional family life.

Label & Description: Questionable Dilemma. One of the premises makes a questionable either/or claim.

Argument Analysis: The major premise is questionable. The first premise contains a dilemma which reduces the number of possible alternatives to two. Because there are other possible positions other than these two extremes, the premise is weak. The above argument ignores the existence of other major world religious views, such as Buddhism and Taoism. It is also possible to be a religious humanist and believe that even though God exists, we are left to make our own decisions about abortion, sexual orientation, and capital punishment—that believing in God does not automatically endorse only one position on these issues. Many gay people also believe in God and that He provides moral guidance. It is also possible to be an atheist or agnostic and strongly endorse traditional family values.

In attacking LaHaye's argument as a Questionable Dilemma we are not claiming categorically that LaHaye's premise is false. We are simply pointing to the fact that it would be premature to accept his major premise when there are other possibilities to discuss. It is possible that he could make a case that these are our only choices. But he has not done so, and thus we have good reasons to doubt his premise until he does. He has claimed there are only two possibilities. We need only point to a third alternative to draw attention to the questionable nature of his premise and place the burden on him to offer further support for this premise before we have a good reason to accept his conclusion.

Here is the formal essence/recipe for all Questionable Dilemma fallacies.

5-2b

Conclusion: Do A, believe A.

Premise #1: Because we must do (or believe) A or B.

Premise #2: B is bad. (usually implied)

Label & Description: Questionable Dilemma. One of the premises makes a questionable either/or claim; it restricts our choices to only two alternatives.

Argument Analysis: The premise is questionable. The first premise contains a dilemma which reduces the number of possible alternatives to two. Because there are other possible positions other than these two extremes, the premise is weak. Make a case for an alternative C.

Notice that like Slippery Slope the structure of Questionable Dilemma is valid. If it were true that we had only two choices and we did not want one of them, then it would follow deductively that we should make the other choice. Thus, to claim that this fallacy has been committed places the burden of discussion on the content of the argument, specifically the premise that asserts the either/or dilemma. To accuse someone of committing this fallacy, you must know something about the topic under discussion and must at least state a tentative case for a third alternative. You can't simply charge someone with committing this fallacy because he or she claims there are only two alternatives. There may be only two realistic alternatives, and unless we make a case that there is a third alternative, we can't merely assume there is one. By stating a tentative third alternative, we halt the process of premature conclusion and focus attention on the proper place for further discussion.

As an example, recall from Chapter 4 that defenders of deadly military arms sales to foreign countries often phrase their arguments in terms of Two Wrongs Make a Right: It is acceptable policy to sell military arms to third world countries, because the Russians or Chinese are doing it. Suppose after charging someone of committing this fallacy by pointing out that they had not addressed the relevant issue whether selling arms by any country is ethically right, or wise considering that the arms could be used against our own soldiers, the defender of arms sales responds by saying,

5-2c

"Of course it is wrong for any country to do this. In an ideal world this would be categorically wrong, but we do not live in an ideal world. We live in an imperfect world of many necessarily evil responses to gain influence and defend our strategic interests. In the world we live in we have no other choice: either we sell arms or someone else will.

The focus of discussion has now been changed from whether selling military arms and equipment is right to whether we have any other choice. Without further discussion we should not assume a third choice or that there is no other choice. Both parties should now defend their positions by discussing whether there is a third choice.

Finally, since in the United States we have a two party political system for the most part, Questionable Dilemma appeals are a big part of the political scene.

"Either we vote for Obama and hope or we have more of the same."

"Either we support the president's health care revolution or we will continue of be the only prosperous nation in world where 45 million people have no health care insurance."

And who would you vote for if given this choice between the Republican Blunt and the Democrat Carnahan?



Straw Person

We cannot be knowledgeable on every issue, but a little reflection reveals that we should be cautious in accepting without direct testimony a person's interpretation of a position that person is obviously against. I am a college professor. Suppose I want a raise in salary but the governor of my state refuses to raise teacher salaries. Who would it be best to listen to in understanding the governor's reasons—myself or the governor? Should you trust my description to be fair and accurate without getting the governor's position directly from the governor?

Consider the very typical political exchange below. The setting is the fall of 2004 and a presidential election, and the controversy is over whether the efforts against terrorism since 9/11 have been wise or whether serious mistakes have been made.

Politician A:

"This administration relies on many voters being unaware of what is happening in Afghanistan. They argue it is a huge success. But we promised to provide Afghanistan with both security and aid during its transition to democracy. We broke those promises by diverting our attention and resources to Iraq. This administration has allowed the country to slide back into warlordism and allowed the Taliban to make a comeback. The result has been more terrorism and opium production. This administration tells us that the Taliban are gone and a peaceful democracy is developing. They are not gone and anyone can see this by reading the newspapers. The administration often brags about 10.5 million Afghans registering to vote. Proof that democracy will be easy in Afghanistan and it is now on the way. They count on some of the public not to know, and not to read about the critical analysis, that the number of people registered exceeds all expert estimates of the eligible population. What they call proof of democracy on the way is actually evidence of large-scale electoral fraud on the part of the warlords.

On Iraq, this administration tells us everything is going fine as more and more of our troops die every day, car bombs kill children, and international workers are beheaded. They rely on many American people still believing that either Saddam was involved in 9/11 or that Saddam and bin Laden had close ties. But anyone who can read (the 9/11 Commission's report) knows these claims are just plain false. Plus, anyone who spends the slightest amount of time reading the work of experts on terrorism knows that our invasion of Iraq has made us less safe and has been a recruiting bonanza for Osama bin Laden.

We can't afford more of this go-it-alone, more of the same, attention-deficit-disorder foreign policy that appeals to blind Rambo patriotism for support and totally ignores what the rest of the world thinks. When we take preemptive action to defend ourselves, we need to do the hard work of international leadership, passing a global test of legitimacy in explaining clearly to the American people and our allies why we need to take the action that we do. We need to do the same now. We need an immediate call for a summit of European and Middle East nations to create support of an international peacekeeping force in Iraq. And to do this we need a change in leadership. No one is going to follow our current president who has told the rest of the world to go to hell. You cannot lead unless people follow you, and leadership is more than just attacking someone and then saying you're either with us or against us."

Politician B:

"Our opponents think that the American people are ignorant and that their patriotism keeps them from listening to how liberal newspaper writers tell us to think. The cornerstone of our opponent's policy is that we need some sort of global test before we can use our troops to defend ourselves. No, the use of troops to defend American must never be subject to a veto by other countries. We don't take international polls to see if it is alright to defend ourselves. No summit of world leaders has ever killed a terrorist or deterred one from his evil doings. Plus, they say we should worry about what Osama bin Laden thinks. Osama bin Laden? Osama bin Laden does not make decisions for the American people. Newspaper writers don't make decisions for the American people. The American people make decisions for the American people. That's the difference between our president and our opponents—our president trusts the wisdom, patriotism, and strength of the American people."

Notice that both politicians are telling us what his or her opponents have said on very important issues. First, one should be suspicious of what Politician A is telling us. In addition to not being immediately persuaded by the creative ad Hominem attack ("attention-deficit-disorder foreign policy"), one should ask, did the administration claim the "Taliban were gone," that "democracy will be easy in Afghanistan," and that everything was "going fine in Iraq"? Did the president tell the rest of the world "to go to hell"? We don't have direct access to the original claims and exact wording. More likely the claims were not this blunt. More likely the claim about Afghanistan and Iraq was that

tough, hard-fought-for progress was occurring toward establishing democratic governments in these countries.

Second, we do have the original words of Politician A. Did Politician B accurately describe what Politician A said? Did Politician A claim that the American people are ignorant? Did he or she claim that we should think the way liberal newspaper writers want us to think? Did he or she say we should let Osama bin Laden make decisions for the American people? Was Politician A saying that we should hand over decisions of the use of our troops to foreign leaders?

Many politicians learn to exaggerate their opponent's arguments and positions on issues. Although both politicians have attempted to describe the opposing position on important issues, and each mentioned something related to a portion of the opposing argument (democracy in Afghanistan, the reading of newspapers, Osama bin Laden, a summit of world leaders), each placed considerable "spin" on the wording to make their opponents position appear to be very weak.

A Straw Person fallacy is committed when a distortion or exaggeration of a person's position is used as a premise for concluding that the person's position is invalid. Like the little pig who made his house out of straw and had it blown away by the big bad wolf, a straw person argument sets up one's opponent with a distorted or exaggerated description so that the position is easy "to blow away."

Consider this famous argument against the 1950s anti-nuclear bomb activist and British philosopher, Bertrand Russell.

5-3

"Mr. Russell believes that we (the U.S.) should stop making atomic bombs, so that the Soviet Union can gain a strategic superiority over the free world and threaten peace throughout the world. I say better dead than red."

This was a distortion of Russell's true position. He argued in the 1950s that the psychology of the arms race was producing, or would soon produce, a situation where there would be far more nuclear weapons than needed for defensive purposes. By 1970 the U.S. had thirty-six nuclear bombs per major Soviet city, and the Soviet Union had eleven nuclear bombs per major U.S. city—six thousand missiles for the Soviet Union and ten thousand for the U.S. By 1985, the numbers had increased to about 11,000 for the U.S. and 10,000 for the Soviet Union. By 1991, when the Soviets and the U.S. finally announced a nuclear arms reduction agreement, the U.S. had 12,304 missiles and the Soviet Union 11,626. These numbers represent missiles not bombs. Some of the missiles carried as many as ten independently targetable hydrogen bombs; so in total the arsenals of both sides added up to approximately fifty thousand bombs, just one of which could kill millions of people. Russell was arguing that no more nuclear weapons should be produced, but he was not urging that we let the Soviets get ahead and threaten world peace. Rather he argued that the thousand or so nuclear weapons then in existence

already made nuclear war unthinkable. That a policy of more-will-make-us-safer was a dangerous delusion, and it would eventually encourage many other countries to also want and develop nuclear weapons.

Here is how this argument would be analyzed as a Straw Person fallacy.

5-3a

Conclusion: Mr. Russell's position on the production of atomic bombs is incorrect.

Premise #1: He wants us to stop producing atomic bombs, so the Soviet Union will threaten world peace and freedom.

Premise #2: Letting the Soviet Union threaten world peace and freedom is ridiculous.

Label & Description: Straw Person. The premise, although an attempted description of Russell's position, is a distortion of his true position.

Argument Analysis: The premise is not true. The premise involves a distortion of Russell's true position. He argued that the psychology of the arm's race was producing, or would soon produce, a situation where there would be far more nuclear weapons than needed for defensive purposes. Although he did advocate that the production of nuclear weapons cease, it was an exaggeration of his position to claim that he wanted the Soviet Union to gain a strategic advantage. He argued that any increase in nuclear weapons would not make the world safer.

As with the Slippery Slope and Questionable Dilemma fallacies, the focus of the discussion should be on the premise rather than the reasoning. This means that to participate in criticizing or defending the premise we must know something about the details of what is being discussed. We cannot charge someone with distorting a person's true position unless we can make a case for the person's true position. This entails knowledge, a robust world view, or the patience to research the position being criticized. If this is not possible, then one should at least be cautious in accepting a description of a position one knows the describer is against.

Here is the formal essence/recipe for all Straw Person fallacies.

5-3b

Conclusion: X is wrong about A.

Premise #1: An alleged description of X's position on A.

Premise #2: As described, X's position is weak or stupid. (usually implied)

Label & Description: Straw Person. The description of X's position in the premise is a distortion or exaggeration of X's true position on A.

Argument Analysis: The premise is false. Although if the main premise was true, it would offer good grounds for accepting the conclusion, the main premise is not true. Make a case that the main premise is a distortion or exaggeration of X's true position by describing X's true position.

Note that the conclusion of Straw Person is the same as that of the Ad Hominem arguments, in which a person is attacked. Because of this, students will often confuse the Ad Hominem appeals with Straw Persons. Straw Person fallacies at least make an attempt in the premises to describe X's position and thus these fallacies are at least on track in this regard. In comparison, the Ad Hominem fallacies do not describe X's position at all in the premises, but instead attack with irrelevant name calling or cite poor motives and questionable circumstances. Straw Person's premise is relevant to the conclusion. If the description were true, this would be a major consideration for accepting the conclusion. With the Ad Hominem premises, even if the premises are true, they are irrelevant to the conclusion. In recognizing the possibility of a Straw Person fallacy, we are directed to the premise and must discuss whether the description of X's position is accurate or not. In identifying an Ad Hominem fallacy, we are reminded that a person's position on an issue could be worthy even if we don't think much of that person's character or motives, or suspect the circumstances related to the person's argument. We are reminded that although at some point motives may be a consideration, we should examine the details of the person's position before writing it off.

In the above exchange between Politician A and B, behind the exaggerated surface spin, there was a real issue for the American people to think about. Was the current approach to Afghanistan, Iraq, and terrorism working? Did it just need some more time and commitment? Or, was it failing and a change in leadership was needed to produce a more globally cooperative approach? It was important that the description of both sides in the debate be accurate. Sympathizers with Politician B argued for a more pre-emptive and unilateral, America-first approach. We were attacked viciously (9/11) and we had a right to go on the offensive to make sure it did not happen again. Sympathizers with Politician A argued that we needed a less nationalistic and more globally cooperative approach to fighting terrorism and assuming the costs of building democratic governments in Afghanistan and Iraq. The stakes were high.

For help in separating Ad Hominem from Straw Person fallacies, consider this example.

In the spring of 1995, as part of their Contract with America, a Republican controlled House Economic and Educational Opportunities Committee sent a bill to the full house that would repeal the National School Lunch Act. By this time 14 million schoolchildren received free or reduced-priced school lunches and another 5 million received free or reduced-priced breakfasts. House Democratic leader Richard Gephardt responded, "Now we see what the Republican Contract with America is really all about. It is a war against children. They would rather use this money to build highways."

House Republicans responded that this was a "bizarre characterization" of their position. They claimed that the new approach, which would give block grants to states to run the program, would be more efficient, cut unnecessary audits and paper work, and lead to an increase in the amount of money spent on school lunches.

The Republicans may have been wrong that the program would be more efficient and not hurt children, but Gephardt's statements were clearly not an accurate description of what the Republicans thought they were doing. A good case can be made that Gephardt was guilty of a Straw Person.

On the other hand, an attack on the Republican proposals that they were "simply a political payoff to the rich, who supported Republicans during the 1994 elections and who want lower taxes," is best characterized as Ad Hominem Circumstantial. Gephardt was at least attempting to describe the Republican plan; whereas the latter attack did not mention any specifics of the plan, and referred to motives instead.

Another important point on Straw Person fallacies. Media video editing (cable news, YouTube, etc.) allows easy video distortions of an opponent's position. In 1993 Governor Carroll Campbell of South Carolina opposed President Clinton's proposals on health care insurance. In a thirty-second commercial backing the Clinton plan, Republicans were depicted as heartlessly refusing to acknowledge how many people were suffering either without health care at all or were financially drained by family health care costs. In the commercial a sound bite from Campbell clearly states, "There's not a crisis." But Campbell's comment was edited from a much longer answer to a television interview. Here are Campbell's complete remarks,

"Number one, you shouldn't say there's not a crisis. There's a crisis for people that don't have health care. And there is a crisis in the financing. **There's not a crisis** in the whole medical system of America, and there's a different interpretation. . . . But there are areas that are in crisis that need to be dealt with."

A small section of the interview tape was used to totally distort Campbell's opposition to the Clinton plan. Campbell was on record for opposing the forcing of all businesses to help pay for coverage as a destructive burden on small business, but had not taken the position that no legislation at all was needed.

