Logical Fallacies

Hasty Generalization: The writer bases the argument on insufficient or unrepresentative evidence. Suppose, for example, you have own two poodles and they have both attacked you. If you declare that all poodles are vicious dogs, you are making a hasty generalization. There are, of course, thousands of poodles that have not attacked anyone. Similarly you’re in error if you interview only campus athletes and then declare, University students favor a new stadium. What about the opinions of the other students who aren’t athletes? In other words, what the generalization is drawn form a sample what is too small to select, your conclusion isn’t valid.

Non sequitur (‘it doesn’t follow’): The writer’s conclusion is not necessarily a logical result of facts. An example of a non sequitur occurs when you conclude, Professor Smith is a famous historian, so he will be a brilliant history teacher. As you may have realized by now, just because someone knows a subject well does not automatically mean that he or she can communicate the information clearly; hence, the conclusion is not necessarily valid.

Slippery slope. This is the fallacy of arguing that adopting one policy or taking one action will lead to a series of other policies or actions also being taken, without showing a causal connection between the advocated policy and the consequent policies. A popular example of the slippery slope fallacy is, "If we legalize marijuana, the next thing you know we’ll legalize heroin, LSD, and crack cocaine." This slippery slope is a form of non sequitur, because no reason has been provided for why legalization of one thing leads to legalization of another. Tobacco and alcohol are currently legal, and yet other drugs have somehow remained illegal.

Although the slippery slope by itself is clearly fallacious, there are a variety of ways to render the slippery slope argument more plausible. All you need to do is provide some reason why the adoption of one policy will lead to the adoption of another. For example, you could argue that legalizing marijuana would cause more people to consider the use of mind-altering drugs acceptable, and those people will support more permissive drug policies across the board. An alternative to the slippery slope argument is simply to point out that the principles espoused by your opposition imply the acceptability of certain other policies, so if we don’t like those other policies, we should question whether we really buy those principles. For instance, if the proposing team argued for legalizing marijuana by saying, "individuals should be able to do whatever they want with their own bodies,” the opposition could point out that that principle would also justify legalizing a variety of other drugs -- so if we don’t support legalizing other drugs, then maybe we don’t really believe in that principle.

Begging the question: The writer presents as truth what is supposed to be proven by the argument. For example, in the statement, all useless laws such as Reform Bill 13 should be repealed, the writer has already pronounced the bill useless without assuming responsibility for proving that accusation. Similarly, the statement Dangerous pornography should be banned begs the question (that is, tries like a beggar to get something for nothing from the reader) because the writer gives no evidence for what must be first argued, not merely asserted that pornography is dangerous.

Bandwagon appeal: The writer tries to validate a point by claiming that “everyone else believes in this.” Such a tactic evades discussion on the issue itself. Advertising often uses this technique: Over four million people have switched to our insurance company - shouldn’t you?

Red herring: The writer introduces an irrelevant point to divert the reader’s attention from the main issue. This term originates from the old tactic used by escaped prisoners, of dragging a smoked herring, a strong smelling fish, across their trail to confuse tracking dogs by making them follow the wrong scent. For example, roommate A might be criticizing roommate B for his repeated failure to do the dishes when it was his turn, To escape facing the charges, roommate B brings up times in the past when the other roommate failed to repay some money he borrowed. Although roommate A may indeed have a problem with remembering his debts, that discussion isn’t relevant to the original argument about sharing the responsibility for the dishes.
Argument ad hominem (“to the man”): the writer attacks the opponent’s character rather than the opponent’s argument. The statement “Bill Clinton was a bad president because he committed adultery” is not valid. These actions are not related to his actions as president. While you could make a case that he was a bad role model, if you wanted to prove that he was a bad president, you would need to focus on something related to that position. The statement “Dr. Bloom can be a competent marriage counselor because she’s been divorced” may not be valid. Bloom’s advice to her clients may be excellent regardless of her own marital status.

Argument ad populum (“to the people”): the writer evades the issues by appealing to reader’s emotional reactions to certain subjects. For example, instead of arguing the facts of an issue, a writer might play on the reader’s negative response to such words as communism, fascism, radical, and their positive response to words like God, country, liberty. In the statement “If you are a true American, you will vote against the referendum of flag burning,” the writer avoids any discussion of the merits or weaknesses of the bill and merely substitutes an emotional appeal. (Advertisers, of course, play on consumers’ emotions by filling their ads with pictures of babies, animals, status objects, and sexually attractive men and women.) You will notice that this is similar to Aristotle’s emotional appeal. Emotional appeals can cause your readers to see your side and further your case, but use them with caution. Focus emotional appeals on the issue.

