**False Dichotomy** Sometimes oversimplification takes a more complex form, in which contrary possibilities are wrongly presented as though they were exhaustive and exclusive. “Either we get tough with drug users, or we must surrender and legalize all drugs.” Really? What about doing neither and instead offering education and counseling, detoxification programs, and incentives to “Say no”? A favorite of debaters, either/or reasoning always runs the risk of ignoring a third (or fourth) possibility. Some disjunctions are indeed exhaustive: “Either we get tough with drug users, or we do not.” This proposition, though vague (what does “get tough” really mean?), is a tautology; it cannot be false, and there is no third alternative. But most disjunctions do not express a pair of contradictory alternatives: They offer only a pair of contrary alternatives, and mere contraries do not exhaust the possibilities (recall our discussion of contraries versus contradictories on page 319).

A writer would be guilty of creating a false dichotomy if, for example, in an argument in favor of flogging his entire discussion was built on the relative superiority of whipping over imprisonment, as though there was no alternative punishment worth considering. But of course, there is, notably community service (especially for non-violent, juvenile, or many first offenders).

**Oversimplification** “Poverty causes crime,” “Taxation is unfair,” “Truth is stranger than fiction”—these are examples of generalizations that exaggerate and therefore oversimplify the truth. Poverty as such can’t be the sole cause of crime because many poor people do not break the law. Some taxes may be unfairly high, others unfairly low—but there is no reason to believe that every tax is unfair to all those who have to pay it. Some true stories do amaze us as much as or more than some fictional stories, but the reverse is true, too. (In the language of the Toulmin method, oversimplification is the result of a failure to use suitable modal qualifiers in formulating one’s claims or grounds or backing.)

**Red Herring** The fallacy of red herring, less colorfully named irrelevant thesis, occurs when one tries to distract one’s audience by invoking a consideration that is irrelevant to the topic under discussion. (This fallacy probably gets its name from the fact that a rotten herring, or a cured herring, which is reddish, will throw pursuing hounds off the right track.) Consider this case. Some critics, seeking to defend our government’s refusal to sign the Kyoto accords to reduce global warming, argue that signing is supported mainly by left-leaning scientists. This argument supposedly shows that global warming—if there is such a thing—is not a serious, urgent issue. But claiming that the supporters of these accords are left-inclined is a red herring, an irrelevant thesis. By raising doubts about the political views of the advocates of signing, it distracts attention from the scientific question (Is there global warming?) and also from the separate political question (Ought the United States sign these accords?). The refusal of a government to sign these accords does not show there is no such thing as global warming. And even if all of the advocates of signing were left-leaning (they aren’t), this fact (if it were a fact, but it isn’t) would not show that worries about global warming are exaggerated.

**Fallacies of Relevance**

**Tu Quoque** The Romans had a word for it: *Tu quoque* means “you, too.” Consider this: “You’re a fine one, trying to persuade me to give up smoking when you indulge yourself with a pipe and a cigar from time to time. Maybe I should quit, but then so should you. As things stand now, however, it’s hypocritical of you to complain about my smoking when you persist in the same habit.” The fallacy is this: The merit of a person’s argument has nothing to do with the person’s character or behavior. Here, the assertion that smoking is bad for one’s health is not weakened by the fact that a smoker offers the argument.

**The Genetic Fallacy** A member of the family of fallacies that includes poisoning the well and ad hominem is the genetic fallacy. Here the error takes the form of arguing against some claim by pointing out that its origin (genesis) is tainted or that it was invented by someone deserving our contempt. Thus, one might attack the ideas of the Declaration of Independence by pointing out that its principal author, Thomas Jefferson, was a slaveholder. Assuming that it is not anachronistic and inappropriate to criticize a public figure of two centuries ago for practicing slavery, and conceding that slavery is morally outrageous, it is nonetheless fallacious to attack the ideas or even the sincerity of the Declaration by attempting to impeach the credentials of its author. Jefferson’s moral faults do not by themselves
falsify, make improbable, or constitute counterevidence to the truth or other merits of the claims made in his writings. At most, one’s faults cast doubt on one’s integrity or sincerity if one makes claims at odds with one’s practice.

The genetic fallacy can take other forms less closely allied to ad hominem argument. For example, an opponent of the death penalty might argue,

Capital punishment arose in barbarous times; but we claim to be civilized; therefore, we should discard this relic of the past.

Such reasoning shouldn’t be persuasive because the question of the death penalty for our society must be decided by the degree to which it serves our purposes—justice and defense against crime, presumably—to which its historic origins are irrelevant. The practices of beer- and wine-making are as old as human civilization, but their origin in antiquity is no reason to outlaw them in our time. The curious circumstances in which something originates usually play no role whatever in its validity. Anyone who would argue that nothing good could possibly come from molds and fungi is refuted by Sir Alexander Fleming’s discovery of penicillin in 1928.