In 2010, a two and half minute YouTube video posted by conservative blogger Andrew Breitbart, appeared to show Shirley Sherrod, then Georgia's director of rural development for the United States Agriculture Department, making racist comments about how she treated white farmers different than black farmers. (Sherrod is black.) In the video of a speech she gave at an NAACP gathering, she is heard saying,

"I was struggling with the fact that so many black people have lost their farmland and here I was faced with having to help a white person save their land—so I didn't give him the full force of what I could do. I did enough."

She was referring to an event that happened twenty-four years earlier. At the time she was involved in helping black farmers save their family farms and it was the first time a white farmer had asked her for help.

Breitbart posted the small two and half minute segment out of a forty-five minute speech to show that racism existed in the NAACP and to counter an earlier allegation from the NAACP that racism existed in the conservative Tea Party movement. Bill O'Reilly, conservative commentator for FOX news, aired the tape segment and then called for her resignation. Shortly after her comments were condemned by the NAACP and the Obama administration forced her to resign.

However, when the entire forty-five minute speech was seen, a very different message was clear—a message of reconciliation for different ethnicities. According to Sherrod, the incident helped her realize that the big picture issue was not white v. black but rich v. poor. According to Sherrod, those in power too often foster pitting blacks, whites, and other ethnic groups against each other for their agendas.

Turns out she helped the white farmer save his family farm, and he and his wife were seen days after the initial YouTube posting all over the news media praising Sherrod as a person and for all that she did to help farmers of all ethnicities. The Obama administration, O'Reilly, and the NAACP all apologized, and the Obama administration pleaded with Sherrod to return to work with the Agriculture Department.

Two final gems of typical examples of political distortion:

Talk radio host Rush Limbaugh describing in February 2010 first lady Michelle Obama's efforts in getting people, particularly children, to eat more balanced, low fat diets.

“Michelle My Belle is out there saying if you eat the roots and tree bark and the berries and all this cardboard stuff you will live longer, be healthier and you won't be obese. . . . Nutritionist at large demanding. . . requiring what everyone can and cannot eat. . . basically that everyone eat cardboard and tofu . . . no calories, no fat, no nothing, we have to stop obesity.”

In her Let's Move Campaign she's never advocated a total elimination of high fat food, but was trying to use her prestige to promote common sense medical advice to combat rising incidents of obesity and diabetes in children. According to Mrs. Obama,

"This isn't an all-or-nothing proposition and it's important for families not to get caught up in that, not to think that I can never indulge."

She certainly never advocated that people eat roots and tree bark and only tofu. And she surely never demanded what everyone should eat.

Sarah Palin criticizing an attempt by President Obama to control Medicare costs.

“The America I know and love is not one in which my parents or my baby with Down Syndrome will have to stand in front of Obama's "death panel" so his bureaucrats can decide, based on a subjective judgment of their level of productivity in society, whether they are worthy of health care. Such a system is downright evil.”

Obama at various times was trying to implement the use of expert medical advice in Medicare reform by using “comparative effectiveness research. Just because a doctor thinks that an expensive procedure will work does not mean that there is evidence that it does work. Should tax payers pay huge costs for procedures that do not work? Is it a “death panel” that makes a decision based on reliable evidence that the government should not reimburse a worthless procedure? The research had nothing to do with judging whether people with disabilities should live or die based on their level of productivity in society.”

Then there are difficult health care rationing issues. In 2011, the drug Provenge costs \$93,000 and added only 2-5 months of life for those with advanced prostate cancer. Should this expense be covered under Medicare? So that a drug company can make an extra billion dollars a year? If you had a relative that needed this drug would it be ethical of you to demand that tax payers pay for this drug? Keep in mind that younger generations already faced a \$14 trillion federal deficit.

Fallacies of Weak Induction

In the discussion of inductive reasoning in Chapter 3 we noted that although all inductive conclusions lack certainty and have some risk, some inductive arguments give us a better basis for believing that some beliefs are reliable guides to the future. Based upon what we learned about the rigor and patience needed for good inductive arguments, we can classify some psychologically persuasive weak inductions as fallacies.

Hasty Conclusion

Recall from Chapter 3 that no matter how strong all inductions involve generalizations beyond the evidence presented in the premises. Everyday we generalize from our experience. We walk into a room that we have walked into, say, only once before, and we generalize that if we sit in the same chair again, it will support us in the same way it did previously. I eat a sandwich that I like at a restaurant, and I assume that every time I go to this restaurant the sandwich will be the way I like it. I see a bird of a particular color, and I assume that all the birds of this species have this color. Only when we are disappointed in our generalizations, when my sandwich does not come out the way I assumed it would, for instance, do we realize that such generalizations are actually hypotheses, not certain truths. Most of the time, we are being rational in making such generalizations because we are actually adding independent (higher-order, background) inductions and well-supported world views to corroborate our generalizations. When a restaurant makes a sandwich a certain way, I can reasonably assume that it will continue to be made most of the time this way. The employees are trained to make it this way, the owner wants to

please customers and stay in business, and in general I know from past experience and common knowledge that this is the way most restaurants work.

However, the all-encompassing appeal of many of our generalizations, and the same wish to eliminate complexity and insecurity in our lives that leads to black-and-white thinking, sometime fool us into accepting quick generalizations we ought not to. **Hasty Conclusion** is a quick generalization in which care has not been taken to see if a small sample warrants a generalization about the subject of that sample. In our apple example in Chapter 3 we saw that one rotten apple would not warrant a very secure inference about the entire barrel unless we brought some corroborating background inductions into the inference—forensic knowledge of bacterial growth, the amount of time the apples have been in the barrel, and the direction of spoilage (bottom to top). A Hasty Conclusion fallacy is a generalization where such corroborating support has not been offered.

Exaggerated, quick generalizations often occur when people try to adjust to a confusing and controversial event. In 1993 Lorena Bobbitt was declared innocent by virtue of temporary insanity of "malicious wounding." She had cut off her husband's penis with a kitchen knife after he had allegedly raped her. Discussion of the pros and cons of the jury verdict made the rounds of all the TV talk shows, with views in general highly polarized. Some people defended her action, and others condemned it. However, these talk shows generated extreme generalizations such as, "This is a feminist dream come true. What they're doing is licensing the feminists to come and slice our penises off. It will be open season on men."

Consider this example, a letter to the editor in my daily newspaper.

5-4

"I noticed yesterday that the Reverend Hoffman, a very vocal member of Jerry Falwell's Moral Majority, resigned from his post as minister to the New Faith Church, because of the considerable embarrassment over his admitted adultery with one of his parishioners. This characterizes the true nature of the fundamentalist Christian movement; they are all just a bunch of frustrated psychopaths hiding behind the facade of moral righteousness."

From one example of adultery and hypocrisy it is a very weak induction to conclude that this characterizes the entire fundamentalist movement. Without a greater sample or corroborating independent inductions this is a hasty conclusion. A more interesting argument would be the addition of psychiatric corroborating testimony to the effect that those who protest most vigorously against pornography and sexual tolerance tend to have sexual problems themselves, and the addition of more positive cases, such as the cases of televangelist ministers Jimmy Swaggert, Marvin Gorman, Jim Bakker, and Baptist minister George Alan Rekers. Swaggert was caught several times with prostitutes, and Gorman and Bakker were involved in adultery scandals. Rekers, supposedly a leading scholar for the conservative Christian opposition to gay rights, hired a gay escort in May 2010 from Rentboy.com® to allegedly help the elder Rekers carry his bags on a trip to Europe.

Even with this additional evidence the conclusion that this characterizes the entire fundamentalist movement would be too general. More reliable might be a tentative conclusion that a significant amount of hypocrisy exists in the fundamentalist Christian movement.

Here is an analysis of the above argument followed by the formal essence/recipe for all Hasty Conclusion arguments.

5-4a

Conclusion: *All* those in the fundamentalist Christian movement are a bunch of psychopaths.

Premise: *One* member of the fundamentalist Christian movement is found to be guilty of deviant and hypocritical behavior.

Label & Description: Hasty Conclusion. The conclusion asserts a considerable generalization given the small amount of evidence in the premise.

Argument Analysis: This argument is weak in the reasoning. Even though the premise is relevant to the conclusion—Reverend Hoffman is a member of the fundamentalist Christian movement—this one case is insufficient to characterize the whole religious movement without other examples and independent corroborating inductions. Hoffman could be an atypical case. Many more examples would be needed than just one case.

5-4b

Conclusion: All A's are B's.

Premise: One A is a B. (or) A few A's are B's.

Label & Description: Hasty Conclusion. The conclusion asserts a considerable generalization given the small amount of evidence in the premise.

Argument Analysis: Reasoning. Although the premise is relevant to the conclusion, it is insufficient to support the generalization in the conclusion. Make a case that the argument is a weak induction and indicate what type of evidence is needed to make the generalization stronger.

Note that the premise for Hasty Conclusion does not need to refer to only a single incident of the generalization. Consider these examples:

5-4c

Because 9 out of 10 marijuana smokers in the Harlem section of New York later progressed to heroin, it is obvious that smoking marijuana will lead to the use of heroin.

5-4d

Pine must be a liberal atheist, because in this book he criticizes conservative arguments for the existence of God.

For **5-4c**, although the sample cited in the premise is a relatively large percentage, given the sample, the acceptance of the generalization that this sample is typical is hasty. One could easily make a case that this is a very weak induction. The sample, even if true about Harlem, is not necessarily representative of other communities. Harlem could very well be an atypical case. Until a more representative sample is taken, the generalization is very weak. For **5-4d**, this argument is not only a very hasty conclusion—the arguments of liberals are also criticized in this book -- but implies a failed understanding of the reason for criticism as well. I may be very religious, but find the arguments criticized embarrassingly poor. Hence, my goal may be to have students think of better arguments for the existence of God and not to convince them that they should be atheists.

Notice that like the fallacies of relevance covered in Chapter 4, but unlike the fallacies of weak premise discussed at the beginning of this chapter, a Hasty Conclusion fallacy is weak in the reasoning. However, also note that unlike fallacies of relevance, Hasty Conclusion has a premise that is relevant to the conclusion. Recognition of these distinctions is important because in criticizing arguments with the goal in mind of making our arguments better, Hasty Conclusion, as is the case with all weak inductions, at least has the virtue of having evidence in the premise that is on track. So, we at least know what type of evidence we need more of to support the conclusion.

This latter point is also important for making another distinction. We should not mistake the fact that Hasty Conclusion is a very weak induction with the directive that we should be so cautious about generalizing that we stifle all creative hypothesizing. As a fallacy to avoid, understanding Hasty Conclusion cautions us not to jump to conclusions about what to believe or accept as reliably true. This does not mean that we should not jump to conclusions in proposing new ideas or hypotheses. Hypotheses and new ideas are most often the result of creatively jumping to a conclusion from very little evidence. There is nothing wrong with having a lot of bold creative hypotheses around for consideration and testing. However, there is a difference between proposing a new idea and saying that the idea has been critically examined and tested. We should be cautious about *accepting* a new idea, but not necessarily in *proposing* a new idea for examination.

Historically, many currently accepted scientific ideas started as bold conjectures that had very little initial evidence for them. In the sixteenth century, the Copernican hypothesis that the Earth moved and the sun was the approximate center of all planetary motion was a bold and difficult to believe generalization with relatively little evidence for it. It was very hard for many reasonable people to accept because it implied that the heavy, solid earth was spinning at an incredible speed that we do not feel. Also, because of the geometry of a sun-centered universe, the stars would have to be an immense distance away, a distance that further implied a universe much larger and less congenial to our

special role in the eyes of God. At first, no physics existed to explain why we are not thrown from a rapidly spinning Earth. Furthermore, the scientific evidence available at the time seemed to support the view that the stars were much closer to us than the Copernican system implied. Eventually, Newton produced the concepts of gravity and inertia to explain why we are not thrown into space even though the Earth is spinning at about a thousand miles per hour. And eventually more powerful telescopes revealed that the stars are indeed an immense distance away. Thus, it would have been a hasty conclusion that the Copernican system was not true, just because initially the evidence did not support it at the time.

Scientists have also learned to be cautious in accepting initial data as a falsification of a theory or generalization. Sometimes the data are wrong and the theory is used to correct the data. For instance, in the barrel full of apples example in Chapter 3, suppose we have pulled out ninety-nine clearly rotten apples. When we pull out the last one, initially it appears okay. It looks fine on the surface and appears to falsify the hypothesis that all the apples in the barrel are rotten. But because our hypothesis has been so well supported up to this point, it is hard to believe that this last one is not also rotten. So, we examine it inside and find that it is clearly rotten. The history of science includes many occurrences in which initial data, experiments, or observations appeared to falsify a theory, only later to be seen as corrected or confirmations. In short, when facts and a hypothesis conflict, the facts might be wrong!

Darwin's theory of natural selection and Einstein's theory of relativity have a similar history to the Copernican theory. When Darwin's theory was first proposed, the process of natural selection as described by Darwin did not appear to be consistent with the then commonly accepted age of the Earth. But the common view of the age of the Earth was wrong. To explain the evolution of the variety of species that currently exist on the Earth by natural selection requires a very old Earth. Today, geologists believe that there is reliable evidence that our Earth is approximately 5 billion years old, thus providing ample time for the process of natural selection to produce, in Darwin's words, the "grandeur . . . (of) endless forms most beautiful and most wonderful." In terms of an important hallmark of strong inductions and reliable beliefs, it is vital to understand that Darwin's theory is now supported by strongly supported background beliefs in astronomy, physics, chemistry, geology, genetics, paleontology, and modern medicine.

Similarly, when Einstein's theory was first proposed the boldness of the theory far outmatched the evidence. According to Einstein's special theory, time is not uniform or absolute, but "slows down" in one reference frame of high relative velocity compared to another. Today, time dilation (the slowing down of time) demonstrations by scientific experiment are routine. For instance, two high-precision atomic clocks can be synchronized, and one then placed on the space shuttle and the other left on Earth. When the two clocks are compared after the space shuttle returns to Earth, the one on the shuttle will have recorded less time, even though the two clocks will still be recording time at the same precise rate as when they were first compared. It follows from these demonstrations that if long, very high-speed space voyages are someday routine, twin sisters will no longer be the same age if one takes a long space voyage and the other remains on Earth!

Thus, in science there is a difference between **pursuing** a creative new idea and **accepting** it as a reliable belief, and a difference between a **context of discovery** and a **context of justification**. Our emphasis on the tentative and hypothetical nature of establishing reliable beliefs is consistent and actually promotes an attitude of the playful pursuit of and experimentation with bold new ideas.¹

Questionable Cause

By way of introduction to structuring fallacies we examined the fallacy of Questionable Cause in Chapter 4. Now we can examine this fallacy within the proper context of weak induction fallacies. **Questionable Cause** is a type of Hasty Conclusion. To assert that one event is *caused by* another is a bold generalization. When people assert such claims as Reaganomics caused the economy to get better in the 1980s, that the Clinton presidency was responsible for the economic boom of the 1990s, that feminism caused an increase in crime, that sex education classes cause teenagers to want to have sex, which produces more teenage pregnancies and spreads venereal disease, that the use of Google and the Internet are making us stupid², they are making bold claims about very complex situations. It is understandable why we make such claims and why we seek reliable beliefs about underlying causal connections that produce complex behavior and physical and social events. We want to know what causes what, so that we can control reality or at least adjust to it so that we can live successfully. If it is really true that the 1980's economic policies of President Reagan produced the foundation for a better economy, then we want to sustain such policies. If it is really true that sex education classes for teenagers produce behavior that we don't want, then we should eliminate such classes.