Either/or: The writer tries to convince the readers that there are only two sides to an issue—one right and one wrong. The statement “America: Love it or Leave it” is a classic example of this oversimplification. It appeared on bumper stickers in the 1960s. Obviously there are other choices (“Change it or Lose it,” for instance, to quote another either/or bumper sticker from that era.)

Straw man: the writer selects the opposition’s weakest or most insignificant point to argue against, to divert the reader’s attention from the real issues. Instead of addressing the opposition’s best arguments and defeating them, the writer sets up a straw man that is, the writer picks out a trivial (or irrelevant) argument against his or her own position and easily knocks it down, just as one might easily push over a figure made of straw. Perhaps the most famous example of the straw man occurred in 1952 when, during his vice-presidential campaign. Richard Nixon was accused of misappropriating campaign funds for his personal use. Addressing the nation on television, Nixon described his six-year-old daughter, Tricia, had received a little cocker spaniel named Checkers form a Texas supporter. Nixon went on about how much his children loved the dog and how, regardless of what anyone thought, by gosh, he was going to keep that cute dog for little Tricia. Of course, no one was asking Nixon to return the dog; they were asking about the $18,000 in missing campaign funds. But Nixon’s canine gift was much easier for him to defend, and the Checkers speech is now famous as one the most notorious straw man diversions.

Faulty analogy: The writer uses an extended comparison as proof of a point. Look closely at all extended comparisons and metaphors to see if the two things being compared and really similar. For example, in a recent editorial a woman protested the new laws requiring parents to use car seats for small children, arguing that if the state laws require the seats, they could just as easily require mothers to breastfeed instead of using formula. Are the two situations alike? Car accidents are the leading cause of death of children under four; is formula deadly? Or perhaps you read that putting teenagers in sex education classes is like taking an alcoholic to a bar. Is it? If the opinion isn’t supported by evidence, the analogy may not be persuasive. Moreover, remember that even though a compelling analogy might suggest similarities, it alone cannot prove anything.

Quick Fix: The writer leans too heavily on catchy phrases or empty slogans. A clever turn-of-phrase may grab one’s attention, but it may lose its persuasiveness when scrutinized closely. For instance, a banner at a recent rally to protest a piece of antigun legislation read, “When guns are outlawed, only outlaws will have guns.” Although the sentence had a nice balance, it oversimplifies the issue. The legislation in question was not trying to outlaw all guns, just the sale of infamous Saturday Night Specials, most often used in crimes and domestic violence; the sale of guns for sport, such as hunting rifles, would remain legal. Other slogans sound good but are simply irrelevant; a particular soft drink, for example, may be the real thing, but what drink isn’t? Look closely at clever lines substituted for reasoned argument; always demand clear terms and logical explanations.
**Argumentum ad Traditio (Appeal to Tradition):** This line of thought asserts that a premise must be true because people have always believed it or done it. Alternatively, it may conclude that the premise has always worked in the past and will thus always work in the future: "The city of Eugene has kept its urban growth boundary at six miles for the past thirty years. That has been good enough for one-third of a century, why should we change it now? If it ain't broke, don't fix it." Such an argument is appealing in that it seems to be common sense, but it ignores important questions. Might an alternative policy work even better than the old one? Are there drawbacks to that long-standing policy? Are circumstances changing from the way they were thirty years ago?

**False Cause (Post Hoc, Ergo Propter Hoc):** The second event followed the first event, therefore the first event caused the second event. The fallaciousness of this reasoning is obvious, yet it is a remarkably easy fallacy to commit, and it is used often in politics. Examples: "After my opponent took office, the economy plummeted. A vote for me is a vote for restoring the economic engine of this country." "On our watch, the crime rate has gone down. Obviously, our policies are succeeding in the war against crime." "After the social liberalization of the 1960's, social ills such as teen pregnancy, urban violence, and rudeness in public discourse skyrocketed. We need to restore some traditional values."

**Complex Question:** This is the famous "have you stopped beating your dog?" device, in which a conclusion is forced by disguising it in the body of a question. You should be especially suspicious of any question that demands a "yes or no" answer. Examples: "Is my opponent prepared to renounce negative advertising?" "Will you commit yourself to greater equity in employment by endorsing my position on affirmative action?" "Does your procrastination cause your grades to suffer?"