Poisoning the Well During the 1970s some critics of the Equal Rights Amendment (ERA) argued against it by pointing out that Marx and Engels, in their Communist Manifesto, favored equality of women and men—and therefore the ERA was immoral, undesirable, and perhaps even a Communist plot. This kind of reasoning is an attempt to poison the well; that is, an attempt to shift attention from the merits of the argument—the validity of the reasoning, the truth of the claims—to the source or origin of the argument. Such criticism deflects attention from the real issue; namely, whether the view in question is true and what the quality of evidence is in its support. The mere fact that Marx (or Hitler, for that matter) believed something does not show that the belief is false or immoral; just because some scoundrel believes the world is round, that is no reason for you to believe it is flat.

Appeal to Ignorance In the controversy over the death penalty, the issues of deterrence and executing the innocent are bound to be raised. Because no one knows how many innocent persons have been convicted for murder and wrongfully executed, it is tempting for abolitionists to argue that the death penalty is too risky. It is equally tempting for the proponent of the death penalty to argue that since no one knows how many people have been deterred from murder by the threat of execution, we abolish it at our peril.

Each of these arguments suffers from the same flaw: the fallacy of appeal to ignorance. Each argument invites the audience to draw an inference from a premise that is unquestionably true—but what is that premise? It asserts that there is something “we don’t know.” But what we don’t know cannot be evidence for (or against) anything. Our ignorance is no reason for believing anything, except perhaps that we ought to try to undertake an appropriate investigation in order to reduce our ignorance and replace it with reliable information.

Ad Hominem Closely allied to poisoning the well is another fallacy, ad hominem argument (from the Latin for “against the person”). A critic can easily yield to the temptation to attack an argument or theory by trying to impeach or undercut the credentials of its advocates.

Example: Jones is arguing that prayer should not be permitted in public schools, and Smith responds by pointing out that Jones has twice been convicted of assaulting members of the clergy. Jones’s behavior doubtless is reprehensible, but the issue is not Jones, it is prayer in school, and what must be scrutinized is Jones’s argument, not his police record or his character.

Appeal to Authority The example of Jefferson given to illustrate the genetic fallacy can be turned around to illustrate another fallacy. One might easily imagine someone from the South in 1860 defending the slave-owning society of that day by appealing to the fact that no less a person than Jefferson—a brilliant public figure, thinker, and leader by any measure—owned slaves. Or today one might defend capital punishment on the ground that Abraham Lincoln, surely one of the nation’s greatest presidents, signed many death warrants during the Civil War, authorizing the execution of Union soldiers. No doubt the esteem in which such figures as Jefferson and Lincoln are deservedly held amounts to impressive endorsement for whatever acts and practices, policies and institutions, they supported. But the authority of these figures in itself is not evidence for the truth of their views, and so their authority cannot be a reason for anyone to agree with them. Obviously, Jefferson and Lincoln themselves could not support their beliefs by pointing to the fact that they held them. Because their own authority is no reason for them to believe what they believe, it is no reason for anyone else, either.
Sometimes the appeal to authority is fallacious because the authoritative person is not an expert on the issue in dispute. The fact that a high-energy physicist has won the Nobel Prize is no reason for attaching any special weight to her views on the causes of cancer, the reduction of traffic accidents, or the legalization of marijuana. On the other hand, one would be well advised to attend to her views on the advisability of ballistic missile-defense systems, for there may be a connection between the kind of research for which she received the prize and the defense research projects.

All of us depend heavily on the knowledge of various experts and authorities, and so we tend not to ignore their views. Conversely, we should resist the temptation to accord their views on diverse subjects the same respect that we grant them in the area of their expertise.

**Appeal to Fear** The Romans called this fallacy *ad baculum*, "resorting to violence" (*baculum* means "stick," or "club"). Trying to persuade people to agree with you by threatening them with painful consequences is obviously an appeal that no rational person would contemplate. The violence need not be physical; if you threaten someone with the loss of a job, for instance, you are still using a stick. Violence or the threat of harmful consequences in the course of an argument is beyond reason and always shows the hasty or impatience of those who appeal to it. It is also an indication that the argument on its merits would be unpersuasive, inconclusive, or worse. President Teddy Roosevelt’s epigrammatic doctrine for the kind of foreign policy he favored—“Speak softly but carry a big stick”—illustrates an attempt to have it both ways, an appeal to reason for starters but a recourse to coercion, or the threat of coercion, as a backup if needed.