However, great harm can also be done by assuming a causal connection when there is none, and because the world is very complex at least on the surface, the amount of evidence needed to support a causal connection needs to be considerable. As we saw in our introduction of Questionable Cause in the previous chapter, many events take place at the same time so simply having one event precede another is very weak inductive evidence that these events are causally related. Let's look at a previous example in more detail.

5-5

Letter to the editor.

"Just why is everyone pushing this sex education in schools? Why is it necessary? The worn-out reason is that a lot of parents do not talk about it at home, so it must be taught in school. Yet, since this trend started, VD and pregnancy among teenagers and even preteens has sharply gone up. Why? I thought sex education was supposed to reduce it,

¹ For more on the difference between the pursuit and acceptance of belief, see Larry Laudan's **Progress and Its Problems** (Berkeley: Univ. of California Press, 1977), pp.108-114.

² See "Is Google Making Us Stupid: What the Internet is doing to our brains," by Nicolas Carr, **The Atlantic**, July/August, 2008

not increase it. The answer is that it is a 'how-to-do-it' course, nothing else. That is why the dirty books are being pushed in schools now to go with it. Sex education is stupid."

One interpretation is that the author's main conclusion (implied) is that sex education has actually caused what it was supposed to prevent. This is a rather bold and startling claim, considering that sex education classes were offered to educate teenagers about sex and lessen venereal disease and premarital pregnancies. Such classes were also offered based upon the higher-order induction that education is good, that it leads to rational choice and behavior modification.

Suppose we investigate this claim and find that the premise offered in this argument is true: That during the period of time discussed there has been an increase in sex education classes and a simultaneous dramatic increase in venereal disease and premarital pregnancies for teenagers. As in the example of the initial correlation between cigarette smoking and lung cancer, this would be a good place to begin an investigation, not end one. Although this correlation is unexpected, there are so many other possibilities that a bare time correlation by itself is a very weak inductive premise. Suppose sales of acne lotion have increased at the same time sex education classes have increased? Although psychologically more persuasive, without further investigation the status as evidence of this unexpected correlation between sex education classes and an increase in teen sex problems is no better than having a door slam shut immediately after a sneeze.

Many other factors could cause the increase of teenage venereal disease and pregnancy. An increase in the population of teenagers could cause every activity related to teenagers to increase: automobile accidents, purchasing of acne lotion, or particular types of clothing and music CDs, for example. There could be an increase in the population of particular types of teenagers, those in an area of the country where sex education is not taught or where early experimentation is encouraged by various social or family pressures. A mere time sequence and correlation do not prove causation. As with the initial correlation between an increase in the use of cigarettes and lung cancer, a correlation between sex education and teen sex problems does not reasonably substantiate a causal connection, and by itself, it does not give us a clear indication in which direction there may be a connection. For all we know at this point, an increase in teen sex problems has led to an increase in sex education classes!

As with the cigarette example, to establish a more reliable belief concerning a possible connection between sex education classes and teen sex problems a randomized controlled study should be conducted. Recall that in a controlled study the goal is to control as many variables as possible, so that given two populations of teenagers these populations will be about the same in randomized characteristics except that only one group will have had sex education in school. In this way, if we found a much higher percentage of pregnancies and VD in the group that had sex education, we would then have a more reasonable basis for claiming that there is a causal connection between sex education classes in public schools and subsequent teen sex problems. On the other hand, if we found no significant difference between the two groups, it would be reasonable to conclude that a population increase or some other causal factor was involved. Or, if we

found that the group having had sex education classes actually had a much lower percentage of teen sex problems, this would be reasonable support for the conclusion that the sex education classes were fulfilling their purpose of alleviating teen sex problems.

Such studies have been done. In 1992, Girls Inc. released a report on studies they had sponsored. Controlled studies had been conducted over a three year period in Texas, Tennessee, Nebraska, and Delaware, in cities where girls were at a higher than average risk of becoming pregnant. Girls in the sex education programs ages 15-17 were half as likely to have sexual intercourse for the first time as girls who did not participate in the program. And girls having sexual intercourse reported having intercourse without birth control about half as often as girls in the control group. In other words, the sex education program appeared to work. Girls in the sex education programs abstained from having sexual intercourse more often than those not in the program, and if they did have intercourse they were far more likely to use contraception. The programs promoted parent-daughter communication for the purpose of delaying sexual activity, assertiveness skills for saying "no" while remaining popular, motivation for avoiding pregnancy by helping girls set educational and career goals, as well as responsible decisions about contraception. Girls Inc. estimated that it could provide a program containing these components for about \$116 a year per girl.³ If further studies conducted using the techniques of this program corroborate this result, then a more reliable belief would be that a well-run sex education experience for teenagers is a causal factor in lessening teen sex problems, not increasing them.⁴

Here is an analysis of 5-5 followed by the essence/recipe for all Questionable Cause fallacies.

5-5a

Conclusion: Having sex education in schools has caused an increase in VD and pregnancy among teenagers and preteens.

Premise: Before sex education was introduced at schools there were low levels of teenage VD and pregnancy. After it was introduced, VD and pregnancy among teenagers and preteens increased dramatically.

Label & Description: Questionable Cause. The conclusion asserts a causal connection between two events, but only a time sequence of those events is noted in the premise.

³ Leticia T. Postrado and Heather Johnston Nicholson, "Effectiveness in Delaying the Initiation of Sexual Intercourse of Girls aged 12-14: Two Components of the Girl's Incorporated Preventing Adolescent Pregnancy Program," *Youth and Society*, Vol. 23, March, 1992, pp. 356-379.

⁴ Follow up studies have corroborated this general result. For instance, Trisha E. Mueller, Lorrie E. Gavin, Aniket Kulkarni, "The Association Between Sex Education and Youth's Engagement in Sexual Intercourse, Age at First Intercourse, and Birth Control Use at First Sex," *Journal of Adolescent Health*, Vol. 42, January 2008, Issue 1, pp. 89-96.

Argument Analysis: The reasoning is weak. Although the premise is relevant to the conclusion, the reasoning is weak because even if it is true that since there has been sex education in schools, VD and teen pregnancies have increased, this is not sufficient to know whether there is a causal connection between these events. The connection could be purely coincidental and other factors might be involved, such as an increase in the population of teenagers, or teenagers living in a social situation that promotes teen sex problems. The correlation between these events would be a good place to begin an investigation (with a controlled study), not to end one. Needed would be several randomized controlled studies that compared teen behavior between those who have had comprehensive sex education and those who have not.

5-5b

Conclusion: A caused B.

Premise: A happened, then B happened.

Label & Description: Questionable Cause. The conclusion asserts a causal connection between two events, but only a time sequence of those events is noted in the premise.

Argument Analysis: Reasoning. Although the premise is relevant to the conclusion, it is insufficient to support the conclusion. Make a case for a weak inductive inference by describing what other factors were happening at the same time as the alleged cause. Describe what type of evidence and investigation would be needed to make the causal connection claim stronger.

In criticizing a Questionable Cause, you do not need to make a case that one of the other events happening at the same time was the real cause. In the above example, we don't need to prove that some other factor actually caused the increase in teen sex problems. Because the person committing the Questionable Cause has cited only an event happening just before or at the same time as the alleged effect, once we point out that other events were also happening at the same time, the burden of proof is on the person committing the fallacy to show why we should believe the proposed event is the cause, rather than one of the many other possibilities. It is identical to the situation of a sneeze followed by a door slamming. Once we reflect that any one of many other things could be the cause because each also happened prior to the door slamming, the mere fact of sneezing before the door slammed cannot be used to separate it as a cause from the other events. At this stage of investigation, any other event that happened at the same time has an equal chance of being the real cause. A temporal sequence of events is only a good place to begin an investigation into causal connections.

Appeal to Ignorance

Another common hasty reasoning jump involves inferring that, because we can't prove something true, it must be false; or, that because something can't be proven false, it must be true. It would be an unreliable induction to conclude that ghosts exist, because no one

has proof that they don't exist. After the United States invaded and occupied Iraq, experts in weapons of mass destruction searched the country for such weapons. None were found. Because of the nature of inductive reasoning, this search did not prove absolutely that no weapons of mass destruction were there. But just because no one could prove absolutely that they were not there, it was surely not reliable to generalize that they were there.

To understand the weakness in this mode of reasoning, but also to understand the psychological persuasiveness, consider the following example. Suppose I have a new religious belief that somewhere in the universe there is a pearl on a planet that is exactly ten times larger than any other pearl on Earth and that this pearl is special because once it is found by the human species we will have reached a "doorway" to God, and all the suffering that we experience on this earthly plane will be over—we will all go to heaven. Suppose I gain followers who are so faithful that they build space ships and begin to crisscross our galaxy in search of this pearl. If my followers do not find any such pearl within a given time, I can say that it is a big universe and that we just need to have faith and keep looking. If, to my amazement they do find a pearl that is exactly ten times larger than any other pearl and no state of heaven appears, I have ready responses. They either found the wrong pearl—there must be another one exactly ten times larger than this one—or it was the right pearl but our state of mind was not right for God to reveal Himself; He did not think we were worthy yet.

The logical problem with my belief is that I have made it *irrefutable*; it cannot be proved false by any conceivable experience. If we find another pearl and nothing happens, I can again claim that there must be another one exactly 10 times larger than this one. My belief is such that I can take any conceivable experience and twist the interpretation in such a way that the result not only does not disconfirm my belief but actually (I would claim) confirms it. "After all," I might say, "we must be on the right track; at least we found a pearl exactly ten times larger than any known on Earth." My belief may be true, but there is no way to show it to be false. Here is a tragic real life example.

In 2011, a popular radio minister, Harold Camping, predicted that the world would end on May 21, 2011. Because Camping's ministry was broadcast on over 60 radio stations worldwide, the proliferation of social networking and Internet communication, plus millions of dollars spent on advertising, which included 2,000 billboards all over the United States, thousands of people were convinced this prediction was true. Camping had claimed that he calculated the date from numerous statements in the Bible. Many people quit their jobs and some charged up a huge credit card debt to take their families to special places for the end. When nothing happened, one spokesperson for Camping admitted that they were "disappointed" that 200 million people (Camping's estimate) were not transported to heaven and the rest of the billions of people on Earth did not suffer earthquake and other horrendous calamities as the Earth was destroyed. Another follower argued that the prayers must have worked, because God delayed the judgment day so that more people could be saved! Camping soon explained that the date should have been October 21, 2011, but that he was right about the May date being important. Instead of the "rapture day," this date was the "invisible (spiritual) judgment day," the

day that God decided who would go to heaven. No word was given as to why God would need to wait five months to implement His decision. Camping's prediction produced some very harmful consequences. There were reports of suicides all over the world and one woman tried to kill her children because she did not want them to suffer during the apocalypse.

There are many irrefutable beliefs, and many could be true. However, if there is no way to test these beliefs when they clash in the claims they make, there is no way to separate them in terms of which one to believe. There is no way to judge which belief, from a pair of irrefutable beliefs that clash, is likely to be a reliable belief, because no matter what happens, an interpretation is possible that supports both irrefutable beliefs. For many people the security offered by irrefutable beliefs is enough for them to jump to the conclusion that such beliefs must be true. The mistake in reasoning is: *my belief will never be proven false, so it must be true*. No matter what anyone says or discovers, my belief will stand the test of time and be able to handle anything new. I'll never have to revise my belief. I'll never have to be challenged with thinking of a new belief or of modifying my old belief.

Politicians learn how to protect their stated beliefs and policies from facts and events that appear to be inconsistent with the beliefs and policies. If a policy appears not to be working, he or she can argue that we just need more time, patience, and faith in the policy. If it is clear that the policy failed, he or she can argue that criticism and lack of faith in the policy caused the failure. If predicted weapons of mass destruction were not found, they might still be there, or they might have been transported out of the country or given to terrorists. We are always confronted with an infinite number of conceivable possibilities in inductive situations. No inductive generalization can ever be absolutely refuted. But "might be's" and "maybe's" are not reliable for concluding truth.

Similarly, appeals to ignorance use what we don't know to mistakenly conclude that this is evidence for something we do know. Thus, an **Appeal to Ignorance** fallacy is committed when the premise of an argument appeals to what we don't know—specifically that we don't know if a belief is true or false for sure—and is used for concluding an alleged reliable belief. In her book, *Only Words*, Catherine A. Mackinnon cites a premise for an Appeal to Ignorance fallacy when she states, "There is no evidence that pornography does no harm." Even if this is true, it is an unwarranted quick generalization to conclude from this fact alone that there is evidence that pornography does harm.

Consider this example.

5-6

Letter to the editor concerning AIDS and letting a child with AIDS attend school:

"Because science cannot prove that breathing the same air as an AIDS victim will not result in the spread of the virus, children with AIDS should not be allowed to attend public schools."

If the arguer intends the conclusion that it must be true that breathing the same air as an AIDS victim will result in the spread of AIDS, classification as Appeal to Ignorance is appropriate. It might be unfair on my part to interpret this argument in such a strong sense to make it into an Appeal to Ignorance. The arguer might just be urging caution, that because science cannot eliminate absolutely such an important possibility, prudence demands that we are cautious and not let AIDS children come to school. However, we can use the strong interpretation as a guide for criticizing the weaker or more cautious interpretation as well.

As we noted in Chapter 3, the conclusions of science are never absolute, but are the result of a critical process and based upon a great deal of carefully gathered evidence. After many years of scientific study, everything that is known about AIDS at present points to the conclusion that the virus cannot survive outside of the body and must have sexual or other intimate contact for transmission, such as an exchange of semen or blood. This belief could be wrong, but to have a reasonable basis for believing it wrong, direct evidence must be shown that atypical AIDS transmission has actually occurred in some cases. So, in addition to accepting the poor conclusion that we know breathing the same air as an AIDS victim will result in the spread of the virus, unreasonable harm could be done to AIDS-stricken children—children already suffering physically and psychologically—by not letting them come to school. We must take risks with everything we do, but if we have a reliable belief, to be too cautious and not act could be harmful and irrational.

For this case, recall from Chapter 3 the important roles that higher-order inductions and general well-supported background knowledge play in helping us separate the reasonable beliefs from the conceivable ones. Here a large well-developed and well-supported body of general knowledge (also supported by inductive reasoning) supported a reliable belief. Consider a similar example. One of the justifications for the United States invading Iraq was the possibility of not only Saddam Hussein having weapons of mass destruction but the terrifying possibility of his collaboration with Osama bin Laden and his Al Qaeda network of terrorists. But experts on Islamic culture and politics argued (to no avail at the time) that any such collaboration was extremely unlikely, because of the general knowledge that Saddam and bin Laden were virtual enemies and had very different cultural and political views. Fear and lack of evidence can combine to produce very unreliable beliefs.

Here is a possible interpretation and analysis of the above argument followed by the essence/recipe for all Appeal to Ignorance fallacies.

5-6a

Conclusion: It must be true that breathing the same air as an AIDS victim will result in the spread of AIDS.

Premise: Science cannot prove that it is false that breathing the same air as an AIDS victim will result in the spread of AIDS.

Label & Description: Appeal to Ignorance. Concluding that something is true, because (premise) it has not been proven false. There is an appeal to what we do not know in the premise and this is used to conclude what we (allegedly) do know.