**Circular Reasoning:** Explaining something by the thing explained. For example "People like beef because it tastes good" basically says the same thing: they like it and it tastes good. The steak's tasting good is not the cause of the liking it. Events do not cause themselves. Another example "There aren't enough parking spaces for students on campus because there are too many cars" merely presents a second half that restates what is implied by the first half. A revision might say, "There aren't enough parking spaces for students on campus because the parking permits aren't distributed fairly." This kind of assertion can be argued specifically and effectively; the other is a dead end. If you are not writing a paper that argues a position, circular reasoning is still something you should watch out for. Any time you are explaining causes and effects, it comes into play.

**Reason/Logic (logos)**

Briefly, informal reasoning requires clearly linking your general claims with concrete, specific data.

Much of the clear thinking we do in our everyday lives follows logical principles, but in a less formal and systematic way than the thinking of a research scientist. And for most occasions this informal reasoning is adequate. Aristotle points out that it would be just as much a mistake to expect certain proofs in argument as to expect only probable proofs in mathematics. That's not to say your argument can be illogical, only that you shouldn't confuse formal logic with clear thinking or good sense, the essential qualities your argument should display.

When our thinking begins with specifics and moves toward a generalization, we are moving **inductively.** When our thinking begins with specifics and moves toward a generalization, we are moving inductively. That is, if you were to taste several hard, green apples and then draw the general conclusion that all hard, green apples are sour, you would be using inductive reasoning. And, of course, the more apples tasted and the greater the variation in the times and conditions of tasting, the greater the likelihood that your general conclusion would be valid. In your writing, then, when you reason inductively, ask whether you've examined the evidence carefully, whether it justifies your general conclusion, and whether you've given readers enough specific evidence to persuade them that your thinking is sound and your general conclusion is true.
Reasoning that moves in the opposite direction (from general to specific) is called deductive reasoning.

Reasoning that moves in the opposite direction (from general to specific) is called *deductive reasoning*. Here, you take a general principle that you know to be true and use it to understand a specific situation. For instance, you may know from experience that as a general rule bad weather reduces business at the golf course. You may also learn that today's weather will be cold and rainy. From these two pieces of knowledge, you can produce a third, more specific piece: Business at the golf course will be slow today. In writing, deductive reasoning most often appears in a shortened version (called an *enthymeme*) that may be hard to recognize. That's because one or more links in the chain of reason have not been stated directly but only implied. Consider the following example: "Bill never turns in his assignments, so he'll fail the course."

What is not directly stated but only implied is the general principle that students who don't turn in their assignments will fail the course. Such shortened forms are perfectly acceptable, but only if the underlying links and claims are sound. An opponent may want to refute you by challenging some underlying assumptions in your thinking; likewise, you'll want to look for faulty reasoning when you refute your opposition.

**Ethics (Ethos)**

*If you misrepresent the evidence, misunderstand the implications of your own value structure, or seek to hurt some individual or group, you can expect to alienate your readers.*

No matter how solid your reasoning, readers may not accept your argument unless they're also convinced that you're a person of wisdom, honesty, and good will. If you misrepresent the evidence, misunderstand the implications of your own value structure, or seek to hurt some individual or group, you can expect to alienate your readers.

The appeal to character is often subtle, affecting readers almost unconsciously, yet often decisively. "Ah, I see. This writer pretends to be a friend of Mexican-Americans, but her word choice shows that she understands almost nothing of our culture. And her proposal would undermine our whole way of life. Of course, she'd get to build her apartments, and it's obvious that's all she really cares about."

If you realize that readers are likely to analyze your character and intentions this way, you'll see that the best way to put ethical appeal in your writing is to build a strong, healthy relationship with your readers. Convince them that they can trust you to be fair, honest, well-informed, and well-intentioned. Then, having established that trust, don't betray it.

**Emotion (pathos)**

*Emotional appeals must be used with restraint and discretion, or they may prove counterproductive.*

Many people believe that emotional appeals by their very nature subvert reason and are therefore better left to TV hucksters than to writers who want their ideas taken seriously. Because this common view has some validity, emotional appeals must be used with restraint and discretion, or they may prove counterproductive. Nevertheless, while an argument founded mostly on feelings and emotions may be superficial and biased, an argument that is carefully reasoned and honestly presented probably won't be hurt by a bit of *pathos*. In fact, it may be helped.

One way to build pathos is to illustrate or dramatize an idea. This may involve little more than folding short descriptive and narrative examples into the argument. Are you arguing that your city needs to take stiffer measures against drunk drivers? Why not find a place to include a description of the face of a child who was injured in an accident caused by drinking? Or you might want to tell the story of a driver who caused several accidents because the individual's license was never revoked. Including such narrative and descriptive passages can help readers feel the urgency of your proposition so that it gets beyond the level of abstract intellectual speculation and becomes a matter of immediate human concern.