Finally, we add two fallacies, not easily embraced by Engel’s three categories that have served us well thus far (ambiguity, erroneous presumption, and irrelevance): death by a thousand qualifications and protecting the hypothesis.

**Death by a Thousand Qualifications** In a letter of recommendation sent in support of an applicant for a job on your newspaper, you find this sentence: “Young Smith was the best student I’ve ever taught in an English course.” Pretty strong endorsement, you think, except that you do not know, because you have not been told, the letter writer is a very junior faculty member, has been teaching for only two years, is an instructor in the history department, taught a section of freshman English as a courtesy for a sick colleague, and had only eight students enrolled in the course. Thanks to these implicit qualifications, the letter writer did not lie or exaggerate in his praise; but the effect of his sentence on you, the unwitting reader, is quite misleading. The explicit claim in the letter, and its impact on you, is quite different from the tacitly qualified claim in the mind of the writer.

**Death by a thousand qualifications** gets its name from the ancient torture of death by a thousand small cuts. Thus, a bold assertion can be virtually killed, its true content reduced to nothing, bit by bit, as all the appropriate or necessary qualifications are added to it. Consider another example. Suppose you hear a politician describing another country (let’s call it Ruritania so as to not offend anyone) as a “democracy”—except it turns out that Ruritania doesn’t have regular elections, lacks a written constitution, has no independent judiciary, prohibits religious worship except of the state-designated deity, and so forth. So what is left of the original claim that Ruritania is a democracy is little or nothing. The qualifications have taken all the content out of the original description.

**Protecting the Hypothesis** In Chapter 3, we contrasted reasoning and rationalization (or the finding of bad reasons for what one intends to believe anyway). Rationalization can take subtle forms, as the following example indicates. Suppose you’re standing with a friend on the shore or on a pier, and you watch as a ship heads out to sea. As it reaches the horizon, it slowly disappears—first the hull, then the upper decks, and finally the tip of the mast. Because the ship (you both assume) isn’t sinking, it occurs to you that you have in this sequence of observations convincing evidence that the earth’s surface is curved. Nonsense, says your companion. Light waves sag, or bend down, over distances of a few miles, and so a flat surface (such as the ocean) can intercept them. Hence the ship, which appears to be going “over” the horizon, really isn’t: it’s just moving steadily farther and farther away in a straight line. Your friend, you discover to your amazement, is a card-carrying member of the Flat Earth Society (yes, there really is such an organization). Now most of us would regard the idea that light rays bend down in the manner required by the Flat Earther’s argument as a rationalization whose sole purpose is to protect the flat-earth doctrine against counterevidence. We would be convinced it was a rationalization, and not a very good one at that, if the Flat Earther held to it despite a patient and thorough explanation from a physicist that showed modern optical theory to be quite incompatible with the view that light waves sag.
A CHECKLIST FOR EVALUATING AN ARGUMENT FROM A LOGICAL POINT OF VIEW

☐ Is the argument purely deductive, purely inductive, or a mixture of the two?
☐ If it is deductive, is it valid?
☐ If it is valid, are all its premises and assumptions true?
☐ If it is not valid, what fallacy does it commit?
☐ If it is not valid, are the claims at least consistent with each other?
☐ If it is not valid, can you think of additional plausible assumptions that would make it valid?
☐ If the argument is inductive, on what observations is it based?
☐ If the argument is deductive, how probable are its premises and its conclusion?
☐ In any case, can you think of evidence that would further confirm the conclusion? Disconfirm the conclusion?

This example illustrates two important points about the backing of arguments. First, it is always possible to protect a hypothesis by abandoning adjacent or connected hypotheses; this is the tactic our Flat Earth friend has used. This maneuver is possible, however, only because—and this is the second point—whenever we test a hypothesis, we do so by taking for granted (usually quite unconsciously) many other hypotheses as well. So the evidence for the hypothesis we think we are confirming is impossible to separate entirely from the adequacy of the connected hypotheses. As long as we have no reason to doubt that light rays travel in straight lines (at least over distances of a few miles), our Flat Earth friend’s argument is unconvincing. But once that hypothesis is itself put in doubt, the idea that looked at first to be a pathetic rationalization takes on an even more troublesome character.

There are, then, not one but two fallacies exposed by this example. The first and perhaps graver is in rigging your hypothesis so that no matter what observations are brought against it, you will count nothing as falsifying it. The second and subtler is in thinking that as you test one hypothesis, all of your other background beliefs are left safely to one side, immaculate and uninvolved. On the contrary, our beliefs form a corporate structure, intertwined and connected to each other with great complexity, and no one of them can ever be singled out for unique and isolated application, confirmation, or disconfirmation, to the world around us.