Argument Analysis: The reasoning is weak. As a type of hasty conclusion, even though the premise is relevant to the conclusion, it is insufficient (weak induction) to accept the conclusion. Although it has not been ruled out categorically that breathing the same air as an AIDS victim may result in the spread of AIDS, and this is relevant to the possibility of this way of getting the disease, it is a very hasty inductive jump to conclude that because something has not been proven false, it must be true. That it may be true that breathing the same air spreads AIDS, because we can't show it to be impossible, does not mean that it is true. Direct evidence of a link between breathing the same air and the spread of AIDS and corroborating evidence that we need to change our theories about how AIDS spreads would be needed before this conclusion can be considered a reliable belief. For instance, better evidence would be a documented AIDS case where the person worked around AIDS patients occasionally and there was no sexual contact or exchange of blood or other bodily fluids.

5-6b

Conclusion: X is true. (Or, X is false.)

Premise: Because X has not been proven false. (Or, because X has not been proven true.)

Label & Description: Appeal to Ignorance. Concluding that something is true because (premise) it has not been proven false (or false because it has not been proven true). There is an appeal to what we do not know in the premise and this is used to conclude what we (allegedly) do know.

Argument Analysis: Reasoning. A type of hasty conclusion and hence a weak induction. The premise is relevant to the conclusion, but is insufficient to support the conclusion as a reliable belief. Make a case that this form of reasoning is a weak induction because it appeals to what we do not know as a justification for what we allegedly do know, and explain what kind of direct, positive evidence would be more convincing to establish the belief as a reliable belief.

Fallacies of Presumption

Our last group of fallacies we will call fallacies of presumption because, as do fallacies of questionable premise, they show that we should be cautious in accepting or presuming

the premises of an argument as always true or fair. However, unlike the fallacies of questionable premise they will not always have valid reasoning nor will the issue always be whether the premises are true.

Begging the Question

Begging the Question is a fallacy with valid reasoning, but the problem is not whether the premise is true, but whether any evidence at all has been given by the premise to support the conclusion. Another name for this fallacy is a *circular argument*. The reasoning is valid, but it goes in a circle: the premise slyly and unfairly assumes an answer to or a position in the premise on the very question that is supposed to be defended in order for us to accept the conclusion. In other words, the argument takes for granted in the premise in a deceitful way what is supposed to be proved in the conclusion. When one is able to see what is going on, the argument is no more than, "Believe X. Why? Because X is true."

In the march to war with Iraq, the Bush administration argued that it was very likely that Saddam Hussein would soon have nuclear weapons. In September of 2002, Vice President Dick Cheney claimed in a speech that the United States had "irrefutable evidence" that Saddam was rebuilding Iraq's nuclear weapons program. The basis of this claim was thousands of high-strength aluminum tubes that had been seized on their way to Iraq. These tubes could be used for uranium centrifuges and the basic processing of fuel for a nuclear bomb. But as the war approached, it became known that the intelligence community was divided on what these tubes were for, with the majority of weapons experts believing that the tubes were much too narrow and not durable enough for centrifuge use and that they were most likely for conventional artillery rockets in multiple-launch systems. (Iraq had a history of using such tubes for rocket systems.) Because many doubts had been raised about a war of necessity with Iraq when we were already in one war in Afghanistan, administration officials were asked by Congress to further justify the nuclear threat.

Here is the Senate testimony of Defense Secretary Rumsfeld in the fall of 2002 urging United States Senators to believe that Saddam Hussein had already developed or was very close to developing nuclear weapons.

Senator: "Secretary Rumsfeld, do we have any new evidence, a smoking gun, that Saddam Hussein has developed or is close to developing a nuclear bomb?"

Rumsfeld: "Once we see the smoke from a gun, it is too late. The gun has gone off. We need to act against Iraq before it is too late and Saddam gets nuclear weapons. It is not possible to find hard evidence that something is going to happen down the road because you will have known it happened only after it happens. It's very difficult to get perfect evidence before an event occurs or even after it occurs. Pre-emption requires only pre-evidence."

Notice that Rumsfeld was asked if the administration had any new evidence that Saddam

had developed or was close to developing nuclear weapons. He responded that it would be wise for us to take action "before it is too late." But that phrase implies that something major is going on and the issue was whether there was any new evidence that something major was going on. Rumsfeld "begged" the issue. He was asked for evidence and responded by assuming the conclusion he was suppose to provide evidence for.

Begging the Question fallacies are often the most difficult to analyze. Often a vague feeling of being the target of a convoluted trick is difficult to translate into an exact premise and conclusion. Here is a famous example.

5-7

God exists, because it says so in the Bible. And we know that the Bible is an authoritative source of information, because it was divinely inspired.

The conclusion of this argument is that God exists. One of the premises asks us to believe this because God's existence is a clear message of the Bible. But there are many other religious texts reflecting different cultural beliefs about different stories and types of Supreme Beings, and in original versions of Buddhism belief in God was viewed as an impediment to achieving Nirvana. Plus, for atheists belief in God is a myth. So how do we know that what the Bible says is more reliable than what these texts assert? The argument anticipates this objection, and the next premise claims that we can separate out the Bible as correct because its authors were "divinely inspired." But to say that the Bible was divinely inspired—that the people who wrote it had some special communication with divine thoughts—requires that some sort of divine being (God) exists with divine thoughts. The issue of God's existence is "begged," because the divine entity must be God. So the argument goes in a circle. It essentially claims that God exists, because the Bible says so, and the Bible is right because God inspired it. Essentially no more is said than "God exists, therefore God exists."

This argument is no different than my trying to persuade you that classical music is better than rock and roll, because intelligent people listen to classical music, and you can always tell which people are intelligent, because they are the ones who listen to classical music. Or, if I were to attempt to persuade you that a sure sign that intelligent life must exist elsewhere in the universe is that we have lots of problems on Earth (pollution, species extinction, overpopulation, ethnic wars, terrorism) and no life form has been stupid enough to visit us. The premise—we have not been visited by smart ETs who want nothing to do with messy human beings—assumes (begs) an answer to what is at issue in the conclusion: Do ETs exist? What is the independent evidence?

Here is an analysis of 5-7, followed by the essence/recipe for all Begging the Question fallacies.

5-7a

Conclusion: God exists.

Premise #1: Because it says so in the Bible.

Premise #2: What the Bible says is reliable because it was divinely inspired.

Label & Description: Begging the Question. The argument assumes or pre-states in one of the premises a position that we are asked to accept in the conclusion.

Argument Analysis: The premise is presumptive. The premise may or may not be true, but presuming it to be true would be a mistake because it assumes the main claim made in the conclusion that God exists to divinely inspire people. There is no independent evidence offered in the premises to support the conclusion that God exists. To say in a premise that the Bible was divinely inspired is already to commit to the claim that God exists. The argument goes in a circle, and no independent evidence is offered for the conclusion. The argument is valid, because if the premise about divine inspiration is true, then the conclusion that God exists would be true, but because the conclusion and the premise commit us to the same belief, we should not presume the premise is true.

5-7b

Conclusion: X is true.

Premise: Because Y is true (but Y already commits us to accepting X).

Label & Description: Begging the Question. The argument assumes or pre-states in Y a position on X.

Argument Analysis: The premise is presumptive. The premise may or may not be true, but because it is just a surreptitious assumption of the conclusion being true, it would be a mistake to accept it without some evidence for it. Describe what the premise implies and make a case that it already assumes the conclusion to be true.

Although all deductive valid arguments "contain" their conclusions in some sense, Begging the Question offers little but the conclusion. The conclusion is asserted in a disguised way in the premises. Substantive valid deductive arguments correctly stay on track by carrying out the implications of information and evidence. Such arguments involve a very creative process of putting together the right premises and finding the right chain of reasoning that goes somewhere interesting. They bring to our attention what we have committed ourselves to when we accept the beliefs stated in the premises. To see this, think of the difference between the blind man's (Chapter 1) and Eratosthenes' (Chapter 3) accomplishments and the following example.

Suppose I am the chief executive officer of a local electric company, and I am trying to get government approval to build a nuclear power plant. Opposing me is an environmental group called Life of the Land that opposes this particular plant. They claim that it will be extremely dangerous because of the region's geological instability, earthquake and tsunami potential, and the predominant wind patterns that would bring

radiation over most of the city if a nuclear accident occurred. When being interviewed by a local TV station regarding this controversy, I say,

5-7c

"I am not really against organizations such as Life of the Land, but I wish they would concentrate their efforts on helping people."

In making this statement I have "begged the question" at issue. The issue is whether or not the building of the nuclear power plant is beneficial to the people of the city—whether or not the trade off of cheap electricity is worth the potential risk. My position is that the potential risk is minimal and the building of the plant will be good for the people of the city. But rather than offer evidence for this conclusion, my statement just assumes it by claiming that anyone who is against my project opposes what is good for the people of the city. My statement amounts to no more than: "The project is a good project because it is good for the people of the city, and it is good for the people of the city because it is a good project."

The deductive accomplishments of the blind man and Eratosthenes are very different. Both discover and draw out for our attention the implications of accepted information. They are not just repeating an assumption hidden in the premises.

Complex Question

In Chapter 2 you were introduced to the concept of a rhetorical question, a question that implies its own answer by the context. If I were to say to my students a week before a big exam, "You don't want to fail to do your homework before the exam, do you?" I am really saying "It is very important to do your homework now with the exam approaching." We often find such rhetorical questions as appropriate parts of arguments because they are really declarative statements in disguise. However, there are apparent rhetorical questions that do not imply one declarative statement, but actually are complex in the sense that they are asking two questions disguised as one. When such complex questions become a premise in an argument, a **Complex Question** fallacy is committed. The premise then involves a complex question that cannot be answered with a straightforward yes-or-no answer without implying a mistaken conclusion.

Consider this example and its analysis, an argument between a father and son during the Vietnam War.

5-8

Son, "Dad, I've decided to fight the draft and oppose the war in Vietnam. I don't think the war is justified."

Father, "What?! Aren't you going to be a man and support your country?"

Son, "Yes, I mean no!"

Father, "What a coward."

5-8a

Conclusion: The son is not a man (with the courage to do what is right).

Premise #1: "Aren't you going to be a man and support your country?"

Premise #2: "No."

Label & Description: Complex Question. Premise #1 involves a complex question that cannot be answered with a straightforward yes-or-no answer.

Argument Analysis: The premise is presumptive. It involves more than one question: "Are you a man (with the courage to do what is right)?" and "Are you going to support your country?" The son is trapped into accepting a conclusion regardless if he answers yes or no. If he answers 'yes,' he implies that he has changed his mind and will support the war effort. If he answers 'no,' he implies that he is a coward and does not have the courage to do what is right. In either case the conclusion does not follow, because the question needs to be divided. The Vietnam War was very controversial and divided the country on whether the United States should have participated in what many claimed was a civil war. Many young people at that time thought that our involvement in Vietnam violated the very principles of democracy and self-determination our country was supposed to represent. The son's position was that he is not a coward, that the patriotic action to take was to oppose the war as not justifiable, and that the United States did not have the moral right to impose its will on another country.

Some other examples of complex question are:

Prosecutor to defendant: "Have you stopped beating your wife?"

Traditional husband to wife: "Why do you want a career? Aren't you going to stay home and take care of your children?"

Religious advertisement: "Where will your children spend eternity?"

Orange Juice Ad: "Have you had your orange juice today?"

See if you can identify the two questions being asked in each complex question. Later, in the exercises, you will be asked to give a complete Complex Question fallacy analysis for each one. Hint: With exception of the religious advertisement, think what each response implies if you were to answer yes or no. For the religious advertisement, what does the response, "I don't know" imply?

Here is the essence/recipe for all Complex Question fallacies.

5-8b

Conclusion: You accept, believe, or want to do Y (or Z).

Premise #1: Don't you accept, believe, or want to do X? (But X actually involves Y or Z.)

Premise #2: Yes-or-No answer.

Label & Description: **Complex Question.** Premise #1 is a complex question.

Argument Analysis: Presumption. It would be unfair to accept the complex question premise and hence the conclusion. The premise involves a complex question that cannot be answered with a straightforward yes-or-no answer without implying a mistaken conclusion. Make a case that the premise is a complex question by specifying what the two questions are (Y and Z) and showing that the question needs to be divided into two independent questions.

Ambiguity-Equivocation

Previously (Chapters 1 and 2), we saw that mistakes in reasoning can occur when the words used in premises are not precise in their meaning. We recognized that ambiguous phrases such as "the highest rating" can have two different meanings in a given context, and it was a mistake in the Dunlop tire advertisement to presume that only one meaning was intended. We saw that it was a mistake to infer from the technically true premise (Dunlop had been given the highest rating; it placed in the highest category) the conclusion that the Dunlop tire was better (another meaning of highest) than all major competitors. The following is an example of one version of an **Ambiguity-Equivocation** fallacy. In this version a word or phrase occurs in both the premise and the conclusion, but with different meanings:

5-9

Conclusion: The Dunlop SP-4 tire was the best (highest rated) radial tire of all major brands in the ***Car and Driver*** tire test.

Premise: Because it had the highest rating in the ***Car and Driver*** tire test.

You will be asked to finish the analysis of this argument in the exercises.

A lot of humor is based on deliberate equivocations, where language is used that is subject to two or more interpretations. Here are some examples from cartoons.

Peanuts

Charley Brown: "Lucy, if you miss one more fly ball, you've had it!"

Lucy: "If I'd had it, I wouldn't have missed it!"

Shoe

Senator Battison D. Belfrey: "And I'd like to introduce Trixie, my wife of 23 years."

Editor: "The Senator's been married 23 years?"

Cosmo: "*She's* 23, not the marriage..."

And some unintended humorous examples from politicians:

"What a waste it is to lose one's mind, or not to have a mind is being very wasteful." (Dan Quayle, former Vice President of the United States, Speaking to the United Negro College Fund, 5/9/89)

"Too many good docs are getting out of the business. Too many OB-GYNs aren't able to practice their love with women all across this country." (President George W. Bush, Sept. 6, 2004)

In the Peanuts example, the phrase "had it" has two meanings. When Charley Brown uses the phrase he means that if Lucy misses another fly ball, she is probably going to be kicked off the team or something else drastic. When Lucy uses the phrase she means catching the ball. In the *Shoe* example the Editor assumed that the phrase "my wife of 23 years" means to his amazement that the sleazy Senator has been married twenty-three years, but we find that the Senator meant a twenty-three-year-old wife. Like cartoons and humor in general, such deliberate equivocations are harmless and add to the gaiety of life.⁵

The same probably cannot be said about the Dan Quayle case. Since he was vice president of the United States when he made this statement, and a supposed role model of leadership and accomplishment for other U. S. citizens, the confused equivocatory nature of his statement is distressing. Quayle was trying to recall the United Negro College Fund's motto, "A mind is a terrible thing to waste," and probably trying to say something about the importance of self-actualization and the development of potential, of developing the full potential of the human mind regardless of skin color and ethnicity. However, the meaning of the word *mind* in the phrase "lose one's mind" is usually used to refer to someone being very upset or forgetful, or in extreme cases a mental breakdown. On the other hand, the word *mind* in the phrase "have a mind" is often used in deep

⁵ Equivocations can also be used to get our attention, such as in the advertisement from the Environmental Defense Fund supporting recycling, which showed a beautiful picture of our fragile Earth in space with the caption "**IF YOU'RE NOT RECYCLING, YOU'RE THROWING IT ALL AWAY.**" A little reminder from the EDF that if you're not recycling you're throwing away a lot more than just your trash."

philosophical discussions about whether human beings are more than just a physical body, whether they have a mind or soul that will continue to exist after the death of the physical body. Quayle also seems to be equivocating on *waste*. It is sad (a waste) for someone to lose one's mind (go nuts) and bad (wasteful) not to develop one's potential??? Go figure.

For Bush, he undoubtedly meant "love *for* women," rather than "*with* women," in the sense that gynecologists are dedicated to caring about the health problems of women. But even with this phrase, given the context Bush places it in, it could imply a sexual relationship with patients. Normally parents do not worry about the speeches of presidents being X or R-rated.

However, our focus in this section is not only on humor but on arguments that contain ambiguous or equivocal words or phrases. For instance, something is obviously wrong with this argument: "I'm a nobody. Nobody is perfect. Therefore I'm perfect." The word *nobody* is not used consistently. *Nobody* in the first premise means that the person is not important and has no name recognition compared to someone recognized to be important. *Nobody* in the second premise refers to all human beings. So, the link to the invalid conclusion is via a word that is not used consistently.

Even more common are arguments that not only use a word or phrase inconsistently, but the word or phrase occurs in both a premise and the conclusion with different meanings. Let's look more closely at the Archie Bunker examples given in Chapter 2. Archie commits two back-to-back Ambiguity-Equivocation fallacies. In his first argument he equivocates on the word "cheating," and in the second he confuses two senses of "honest." Here is an analysis of his first argument followed by the essence/recipe for all Ambiguity-Equivocation fallacies. The second argument will be left for an exercise.

5-9a

Conclusion: I'm (Archie) not cheating (by using hidden notes on the exam).

Premise: I'm supposed to give the right answers on the test, and it would be cheating if I don't, because it is cheating when you are supposed to give something to someone and you don't.

Label & Description: **Ambiguity-Equivocation.** Inconsistent use of the word "cheating" in the premise and the conclusion.

Argument Analysis: Presumption. We should not presume that Archie has offered any evidence for his conclusion that he is not cheating, because the word "cheating" is not used consistently in the premise and the conclusion. The use of "cheating" in Archie's premise does not have the same meaning that Gloria is using. He has not responded to Gloria's charge of cheating (the issue in the conclusion) in the sense that using hidden notes on an exam is cheating. In denying Gloria's charge, his use of "cheating" in the

sense of not giving something to someone does not answer Gloria's charge of the inappropriateness of using hidden notes on an exam.

5-9b

Conclusion: X is the case (using a particular word or phrase with meaning A).

Premise: Because Y is true (using the same word or phrase with meaning B).

Label & Description: Ambiguity-Equivocation. Using the same word or phrase (identify) in the premise and the conclusion but with an inconsistent meaning.

Argument Analysis: Presumption. Because the word or phrase used in the premise does not have the same meaning as the word or phrase used again in the conclusion, an illusion of evidence is created, but no evidence is actually supplied by the premise. Explain why it would be presumptive to accept the premise as evidence by identifying the word or phrase and explaining the two different meanings used in the premise and conclusion.

For a more serious example of Ambiguity-Equivocation consider the following use of sexist language.

5-9c

It is not true that the use of robotic space craft is better than manned space flight. Only manned space flight could accomplish the data gathering flexibility exhibited by the Apollo-Moon program. Therefore, we should allocate the resources for men to be astronauts.

The word *man* has different meanings in English. It sometimes refers to a single male, as in "The man was very tall," and sometimes to the entire human species, as in "Man has accomplished so much in recent years with new technology." In recent years a revolution in language use has taken place alongside changing attitudes toward women and minorities. A much more inclusive attitude has developed endorsing the wisdom of allowing all people to develop their potential. The above example reminds us that sexist language should be avoided because it leads to sexual stereotyping. Words such as *mankind*, *businessman*, and *chairman*, are being replaced with *humankind* (or the *human species*), *businessperson*, and *chairperson*. The fallacious nature of the above argument can easily be seen if we replace the phrase *manned space flight* in both premises with *human-piloted space flight*.

Women, however, can be equally guilty of such equivocations. Consider the feminist joke, "All men are animals, some just make better pets." Here we start with the generic *men*, meaning possibly human beings, and the generic *animals*, possibly meaning a biological category. But the sentence could also mean that all individual men exhibit behavior no better than wild animals. And then the second sentence says *some*, meaning some individual men, and refers back to the possible generic biological category of

animals in the sense that some animals can be pets.

Questionable Analogy

Analogical reasoning is a type of inductive reasoning that is often strong enough to provide us with reliable beliefs. If a friend of mine has a Honda Accord LX and she tells me that it has the particular internal mechanical features X, Y, Z, then it is a fairly reliable inference on my part that the next Honda Accord LX I see will also have these features. When I see the next Honda Accord LX and note its external features I infer that it must be "just like" my friend's Accord and must also have the internal mechanical features X, Y, Z. There might be a few things that are different between the two cars, but it will be a reasonable inference on my part to conclude that basically the cars are built the same. The strength of this inductive inference is based on a higher-order induction—our background knowledge on how cars are manufactured.

Creative and insightful analogies can also help us understand and put into perspective confusing events. When in 2010, the BP Deepwater Horizon oil spill in the Gulf of Mexico dragged on and on, producing devastating environmental damage to Gulf States, people wondered how this could happen. Why didn't the United States government and the BP oil company marshal the technology to stop the leak? People learned that the oil companies had very sophisticated technology and plans to extract oil from miles under the ocean, but unsophisticated plans in case anything went wrong. David Gallo, the director of special projects at the Woods Hole Oceanographic Institution, put the events, lack of a coordinated plan, and what appeared to be one Rube Goldberg failed attempt after another, in clear perspective by using an analogy: "Right now, it's like there's a fire and saying we'll be right there once we build the fire truck. Someone has the hose and someone else the tires."

However, analogies can also be used as hasty premises in the sense that they are offered as a creative comparison of two things with little or no evidence that the two are genuinely comparable. If the comparison is weak or false, we say someone is comparing "apples and oranges." When a weak analogy is used as a premise, a **Questionable Analogy** fallacy is committed. Consider the following letter to the editor during the Reagan presidency.

5-10

President Reagan's economic policies, which are supposed to solve our economic problems, are just like ancient practices of human sacrifice. Selected individuals were slaughtered at the altar to appease the gods and enhance the well-being of the majority. There is no difference between this and Reagan's policy, which gives large tax cuts to the rich and cuts government programs for the poor.

The implied conclusion of this argument is that Reagan's economic policies of the 1980s were bad for the country. The alleged goal of Reaganomics was to stimulate the economy by cutting government expenditures and taxes. This was supposed to put more

money into the hands of the wealthy and the middle class, making more money available for investment, unleashing creative entrepreneurial initiative, and creating more jobs for the middle class and the poor. In short, supporters of Reagan's policies argued that this approach would help the poor, not sacrifice them. Too much government is inefficient and it is better to let the free market create the creative conditions for economic growth.

The author of the above argument may be right that it did not help the poor, but instead sacrificed their needs in favor of the wealthy. However, no evidence was offered to support this claim, instead only a creative analogy was used comparing the treatment of the poor with the primitive practice of sacrifice. Critics of Reaganomics also disparaged this approach by calling it "trickle-down economics" (Ad Hominem). A better argument would cite possible statistics showing that the number of people classified as poor increased dramatically during the Reagan presidency, that most of the jobs created were low paying jobs, that the wealthy tended to keep their money and use it for other purposes than investment in new industries, and that budget deficits also increased, which placed a heavy burden on the present economy and future generations.

Analogies can be used to help us understand an argument by way of introduction or summation, but the bare analogy should not persuade us. The author of the above argument could use the above analogy to get our attention or to summarize a better argument that showed real negative effects on the poor.

For another example, a peripheral issue in the 2004 presidential campaign was the ethical stance the candidates took on stem cell research. John Kerry was for greater government funding for stem cell research. George W. Bush, as president, had approved some federal funding for stem cell research, but limited the funding to stem cell lines that had already been created and prohibited funding for the creation of new stem cell lines. Bush opposed the creation of further stem cell lines because it involved the process of destroying a developing human embryo a few days old. Even though stem cells showed enormous medical promise in the fight against aging and disease, Bush and his supporters argued that we should not start down the road of "killing" one human being to save another. According to Bush, this research was "at the leading edge of a series of moral hazards."

Kerry supporters argued that Bush was blinded by a personal religious ideology that many Americans did not share. Many people with loved ones suffering debilitating diseases did not believe that a bunch of cells no bigger than the dot at the end of this sentence was a human being and that the president had no moral right to impose his personal religious conviction on when a human life begins and interfere with medical attempts to save lives.

Bush supporters were arguing that the attacks on Bush were unfair as he was the first president to support federal funding for at least some stem cell research. But in a speech supporting Kerry, Michael J. Fox, former TV actor, Parkinson's disease patient and stem cell research activist compared President Bush's limits on federal research funding to giving someone a car without any gas. He said, "But he's congratulating himself on giving us the car, so we sit there stuck. . . . One doesn't have to be cynical to take a dim

view of that and be frustrated by that." Fox's use of the car analogy helps us to understand his frustration and moral outrage, but by itself it does not support a moral conclusion on a very complex issue.

In May of 2003, at the urging of the Bush administration, Congress began the process of repealing a 1994 law that prohibited the United States from producing low-yield nuclear weapons. The Bush administration wanted to build a new type of nuclear weapon, a Bunker Buster (Robust Nuclear Earth Penetrator). These so-called "mini-nukes" would be able to destroy hardened bunkers buried deep underground where weapons of mass destruction could be hidden. But this occurred at a time when nuclear proliferation (North Korea and Iran appeared to have or soon would have nuclear bombs) and the possibility of terrorists getting their hands on poorly secured nuclear weapons. This prompted the Director General of the International Atomic Energy Agency, Dr. Mohammed el-Baradei, to compare the United States to "some who have continued to dangle a cigarette from their mouth and tell everybody else not to smoke." As an introduction to a more specific argument, this analogy surely could serve as an attention-getting device that should engender considerable critical thinking about the wisdom and consistency of United States efforts to keep nuclear weapons from spreading. What message was the United States sending to the rest of the world if it decided to build a new type of nuclear weapon?

The point is, if we claim that X is like Y, we should be able to justify that this is so because they share some characteristics A, B, C. Thus, it is the substantiation that both X and Y do have characteristics A, B, C that should persuade us. Did the poor get poorer under Reagan's policies? Was Reaganomics the cause? Did more people become poor because of Reaganomics? Did the rich prosper? Was there a conscious effort to sacrifice the poor for the betterment of some and their niche in the economy? Was the funding of only some stem cell research comparable to a car with no fuel? Was the limited funding virtually useless? Was it severely limiting worthwhile medical progress? Were there good reasons that the new nuclear weapon should be treated as an exception?

Here is an analysis of the Reagan argument followed by the formal essence (recipe for analysis) of all Questionable Analogy fallacies.

5-10a

Conclusion: Reagan's economic policy is wrong.

Premise #1: Reagan's policy is just like ancient practices of human sacrifice. It sacrifices the poor to enhance the well-being of the majority. There is no difference between the ancient practice of human sacrifice and Reagan's policy, which gives large tax cuts to the wealthy and cuts government programs for the poor.

Premise #2 (implied): A policy of human sacrifice is wrong.

Label & Description: Questionable Analogy. A weak analogy was used in the premise; Reaganomics was compared to ("just like") the ancient practice of human sacrifice.

Argument Analysis: Presumption. A creative analogy was used in the premise, but it would be unfair to presume that this was evidence for the conclusion. Although the use of the above analogy can be used to help others understand the author's sentiments about the Reagan economic policy that cut funding for government programs for the poor, it did not provide evidence that Reagan's policy was not working. Reagan claimed that his policies would benefit all the people by producing a healthier economy and more jobs. Evidence should have been introduced to show that this was not true. Furthermore, there are at least some obvious differences between the two things being compared that weaken the above analogy. No one was literally murdered (slaughtered) under Reagan's policies. And no evidence was introduced showing that there was a conscious policy of sacrificing the poor for the betterment of the wealthy and the middle class.

5-10b

Conclusion: X is bad (Or, X is good.)

Premise #1: X is just like Y.

Premise #2: Y is bad (Or, Y is good.) (usually implied)

Label & Description: Questionable Analogy. A weak analogy is used in the premise (indicate what is being compared to what).

Argument Analysis: Presumption. Just because a creative analogy is used in the premise we should not presume that evidence is offered for the conclusion. By way of summation or introduction, creative analogies can help us understand an argument, but unless the characteristics of similarity are discussed and justified, bare analogies should not be considered evidence. Critique the specific analogy. Indicate what evidence is left out that would make the analogy stronger. Indicate how the two things being compared are dissimilar.

To repeat, the use of an analogy as a conclusion (rather than a premise) is a type of inductive argument and not all analogies are inappropriate or weakly supported. A strong case can be made that two things really are similar by demonstrating in detail a representative sample of the characteristics they have in common. But we should not presume that such a demonstration has been made just because a creative comparison is offered. Consider another example.

Jerry Falwell, one time leader of a group called the Moral Majority, once claimed that giving teenagers free condoms was like giving "cook books to people at fat farms." We can imagine what might happen to people who are trying to lose weight being given cook books that detail, complete with sumptuous pictures, how to cook gourmet meals. We can imagine that their dieting discipline might suffer. But imagining that their discipline will

suffer is not evidence that their discipline will suffer. Furthermore, Falwell has given no evidence to support his comparison that if we give free condoms to teenagers, their discipline will similarly suffer, or that the benefits of giving free condoms to teenagers will not far outweigh the potential problems. He has not cited any actual studies that show giving free condoms increases teenage sexual activity beyond what it would be anyway. His creative analogy is another example of a "hand-waving" excuse not to test an important claim. Are the two things being compared truly similar? Are all teenagers sexually obsessive to the same extent as compulsive eaters? Isn't there a major difference between adults at a specific facility (a weight reduction site) with a specific goal and teenagers in the general population with many different interests and involvements? Perhaps not. Maybe Falwell's basic claim is correct. But do we know? His claim could be tested and the analogy possibly supported as a reliable inductive generalization, but only if we let the world of experience speak. But if we presume his analogy is an acceptable premise offering evidence, we would be cutting ourselves off from exactly the type of reasoning necessary to gain a reliable belief about an important matter.

Besides being another excuse for not testing beliefs, weak analogies are persuasive because many people accept only what they understand, and analogies do help us understand a person's argument. But understanding an argument should be separated from judging that argument. Although we should understand an argument before we judge it, we should be able to understand many arguments and beliefs that we do not accept. Falwell's analogy helps us understand his claim, but we don't have to accept his conclusion just because we understand his argument.

Due to its popularity, many people in the United States understand sports. So, in general sports enthusiasts know what it means when one claims that it is better to play offense than defense. After 9/11 many people fully supported the general foreign policy that the United States should "play offense" against terrorism, to take preemptive military efforts to kill terrorists and disrupt their organizations, and not wait until they attack again on American soil. But if we claimed that attacking Iraq was just like playing offense in sports, critics of this war could claim that we are comparing apples to oranges. Was Iraq a central focus in the war against terrorism, or was it, as John Kerry argued in the first presidential debate of 2004, a "serious diversion" from that effort? Just understanding the sports analogy does not help us decide this complicated matter.

Furthermore, there may be many beliefs that are true that we have a hard time understanding. For instance, as human beings with goals and consequent purpose to our actions to achieve these goals, we will have a hard time understanding how it could be possible that the universe may be here for no reason, that it may be here for absolutely no purpose, that it and our existence are just accidents. We may have a hard time imagining this possibility, but it could be true. Because we think this way, we are easy prey for someone who offers us the argument: "Believing that God does not exist and that the universe is here for no reason is like believing that a building collapsed for absolutely no reason." Understanding this analogy is not proof that there is a God and a purpose to life.

Perhaps anyone who is not a theoretical physicist will have a hard time believing that the universe was created from absolute nothingness. The human mind seems to naturally believe that all events must have a cause. But reality need not conform to the way our minds work. Today, modern physicists have constructed well-supported scientific theories that deny that every event has a cause and propose that the universe could be created from a kind of nothingness. Below, the noted science author Jonathan J. Halliwell attempts to describe this situation in a *Scientific American* article. Note his liberal use of analogies (tunneling, fuzz) to help us understand these difficult concepts.

"Perhaps then, the universe has tunneled from 'nothing.' The evolution described by inflation and the big bang would have subsequently occurred after the tunneling. . . . The picture that emerges is of a universe with nonzero size and finite (rather than infinite) energy density appearing from a quantum fuzz."⁶

Suppressed Evidence

Our last fallacy is a special case. The fallacies that we have looked at thus far involve persuasive tricks either in the reasoning or the premise. It is also possible to select evidence in a special way such that although the evidence is true and offers a relevant supporting reason for the conclusion, we still should not accept the conclusion because special information associated with accepting the conclusion is omitted.

In the fall of 2004, Democrats ran an advertisement attacking Vice President Dick Cheney.

"As vice president, Dick Cheney received \$2 million from Halliburton. Halliburton got billions in no bid contracts in Iraq. Dick Cheney got \$2 million. What did we get? A \$200 billion dollar bill for Iraq. Lost jobs. Rising health care costs. It's time for a new direction."

Before he was vice president, Cheney was the chief executive of Halliburton. It is true that Cheney received just under \$2 million from Halliburton after the election in November 2000, but nearly \$1.6 million of that total was paid before Cheney (Vice President Elect) actually took office on Jan. 20, 2001, and all of the money was earned by Cheney before he was a candidate for vice president and much before the Iraq War and Halliburton's involvement in that war.

The advertisement by the Democrats told the truth about Cheney receiving a substantial amount of money from the politically unpopular company Halliburton, but they omitted the fact about the timing of the compensation.

In the 1996 presidential election, Republican candidate Bob Dole had slipped significantly in the polls after he made a foot-in-the-mouth comment essentially stating that nicotine had not yet been proven addictive by medical science. Dole had been

⁶ Jonathan J. Halliwell, *Scientific American*, Dec. 1991, Vol. 265, NO. 6, pp. 84, 85.

criticized for accepting large amounts of campaign donation money from the tobacco companies. Attempting to regain ground, Dole charged in a speech that the Clinton presidency was too lax on drug law enforcement. As evidence Dole charged that since Clinton has been in office, heroin use amongst teenagers had doubled! A frightening charge that would surely show up on the front pages of major newspapers. Later, however, in the back pages of newspapers, follow-up stories appeared that discussed the criticisms of statisticians, who noted that the so-called “doubling” was from .04% to .08%, and that given the small number of teenagers who had experimented with heroin, this result was probably not statistically significant. In other words, it could be a mere sampling error.

A Suppressed Evidence fallacy is an argument that is valid or appears to offer a strong, relevant, and true premise for its conclusion, but omits an important fact that when known makes a major difference in how we ought to view the conclusion.

To take a simple example, an old Crest commercial urged people to buy the toothpaste because it had fluoride. It was true that Crest had fluoride, and, based on reliable scientific studies, that was a good reason to buy it, because fluoride prevents tooth decay. What was missing in this commercial was the simple fact that many other types of toothpaste also had fluoride in them. So, a reason to buy Crest rather than one of the other toothpastes was not provided. Information was omitted that would make a significant difference on the persuasiveness of the argument for Crest.

Many advertisements use this technique. Technically they do not make false claims. The premises in isolation from an important fact or two do appear to give a good reason to buy the product. But the reasons offered are slanted in such a way that even though the premises are true and the reasoning valid or reliable, a key fact is omitted that would change our perspective on the force of the premises.⁷

A popular approach in early TV advertising was to use what is called the **Brand X** technique. For instance, in attempting to use the rational force of a controlled study, two sets of identical shirts would be washed in separate washing machines. One would have Tide detergent and the other Brand X. After washing, the Tide shirt would of course appear cleaner, thus giving us a good reason to buy Tide rather than Brand X. But what was Brand X? Was it one of the major competitors of Tide? Laundry soaps are not all the same and they do improve over time. What this commercial did was compare Tide to an older detergent that was no longer on the market. Similarly, an old Shell gasoline commercial urged us to buy Shell gasoline because it contained Platformate, a special ingredient that would give greater gas mileage. The commercial showed two cars being given the same amount of gasoline, one with Platformate and one without, and then being driven down a road at the same speed. It ended in a dramatic fashion with the car without gasoline containing Platformate running out of gas and the Shell car continuing until it broke through a paper barrier with the Shell logo on it. What we were not being told is that the other car also contained Shell gasoline but with the Platformate removed, and

⁷ Other common examples are: Buy Sanka coffee; it's decaffeinated. (Other brands also sell decaffeinated coffee.) Bank at Bank of America, because equity loans are offered. (So do almost all major banks.)

that all the gasoline competitors of Shell had similar mileage ingredients added to their gasoline.

As we saw above with the Cheney advertisement and Dole charge, suppressed evidence is also a favorite technique used by politicians, because it does not involve lying but does require knowledge (to understand the slanting and spin) that the average person will not have. In the 2004 election, the Republicans were equally guilty of suppressed evidence in spinning the numbers on job creation. In the 2004 vice presidential debate, Dick Cheney noted that with President Bush if office, "We have added 1.7 million jobs to the economy."

But by the time of the election that year George W. Bush was the first president in 70 years to lose jobs overall. There were approximately a million fewer jobs than when Bush took office. The Bush administration had forecast that 7 million more jobs would be created by then, if his massive tax cuts were enacted. They were enacted. Almost 2 million jobs (1.7) had been added from the low point of the recession in 2002, but overall over 3 million jobs were lost. So, Cheney could spin the truth around the fact that there was a net loss of about a million jobs during the Bush first term.

Republicans had used a similar negative spin on jobs in the 1988 election. That year, in the presidential campaign, then-Vice President H. Bush attacked the economic record of Michael Dukakis, then governor of Massachusetts. As part of a speech, Bush charged with dramatic emphasis the following.

5-11

"Under my opponent, Massachusetts has lost—lost—twenty-six thousand jobs since 1983, more than any other state in the country."

In this speech Bush was attempting to counter the Dukakis strategy of pointing to the economic turnaround of the state of Massachusetts during his tenure as governor. Dukakis claimed that if he could lead Massachusetts through an economic transformation from a backward economic focus with reliance on out-of-date and globally noncompetitive manufacturing jobs to a high-tech, globally competitive, new industrial structure based on robotics and computer technology, he could do the same for the nation. Bush implied that no such Massachusetts economic miracle had occurred and that Dukakis was not fit to be president. So how could Dukakis claim that he had been a good governor and that the economy had improved in his state, if his state had lost twenty-six thousand jobs? Was Bush lying? Bush was not lying, but awareness of an important fact suppressed by Bush would have made a very big difference in the persuasive force of his premise. The state had lost approximately twenty-six thousand **old** industrial manufacturing jobs. But according to federal figures Massachusetts had gained more than 230,000 new industry jobs in the same time period!

Here is a complete analysis of Bush's argument followed by the essence/recipe all Suppressed Evidence fallacies.

5-11a

Conclusion: Michael Dukakis has not been a good governor for the state of Massachusetts.

Premise: Since he has been governor, his state has lost twenty-six thousand jobs.

Label & Description: Suppressed Evidence. Although the premise was true and would have been a good reason for accepting the conclusion in isolation, an important fact was suppressed.

Argument Analysis: Presumption. We should not presume that the premise offers a good reason to accept the conclusion because this argument involved suppressed evidence. Although the premise was true and in isolation offered a good reason for accepting the conclusion, the argument omitted the fact that during the time Dukakis was governor his state had gained 230,000 new industry jobs. Because Dukakis was claiming that he had helped turn his state's economy around with policies that encouraged the establishment of such new industries, this fact would now seem to support Dukakis's claim. Bush had unfairly slanted his argument by selecting a fact that appeared to support his conclusion while omitting a fact that would change our perspective on the persuasiveness of his argument.

5-11b

Conclusion: Accept X.

Premise: Because Y is true.

Label & Description: Suppressed Evidence. Although Y is true and would be a good reason for accepting X in isolation, Z (an important fact) is suppressed.

Argument Analysis: Presumption. Argue that although Y is true and offers a good reason to accept X in isolation, an important fact, Z, has been omitted. Describe Z and explain how it should change our perspective on the persuasiveness of the argument.

Note that in charging Suppressed Evidence it is not sufficient to simply claim that there is another side to the story or that some fact may be suppressed. Whatever fact is being suppressed must be known and described, and then used as part of a counter argument showing how our perspective of the persuasiveness of the original argument should change. Also, the Suppressed Evidence fallacy is reserved for cases where one or only a few facts have been omitted. Every discussion that involves a complicated situation can of course produce different points of view. An argument that supports only one point of view is not necessarily suppressed evidence. A charge of Suppressed Evidence fallacy is reserved for the relatively focused cases where a few facts have been omitted. Because every argument is guilty to some extent of not providing all the possible available

evidence—if for no other reason than we never know all the facts in an imperfect world, and it is never the case that all the facts are "in" so to speak—it would not be fair to charge an argument with suppressed evidence simply because there may be something not considered by the argument. Given any situation there is always more to discuss and every argument would be a fallacy if we did not acknowledge that this is appropriately so. That we live in an uncertain world and that all arguments are fallible, that we must place our bets based only on reliable evidence, should not be confused with specific cases of identifiable suppressed evidence.

Let's conclude this chapter with an important warning. Students will often confuse Suppressed Evidence with Straw Person. Remember this key difference: The premise for Suppressed Evidence is true; the premise for Straw Person is false. Are these examples potential Suppressed Evidence or Straw Person appeals?

1. After the first presidential debate in 2004, President Bush said that John Kerry "would prefer the dictatorship of Saddam Hussein to the situation in Iraq today, I strongly disagree." Kerry never said that. In a speech at New York University a few days earlier, he called Saddam "a brutal dictator who deserves his own special place in hell." He added, "The satisfaction we take in his downfall does not hide this fact: We have traded a dictator for a chaos that has left America less secure." Bush contended also that Kerry had once supported removing Saddam Hussein from power but now "says it was all a mistake."
2. During this same election campaign, Democratic campaign manager Mary Beth Cahill accused President Bush of having "no plan to get us out of Iraq" and thinking "the future of Iraq is brighter than the future of America." What Cahill was referring to is a statement President Bush had made about a poll "that said the right track/wrong track in Iraq was better than here in America." In other words, the president claimed to have seen a poll that was remarkable, that the people of Iraq were more optimistic about their country being on the right track than were the people of the United States. The president's point was that some people in the United States needed to be more optimistic that its foreign policies would work given time.
3. In the run-up to the 2004 presidential elections, Democrats charged that more jobs were lost while George W. Bush was president than during any other presidency in recorded history. While it was true that nearly 3.3 million "private-sector" jobs disappeared between the peak of employment in February 2001 and the depth of the job slump in August, 2003, and that was the highest number of private-sector jobs lost during any slump since records first were kept, this number is partly due to population growth, not to the severity of the economic downturn. When population growth is taken into account, measured as a percentage of peak employment, Bush's job loss was just over 2% of all jobs and broke no record. Plus, not only did the Democrats not include the economic impact of 9/11, but their claim failed to note the substantial growth in "public-sector" jobs, such as the 50,000 federal airport security screeners hired for the Transportation Safety Administration, replacing low-wage contract employees.

You will be asked to give a complete analysis of these arguments in the exercises.

Key Terminology

Fallacies of Questionable Premise – focus is on the premise being false, questionable, or unfair, not the reasoning.

Slippery Slope
Questionable Dilemma
Straw Person

Fallacies of Weak Induction – focus is on the weak inductive reasoning, not the truth of the premises. Premises are relevant to the conclusion.

Hasty Conclusion
Questionable Cause
Appeal to Ignorance

Fallacies of Presumption – focus is on the premises being unfair in the specific manner relevant to the fallacies below.

Begging the Question
Complex Question
Ambiguity-Equivocation
Questionable Analogy
Suppressed Evidence

Concept Summary

In this chapter we covered fallacies that are (1) valid but have questionable premises in terms of their truth status, (2) fallacies whose premises are relevant and probably true but are weak by inductive standards used to establish reliable beliefs, and (3) fallacies where the premises may not be false but are presumptive in some way.

The fallacies of questionable premise play upon the natural fear and uncertainty generated by living in a complicated world. **Slippery Slope** offers a chain of possible events in one or more of its premises, but cites no evidence for why we ought to accept such controversial premises. **Questionable Dilemma** simplifies our choices to a black-and-white situation in its premise, but a little reflection reveals that the world and our choices are more complicated than that offered by this premise. **Straw Person** also appeals to our desire to have uncomplicated choices by offering a simplified, but distorted and exaggerated description of an opponent's position.

The fallacies of weak induction take advantage of the fact that many of our beliefs are generalizations from particular experiences, but they also take advantage of the fact that human beings have a tendency to be epistemologically lazy. That is, we want "quick"

beliefs and often do not have the patience to submit our generalizations to the inductive rigor of establishing them as reliable beliefs. **Hasty Conclusion** jumps to a generalization from only one or a few positive particular cases of the generalization and does not offer sufficient evidence that would give us a reliable reason to believe the cases are representative. **Questionable Cause** infers a very important and strong conclusion—a causal connection between two events—but offers only a basic minimum of evidence in the premise for such a conclusion—a time sequence of those events. **Appeal to Ignorance** takes advantage of the fact that if we have not shown a belief to be false (or true), it could possibly be true (or false). But instead of inferring from this lack of knowledge to the appropriate conclusion that more investigation is needed, it hastily jumps to the conclusion that we know something to be true, because of our lack of certainty that it is false, or that we know something to be false, because of our lack of certainty that it is true.

Finally, fallacies of presumption have premises that may be true but the premises are presented in a slanted or unfair way. **Begging the Question** surreptitiously assumes the conclusion, so it offers no evidence for the conclusion and only argues in a circle. **Complex Question** offers two or more questions in a key premise disguised as one, such that the question cannot be answered with a yes or no answer without implying an unfair or unintended conclusion. One version of **Ambiguity-Equivocation** uses a word or phrase in the premise that also occurs in the conclusion, but the meaning of the word or phrase in the premise is not consistent with that of the conclusion. **Questionable Analogy** takes advantage of the fact that analogies are often used as attention-getting devices and as an inductive strategy for arriving at reliable beliefs. But there is a difference between an analogy presented as part of a complete argument and an analogy used as premise only. Analogies as part of complete arguments present a representative sample of similarities between two things in the premises and then generalize reliably that the two things being compared are similar. Analogies as persuasive fallacies present a quick creative comparison of two things without offering a detailed or representative sample of similarities of the two things being compared. In the latter case we should not presume that evidence has been offered just because the analogy may help us understand the argument's claim. Evidence still must be presented that the claim is true. Finally, **Suppressed Evidence** shows that we should not presume that a good argument has been presented even if the premises are true and offer a good reason for accepting the conclusion. The premises may be true and in isolation offer a good reason for accepting a conclusion, but our perspective on the persuasiveness of the premises can change if we find out that an important fact has been omitted.

Exercises



EXERCISE I

Indicate whether the following are true or false.

1. Logicians have identified twenty informal fallacies, and any bad argument can be identified as one of these fallacies.
2. All fallacies of weak induction have premises that are at least relevant to the conclusion.
3. *Once an argument has been identified as a fallacy, the belief contained in the conclusion should not be accepted by any rational person, because we know that the conclusion is false and that it cannot be strengthened with another argument.
4. The fact that we should avoid hasty conclusions does not mean that we should avoid all creative generalizing and hypothesizing.
5. The Slippery Slope fallacy is similar to the Questionable Cause fallacy. Both make a causal connection claim in the conclusion.
6. *It is not fair to charge someone with committing a Questionable Dilemma fallacy without at least making a tentative case for a third alternative.
7. A Complex Question fallacy is any argument that has a question in its premises, and it is a bad argument because premises should be declarative sentences, not questions.
8. The main problem with the Begging the Question fallacy is that the argument is always circular.
9. *Analogies are helpful in understanding arguments, but we must be careful in how we use them as evidence. Understanding an argument is not evidence that the argument is strong.
10. A Suppressed Evidence fallacy is committed whenever all the points of view of an issue are not discussed or when all the facts have not been found.
11. An Appeal to Ignorance fallacy is a type of weak induction.
12. A Suppressed Evidence fallacy has a false premise and a Straw Person fallacy has a true premise.
13. To make a solid case for a Questionable Cause fallacy it is necessary to draw attention to the weak induction by indicating alternative time-sequences and alternative possible causes.
14. The problem with irrefutable beliefs is that there is no way to test them when they clash with each other.
15. The only purpose for criticizing arguments and identifying fallacies is to make sure that we don't believe in false beliefs.

Exercise II

Give a complete written analysis similar to that provided in the text for the following Chapter 5 fallacies. Use the same format as that in the text: Conclusion, Premise(s), Label and Description, and Argument Analysis. Be sure to provide and develop the appropriate focus in the argument analysis section. Hint: Use the recipes as a guide for each analysis.

1. Conversation:

Bob: "If it wasn't for the demonstrations and protests by college students and liberals against the Vietnam War during the late 1960s and early 1970s, we would have won the war."

Sam: "How do you know that?"

Bob: "Before the demonstrations and protests against the U.S. military involvement in Vietnam, we were winning the war. After they started, we began to lose."

2. Argument by Daniel Brent, U.S. Attorney opposing a program that would give sterile needles to drug addicts as a measure to control the spread of AIDS:

"We should not support this program, because if drug addicts who have not been mainlining (because of their fear of AIDS) get clean needles they will try intravenous use. If they get addicted to intravenous use, then when they can't get clean needles, they will use dirty ones and put themselves at risk for AIDS. Supporting this program will backfire, actually leading to an increase in intravenous drug use and the spread of AIDS."

3. *During the early years of the Reagan administration, troops were sent to Lebanon to help establish peace between the Islamic and Christian factions fighting for control of Beirut. Reagan vowed that the United States would not be intimidated by terrorists, but after three truck bombings, one of which killed 250 soldiers, the United States withdrew its troops. Here was President Reagan's response to a question regarding why we did not have better security by the time of the third bombing, the bombing of the U.S. embassy.

"Anyone who has ever had their kitchen done over knows that it never gets done as soon as you wish it would."

Assume that Reagan's reference to having a kitchen remodeled was a reference to security plans that did not get into place as fast as the Reagan administration had hoped. Assume that Reagan was offering a reason for the conclusion that poor security that led to the success of the truck bombings was understandable and

defensible.

4. Advertisement (1991) for Lean Cuisine frozen dinners.

"Of all the things we make, we make sense! There are some things we skimp on: Calories. Fat. Sodium. With less than 300 calories, controlled fat and always less than 1 gram of sodium per entree, we make good sense taste great."

Note: The salt content in food is normally referred to in milligrams. One gram is equal to one thousand milligrams. In response to criticism from the Federal Trade Commission, Lean Cuisine dinners now contain no more than 600 milligrams of sodium. Shortly after this advertisement appeared in the early 1990s, the Federal Drug Administration issued rules on package labeling in compliance of the National Labeling Education Act. For salt content, "low salt" was to mean "less than 140 milligrams of sodium."

5. Argument by Archie Bunker on the sex drive of retarded people.

Archie: "Retarded people have an abnormal sex drive."

Mike: "That's a myth!"

Archie: "Oh yeah, then why are you on automatic all the time?"

Although Archie's final argument is a hasty conclusion -- that because one person he knows (Mike) is (allegedly) mentally retarded and has a abnormal sex drive ("on automatic all the time"), therefore all retarded people are this way -- Archie seems to be using another fallacy against Mike: That he is mentally retarded because he has an abnormal sex drive and he has an abnormal sex drive because he is mentally retarded. Analyze the latter argument.

6. In April 2003 the Supreme Court was set to rule on a case that eventually overturned a Texas sodomy law. Just prior to the ruling Senator Rick Santorum, Republican, Pennsylvania, said in an interview,

"If the Supreme Court says that you have the right to (homosexual) sex within your home, then you have a right to bigamy, you have the right to polygamy, you have a right to incest, you have the right to adultery. You have the right to anything."

Assume that Santorum's implied conclusion is: **"The Supreme Court should not say that you have the right to (homosexual) sex within your home."**

7. Letter to the editor defending Lt. Colonel Oliver North during his 1989 trial for breaking government laws by diverting money from arms sales to Iran to the Nicaraguan Contras.

"It seems to me we must either support the causes of dedicated men like Lt. Col. Oliver North who are champions of the principles of freedom and equality or allow our country to be taken over by the wimp liberals, homosexuals, and Gorbachev lovers. I am confident that Americans know the evil consequences of the latter choice. So, let's support North and the other defendants in the Iran-Contra trials."

8. During the 1988 presidential campaign, then-Vice President Bush attempted to portray his opponent Michael Dukakis as weak on military defense issues, as one who would dismantle the U.S. military at a crucial time in our struggle to end the cold war. According to Bush, one of the reasons that Dukakis should not have been supported was because he has "opposed every new weapons system since the slingshot."

Note: As a democrat it is true that Dukakis was in favor of cutting military spending in favor of better domestic programs and reducing the trillion dollar deficit produced by the Reagan administration. Dukakis was also against the Star Wars nuclear shield to be placed in outer space. But he supported the Stealth bomber, the D5 sea-launched ballistic missile and Trident II submarine, the M1 tank, and the F15 and F16 jet fighters. FYI: At the Republican National Convention in 2004, keynote speaker Zell Miller made similar charges against the Democratic nominee for president, John Kerry. After listing similar weapons systems that Kerry had voted against, he said: "This is the man who wants to be the Commander in Chief of our U.S. Armed Forces? U.S. forces armed with what? Spitballs?"

9. *In September of 1991 a consumer group charged that the Federal Drug Administration made a mistake in approving the drug Prozac, widely prescribed for treatment of depression. The group claimed that it was a dangerous drug that sparked suicidal impulses and should be banned. Suppose as evidence of this claim the group cited the case of a woman who had terrifying nightmares, headaches, forgetfulness and anxiety three days after she began taking the drug. That during that period she tried to kill herself with a gun, but her husband stopped her before she could pull the trigger. She was on the drug for three weeks, and all suicidal impulses disappeared when she stopped taking the drug. Suppose the consumer group was concluding from cases like these that all people risk suicidal impulses if they take this drug.

Note: By this time the drug Prozac had been prescribed for more than 3 million people in the United States, and 5 million people worldwide. Also, 15 percent of untreated depressed patients commit suicide, and depression is a major cause of

suicide. This drug and related ones continue to be controversial. Critics claim the drugs in general do not work better than placebos.

10. Science cannot prove categorically that the theory of evolution is true. Therefore, any scientist who accepts it is doing so on faith alone.

11. Analyze this argument:

Attacking Iraq and the war with Iraq were justified. We know this is so, because it is just like a baseball game except with the tables reversed. We would rather play this as an away game instead of a home game. If we are not going to fight terrorism there, we are going to have to fight it here at home.

Note: Critics of the war with Iraq did not question the basic premise that we had to fight terrorism abroad and seek out and destroy terrorists before they hurt us in the United States. They claimed that the issue was whether the war with Iraq was a fight against terrorism and the real threat to our country or was it a serious diversion from that war in terms of resources and world-wide support and cooperation needed to fight bin Laden and Al Qaeda in Afghanistan. The war may have been a trillion dollar mistake, significantly hurt our economy, and weakened our efforts against terrorism. Worth noting: A 2011 report by the Watson Institute at Brown University (*The Costs of War Since 2001: Iraq, Afghanistan, and Pakistan*) concluded that the two wars with Afghanistan and Iraq, plus counterinsurgency efforts in Pakistan cost \$4 trillion. The report also estimated a \$1 trillion cost for health care over 30-40 years for injured soldiers, and 225,000 civilian and soldier deaths. These costs did not take into account the billions of dollars in reconstruction costs for Afghanistan and Iraq.

12. As a prelude to the 1992 presidential election, the Democrats charged that President Bush was insensitive to domestic issues. As evidence of this they cited Bush's threatened veto of legislation to extend jobless benefits for twenty 20 more weeks for unemployed Americans. The Democrats claimed this bill was badly needed because every month three hundred thousand unemployed Americans were seeing their jobless benefits expire due to a long recession.

According to Bush, he vowed to veto the bill because its \$6.1 billion cost was too high and the recession was almost over. At a Republican fund raiser Bush said that the Democrats' bill was "garbage," and that "We want to help people, but also we want to see that what we do is fiscally sound."

House Democratic leader Richard Gephardt of Missouri responded, "This is the president's domestic agenda: mingling with the millionaires, raising campaign funds, calling the recession no big deal, and referring to unemployment benefits

as garbage. Unemployment compensation isn't garbage Mr. President, and neither are the people who need it."

Analyze Gephardt's argument.

13. Reverend Jerry Falwell, founder of Moral Majority on abortion... "Calling the abortion issue a question of freedom of choice is ridiculous. 'Freedom to kill' is more appropriate. It's like a bank robber saying, 'I have freedom to break safes, and I want my freedom.'"

14. Analyze Archie's second equivocation fallacy ("being honest") from Chapter 2.

15. Recall the Rumsfeld Senate testimony on Iraq and nuclear weapons in this chapter.

"Once we see the smoke from a gun, it is too late. The gun has gone off. We need to act against Iraq before it is too late and Saddam gets nuclear weapons. It is not possible to find hard evidence that something is going to happen down the road because you will have known it happened only after it happens. It's very difficult to get perfect evidence before an event occurs or even after it occurs. Pre-emption requires only pre-evidence."

Analyze this interpretation of his argument.

There is evidence that Saddam has developed or is very close to developing nuclear weapons. Because we can't wait until we see the results (smoke) of his development of nuclear weapons.

16. In Richard Wright's novel *Native Son*, a black man has been arrested and is on trial for the murder of a daughter of a wealthy Chicago family. The evidence against him is purely circumstantial: As the family's chauffeur he was allegedly the last one to see the girl alive when they dropped off her boyfriend at his apartment. The girl's burnt bones were found several days later in a basement furnace, and the black man's other job was to keep the furnace stocked with fuel to heat the family's mansion. Here is a key exchange between the Prosecutor and the boyfriend at the trial.

Prosecutor: "What time did they pick you up?"

Boyfriend: "About 7:30."

Prosecutor: "The negro chauffeur was driving?"

Boyfriend: "Yes."

Prosecutor: "And what time did you get dropped off by the drunken negro chauffeur?"

Boyfriend: "About 11:30."

Prosecutor: "So you left her alone with the drunken negro chauffeur about 11:30?"

Boyfriend: "Yes, but ..."

Prosecutor: "Thank you, that will be all."

Hint: How many questions is the Prosecutor asking in his third question?

17. Argument in the 1970s in favor of legalizing marijuana: "No one has been able to show that marijuana is harmful, therefore it must be safer to use than alcohol."

18. Letter to the editor arguing in favor of legalized abortion:

Abortion should be legal, just like any other medical procedure. As a human being I have a basic right to control what takes place in my own body. If you had cancer or a parasite growing in your body, it would be absurd to think that the government could prevent you from having it removed.

19. Give a complete analysis of the Bob Hope, Anita Bryant, and Obama policy Slippery Slopes (5-1c, 5-1d, 5-1e).

20. Advertisement for Pepperidge Farm's Flaky Crust Chicken Pot Pies:

Great taste with moderate calories and fat. With only 450 calories and eight grams of fat a little indulgence is worth the price for great taste. Pepperidge Farm's Flaky Crust Chicken Pot Pies—an oven baked taste just like Grandma made for our modern microwave life styles. Try one today.

Note: The side of the box makes clear that the calories and fat mentioned are for only half a pie. So the total calories and fat per pie (most people will eat a whole pie, and the advertisement asks us to try "one.") are 900 and 16 respectfully. Plus the fat referred to in the advertisement is only the saturated fat. A single pie also contains 13 grams of trans-fat from partially hydrogenated oil. So the total fat is 29 grams. Together the calories and fat add up to about the same as eating two

McDonald's Quarter Pounders.

21. Letter to the editor on Christianity and the gay rights movement.

A few weeks ago, the gay rights movement held its annual parade in Washington, D.C. I was appalled to see the shameless promotion of sexual immorality on the streets of our nation's capital. Through this event and also through the public blessing of the gay and lesbian community by President Clinton, enough evidence has been shown to prove that our nation has forgotten God.

22. *From a 1993 Democratic fund raising letter, asking for money to help pass president Bill Clinton's economic proposals.

"Ever since Bill Clinton first proposed his New Direction economic stimulus and deficit reduction package in his State of the Union address, the lights have been burning late in the plush offices along "Gucci Gulch" as the "Me First" crowd -- the special interest establishment and its lawyers and lobbyists -- plots and schemes. We need your help. This is an epic struggle between the special interests and the public interest, between the old Republican road and Bill Clinton's New Direction."

Assume that the premise in this argument is: **Either we support Clinton's New Direction economic proposals and the public interest, or we support special interests, the "Me First" crowd along "Gucci Gulch," and the old Republican road.**

Some background: According to Republican opponents of Clinton's economic proposals to reduce the Federal deficit and stimulate the economy, they involved mostly raising taxes and spending large sums of money on inefficient bureaucratic programs. They claimed that Clinton's proposals were essentially the same tax-and-spend tactics of former failed Democratic programs. The Republicans claimed to be in favor of cutting Federal spending as the best way of stimulating the economy and decreasing the deficit. Supporters of Clinton's plan claimed that the increased taxation would fall mostly on the rich.

23. The following is part of a campaign pitch in favor of the 1992 reelection of then-President George H. Bush.

Of all the president's accomplishments, there should be little doubt in anyone's mind that President Bush's war on drugs has worked, that his policies of rigorous interdiction and police law enforcement efforts have caused a dramatic decrease in the use of drugs in our society. Before Bush was president the use of marijuana and cocaine were skyrocketing. Now, since he has been president the use of both drugs has dropped dramatically.

24. Argument Opposed to a New Immigration Bill being debated in Congress during the second term of President George W. Bush:

“Don’t support the Bush immigration bill. If this bill becomes law, it will provide amnesty to an estimated 12 million people who broke the law of the United States and allow them to stay in our country legally. What is next? Amnesty for sex offenders and murders? Make no mistake about it how much this will allow us to let down our guard on protecting our borders. If this bill becomes law, it will eventually allow terrorists, gang members and sex offenders into the country.”

Note: President Bush and a bipartisan group of Senators support a Bill that would give immediate, probationary status to work for an estimated 12 million undocumented immigrants, if they pass background checks. Each, plus family members, would get special visas good for four years by paying a \$5,000 penalty per head of household. To receive permanent legal residence, they would have to obey all laws and wait eight years. At that point, each could be granted a green card by returning to their home country and paying another \$4,000 penalty. The new visas would not take effect until the Department of Homeland Security has met new border security and immigration enforcement conditions, including: expanding the Border Patrol to 18,000 agents; constructing 200 miles of vehicle barriers and 370 miles of fencing along the border; deploying four unmanned aerial vehicles and 70 ground-based radar and camera systems along border; establishing a secure identification system to verify workers are eligible for jobs.

25. Argument in favor of biological evolution:

Imagine that through some magic, all we could see of a real tree were its individual leaves distributed in space. Would we suppose that somehow those leaves had just sprung into existence where they were? Surely not! We would suppose that they were supported by an unseen trunk, branches and stems, dividing and subdividing, and that the leaves hung at the end of the finest, final stems. And this is what evolution is, just like a tree. The leaves are the species of plants and animals we observe today. The trunk, branches, and stems are the extinct species of the past. It would be just as stupid to not believe in evolution as it would to believe tree leaves could miraculously come into existence without a trunk and branches. So, believe it or not, evolution is true.

26. Argument in favor of the notion that paying Federal taxes should be voluntary.

In a democracy we are supposed to think for ourselves. Well then, I should be able to think for myself on whether I pay my taxes this year.

27. *People who believe in God are ignorant. You can always tell who these people are: They actually believe there is a heaven with an afterlife!

28. Argument in favor of the absolute freedom of the press.

In a democracy a free press is in the public interest. Therefore, tabloid newspapers, such as the ***National Inquire*** should not be sued for distorting or exaggerating the intimate details of famous personalities, because this is what the public is interested in.

29. We should not legalize marijuana for medical purposes, for the following reasons. If you start with legalizing marijuana for the ill, you end up with allowing marijuana use for anyone who can claim to be ill. If you give this societal nod and wink to marijuana for medical reasons, it sends a message to kids that pot is OK, and everyone knows that children are extraordinarily sensitive to signals coming from culture. Soon, because marijuana is a gateway drug, more and more of our children will be using cocaine and heroin. If you legalize marijuana for medical use, it will be an invitation to every teenager with hangnail to come in and zone out.

30. We should eliminate all tofu from our diets. This is so, because a story in today's paper reported a study done with about 4,000 Japanese-American men. The men were part of a Honolulu Heart Study that started in the 1960s. Their diets were carefully monitored for over 30 years. In the 1990s autopsies were done on the men who died and cognitive tests were done on those still alive. The results showed that those men who ate tofu at least twice a week or more were more than 2.5 times more likely to suffer some form of senile dementia (Alzheimer's and similar brain diseases) than those men who rarely or never ate tofu.

Note: The men examined were in their 70s, 80s, or 90s. Those men who allegedly showed signs of some form of brain disease were performing mentally as if they were five years older than they were. But no other study at the time showed a link between the consumption of tofu and brain disease, and in fact many studies of East Asian societies that eat lots of tofu have shown less incidences of Alzheimer's and dementia. Critics of this study claim that the researchers did not control for education level and incidences of previous stroke in the men.

31. According to President George W. Bush, the invasion of Iraq in the spring of 2003 was necessary, because Saddam Hussein's regime posed a threat to the American people and people around the world. In a speech to the 2004 Republican National Convention he said:

"... I faced the kind of decision that comes only to the Oval Office—a decision

no president would ask for, but must be prepared to make. Do I forget the lessons of September 11th and take the word of a madman, or do I take action to defend our country? Faced with that choice, I will defend America every time.

Note: Critics claimed that Bush rushed to war with Iraq, that the Iraq war turned into a serious diversion of the war against terrorism because it was well documented that 9/11 was not caused by Saddam Hussein, but by Osama bin Laden and Al Qaeda. Furthermore, critics claimed that the invasion of Iraq was reckless because there was substantial evidence that most of Iraq's weapons had been destroyed by previous inspection teams, and United Nations sanctioned inspectors were again in Iraq. Critics claim they should have been allowed to finish the job of confirming or not confirming the presence of weapons of mass destruction.

Assume that one interpretation of Bush's premise is: **"Either we trust a madman and don't eliminate him or we defend America by invading Iraq and eliminating the madman."**

Also, FYI, an September, 2004 report (*Comprehensive Report of the Special Advisor to the Director of Central Intelligence on Iraq's Weapons of Mass Destruction*) from the 1200 member Iraq Survey Group searching for weapons of mass destruction in Iraq concluded that Iraq's stock piles of unconventional weapons were destroyed in 1991 and all factories in Iraq capable of producing militarily significant quantities of unconventional weapons were destroyed by 1996. As to why Saddam Hussein did not release this information to the world to avoid a United States invasion, the report said that Saddam was most concerned about a possible new attack by Iran, whose incursions into Iraq during the Iran-Iraq war of 1980-88 were fended off by Baghdad only with the use of chemical munitions fired on ballistic missiles. In other words, Saddam was using the uncertainty of whether he had these weapons or not as a deterrent to possible attack.

32. Give a complete analysis of the three arguments listed at the end of the Suppressed Evidence section. For the label, choose between Straw Person and Suppressed Evidence. Here is some help with the argument structures:

#1

Conclusion: John Kerry is not fit to be president and commander in chief of the United States.

Premises: He said that he would prefer the dictatorship of Saddam Hussein to the situation in Iraq today and that although he once supported removing Saddam Hussein from power he now says it was all a mistake.

#2*

Conclusion: George W. Bush is not fit to be president and commander in chief of the United States.

Premise: The president has told the American people that he thinks the future of Iraq is brighter than the future of America.

#3

Conclusion: George W. Bush has done a terrible job leading the economy during his presidency.

Premise: More jobs were lost while George W. Bush was president than during any other presidency in recorded history.

33. Finish the analysis of the Dunlop tire commercial.

Conclusion: The Dunlop SP-4 tire was the best (highest rated) radial tire of all major brands in the *Car and Drive* tire test.

Premise: Because it had the best (the highest category) rating in the *Car and Driver* tire test.

34. Provide a complete analysis of the Complex Question examples given in this Chapter.

#1

"Have you stopped beating your wife?" For a second premise use the answer "No."

#2

"Why do you want a career? Aren't you going to stay home and take care of your children?" For a second premise use the answer "No."

#3

"Where will your children spend eternity?" For a second premise use the answer, "I don't know." Assume the conclusion then will be: "So, you do believe in God and an afterlife?"

#4

"Have you had your orange juice today?" For a second premise use the answer

"No."

35. Argument against President Obama's foreign policy:

Obama's foreign policy that involves reaching out to moderate Muslims is a failure and has caused huge setbacks, such as our war in Afghanistan. Before Obama was president and announced his new approach to terrorism, we were winning the war in Afghanistan. Now, after just one year in office, we are losing the war in Afghanistan.

Note: Those who criticized Obama's foreign policy argued that reaching out to the moderate Muslim community for support is basically sending a message of weakness and appeasement. The Bush hard line policy they argued was better, either you are with us or against us. Supporters of Obama argued that the war in Afghanistan had gone badly because the Bush administration did not finish the job there when it had a chance and unwisely attacked Iraq, taking precious military resources away from Afghanistan at a crucial time. It allowed the Taliban to regroup. Supporters of Obama noted that he immediately increased the troop level in Afghanistan by 30,000 when he became president and quadrupled the number of drone attacks against the Taliban in Pakistan. The Bush policy also alienated many moderate Muslims and made our war against Muslim extremists much harder. They cite statistics from experts on terrorism that the Bush policy increased terrorist acts and recruitment.

Exercise III

Read the letters to the editor in your daily newspaper or Internet news sites, watch cable news and commentary shows, look critically at advertisements in magazines, the Internet, and on television, until you find at least five different examples of some of the fallacies covered in Chapter's 4 and 5. Supply a complete analysis in terms of Conclusion, Premise(s), Label and Description, and Argument Analysis.

Exercise IV

Make a case for any fallacies you think I have committed in this book! Note that the next chapter is considered very controversial by people who do not endorse what I have called the world view of modern science. In making your case, supply a complete analysis in terms of Conclusion, Premise(s), Label and Description, and Argument Analysis. (Feel free to discuss them with me via the e-mail address listed in the Introduction.)

Exercise V

Write an essay analyzing the lightning strike of the Jesus statue (see one of the opening quotes to this chapter. What could one conclude or argue from this event?

Answers to Starred Exercises:

I. True and False.

3. **False.** To identify an argument as a fallacy is only to identify it as a weak argument, not to offer a proof that the conclusion is false. Furthermore, one of the purposes of identifying fallacies is to understand what kind of evidence is needed to make arguments stronger and conclusions better supported.

6. **True.** Questionable Dilemma is a valid argument, so the focus of discussion should be on the either/or premise. This argument claims there are only two realistic alternatives. To show that the conclusion is not supported, you must be able to show that the two alternatives are not the only alternatives by describing a tentative case for a third alternative. You will need to be informed about the world to do this. We need good logical skills and information to avoid being tricked.

9. **True.** There is a difference between analogies as complete and reliable arguments, where the premises offer a comparative representative sample of two things being claimed to be similar in the conclusion, and simple creative comparisons offered in the premises with no detailed justification that the two things compared are really similar.

II. Fallacy Analyses.

3.

Conclusion: Poor security that led to the truck bombings in Beirut is understandable and defensible.

Premise: Constructing security barriers against terrorism is just like having a kitchen remodeled when it doesn't get done as soon as you wish it would.

Label & Description: Questionable Analogy. A weak analogy is used in the premise. Constructing security barriers against terrorism is compared to remodeling kitchens.

Argument Analysis: Presumption. Although Reagan's analogy may serve as an introduction to a defense of why we could not protect U.S. personnel better, we should not presume that he has given any evidence for his conclusion yet. U.S. personnel were put into a very dangerous situation, and Reagan gave us no reason to believe that there was a systematic security plan. Furthermore, the analogy is a poor one, because as president of the United States, surely he had more power over the implementation of security measures than the average person who is trying to work with slow carpenters to remodel a kitchen.

9.

If we focus on the claim that Prozac caused the woman's problems, a case could be made for Questionable Cause. The fact that her symptoms increased after taking the drug could be a coincidence. Presumably she was taking the drug in the first place for treatment of depression and it is possible that the underlying source of this depression caused her symptoms, the increase in her problems being a natural progression of the underlying problem.

However, since the conclusion of the consumer group was that cases like these prove that all people risk suicidal impulses if they take this drug, a case can be made for Hasty Conclusion as follows.

Conclusion: In general, Prozac is a dangerous drug that produces suicidal impulses.

Premise: Some people who have taken this drug have attempted to commit suicide.

Label & Description: Hasty Conclusion. There is a considerable generalization in the conclusion, given the small amount of inductive evidence in the premise.

Argument Analysis: Reasoning. Although the case cited in the premise is relevant to the conclusion, it is insufficient to support the generalization in the conclusion. The case cited does not appear to be a typical reaction to the drug. Because millions of people take this drug, most with alleged apparent success with no adverse side effects or symptoms as those described, more evidence should be given that the alleged suicidal reaction is common. For a genuine test of this claim, a controlled study should be cited—two groups of people suffering from depression, only one group given the drug Prozac. For the FDA to allow for the prescription use of any drug, such controlled studies are mandatory. That some people have had suicidal tendencies after taking the drug does not prove that the drug caused this reaction. The people had clinical depression, so their suicidal tendencies may have surfaced anyway. All drugs have side effects and no drug is 100% effective. Furthermore, even if it is true that some people do have adverse reactions to the drug, most important for the charge of hasty conclusion, this would not prove that all or most people will.

FYI, drug firms often keep large amounts of research data secret and are required only to submit all "relevant" trials for approval. Critics claim that they often suppress negative results and only show positive results for their drugs. Prozac-like drugs are called "selective serotonin reuptake inhibitors" (SSRIs). Some critics believe that if all relevant trials are taken into account, SSRIs can be linked with double the suicide risk compared to placebos. If true, such summary analysis is far stronger evidence for the potential danger of these drugs than a few dramatic cases. Plus, many of the trials showed that SSRIs do not work for depression much better than placebos and the pharmaceutical companies have made billions of dollars selling these drugs.

Although there are some Ad Hominem attacks in this letter (Gucci Gulch crowd), the following Questionable Dilemma interpretation is the strongest.

Conclusion: We should support Bill Clinton's economic proposals.

Premise: Either we support Clinton's New Direction economic proposals and the public interest or we support special interests, the "Me First" crowd along "Gucci Gulch," and the old Republican road.

Premise: Supporting the special interests, etc. is bad for the country.

Label & Description: Questionable Dilemma. There is a questionable dilemma in one of the premises. This premise restricts our choices to only two possibly extreme choices.

Argument Analysis: The major premise is questionable. The first premise contains a dilemma which reduces the number of possible alternatives to two. Because there are other possible positions other than these two extremes, the premise is weak. Although the Clinton supporters could be right that these are our only choices, there is at least a third possible choice that is not being discussed. Being against adding more government programs does not make one automatically a fan of special interests and the rich. One could argue for reducing the deficit and stimulating the economy by getting very serious about government waste. Was the only way to stimulate the economy a program of government projects? Were all the projects good projects, or were some merely pork barrel? Is spending money on government projects the most efficient way of stimulating the economy?

27.

Conclusion: People who believe in God are ignorant.

Premise: They actually believe there is a heaven and an afterlife!

Label & Description: Begging the Question. The premise is being sarcastic and is essentially assuming the same point alleged in the conclusion, that anyone is ignorant who has religious beliefs that involve God and essential related concepts to a belief in God (heaven and an afterlife).

Argument Analysis: Presumption. We should not assume that any evidence has been offered in the premise for the conclusion. The premise does not do more than restate what the conclusion is asserting. This person is apparently assuming that anyone who believes in heaven and an afterlife is ignorant. So, the argument is circular; it amounts to no more than: People who believe in God are ignorant, because they believe in the ignorant proposition that a heaven and afterlife exist. No evidence has been introduced showing that the belief in heaven and an afterlife is false, and no evidence has been introduced to show that people who believe in God have very low intelligence and are very poorly informed about issues related to meaning in life.

32-2.

This argument would not be Suppressed Evidence because we can make a case that the premise is false.

Conclusion: George W. Bush is not fit to be president and commander in chief of the United States.

Premise: The president has told the American people that he thinks the future of Iraq is brighter than the future of America.

Label and Description: Straw Person. The premise is a distortion of what the president said about Iraq and the United States.

Argument Analysis: Questionable Premise. The premise is not true. It is a distortion of what the president said. President Bush had talked about a poll "that said the right track/wrong track in Iraq was better than here in America." In other words, the president claimed to have seen a poll that was remarkable, that the people of Iraq were more optimistic about their country being on the right track than were the people of the United States. The president's point was that some people in the United States needed to be more optimistic that its foreign policies would work given time. He did not say that Iraq had a brighter future than the United States.

Essential Logic
Ronald C. Pine