in which it does not do so is hardly sufficient to show that such foods are healthy. The owner of a “fish and chips” shop in England fallaciously defended the healthfulness of his deep-fried cookery with this argument:

Take my son, Martyn. He’s been eating fish and chips his whole life, and he just had a cholesterol test, and his level is below the national average. What better proof could there be than a fryer’s son?28

Foods or drugs that are harmless in one context may be harmful in another. To move from a single case, or a very few cases, to a large-scale generalization about all or most cases, is fallacious reasoning, but it is common and often tempting. It is also called the fallacy of converse accident because it is the reverse of another common mistake, known as the fallacy of accident, in which generalizations are misused in another way. We turn to it next.

OVERVIEW

Fallacies of Defective Induction

**D1. The Argument from Ignorance (ad ignorantiam)**
An informal fallacy in which a conclusion is supported by an illegitimate appeal to ignorance, as when it is supposed that something is likely to be true because we cannot prove that it is false.

**D2. The Appeal to Inappropriate Authority (ad verecundiam)**
An informal fallacy in which the appeal to authority is illegitimate because the authority appealed to has no special claim to expertise on the matter in question.

**D3. False Cause**
An informal fallacy in which the mistake arises from accepting as the cause of an event what is not really its cause.

**D4. Hasty Generalization**
An informal fallacy in which a principle that is true of a particular case is applied, carelessly or deliberately, to the great run of cases.

**4.5 Fallacies of Presumption**

Some mistakes in everyday reasoning are the consequence of an *unjustified assumption*, often suggested by the way in which the argument is formulated. That suggestion may be deliberate, or the assumption may be only an oversight. In either case, the upshot is that the reader, the listener, and even the author of the passage may be led to assume the truth of some unproved and
unwarranted proposition. When such dubious propositions, buried in the argument, are crucial for the support of the conclusion, the argument is bad and can be very misleading. Arguments that depend on such unwarranted leaps are called **fallacies of presumption**.

In fallacious arguments of this kind the premises may indeed be relevant to the conclusion drawn, but that relevance is likely to flow from the tacit supposition of what has not been given support and may even be unsupportable. The presumption often goes unnoticed. To expose such a fallacy it is therefore usually sufficient to call attention to the smuggled assumption, or supposition, and to its doubtfulness or its falsity. Three common fallacies are included in this category.

**P1. ACCIDENT**

Circumstances alter cases. A generalization that is true by and large may not apply in a given case (or to some subcategory of cases) for good reasons. The reasons the generalization does not apply in those cases have to do with the special circumstances, also called the “accidental” circumstances, of that case or those cases. If these accidental circumstances are ignored, and we assume that the generalization applies universally, we commit the **fallacy of accident**.

In the preceding section we explained the **fallacy of converse accident**, or **hasty generalization**, the mistake of moving carelessly or too quickly to a generalization that the evidence does not support. **Accident** is the fallacy that arises when we move carelessly or unjustifiably from a generalization to some particulars that it does not in fact cover.

Experience teaches us that even generalizations that are widely applicable and very useful are likely to have exceptions for which we must be on guard. For example, there is a general principle in law that hearsay evidence—statements made by a third party outside court—may not be accepted as evidence in court; this is the “hearsay rule,” and it is a good rule. But when the person whose oral communications are reported is dead, or when the party reporting the hearsay in court does so in conflict with his own best interest, that rule may not apply. Indeed, there is hardly any rule or general principle that does not have plausible exceptions, and we are likely to argue fallaciously if we reason on the supposition that some rule applies universally.

**P2. COMPLEX QUESTION**

One of the most common fallacies of presumption is asking a question in such a way as to presuppose the truth of some conclusion that is buried in the question. The question itself is likely to be rhetorical, with no answer actually being sought. But putting the question seriously, thereby introducing its presupposition surreptitiously, often achieves the questioner’s purpose—fallaciously.
Thus an essayist recently asked:

With all of the hysteria, all of the fear, all of the phony science, could it be that man-made global warming is the greatest hoax ever perpetrated on the American people?\(^{29}\)

Such a statement assumes that much of the evidence supporting global warming is unreliable or “phony.” Or a homeowner might ask, regarding a proposed increase in the property tax, “How can you expect the majority of the voters, who rent but don’t own property and don’t have to pay the tax, to care if the tax burden of others is made even more unfair?”—assuming both that the burden of the proposed tax is unfair and that those who rent rather than own their own homes are not affected by tax increases on property. Because assumptions like these are not asserted openly, the questioners evade the need to defend them forthrightly.

The complex question is often a deceitful device. The speaker may pose some question, then answer it or strongly suggest the answer with the truth of the premise that had been buried in the question simply assumed. A letter writer asks, “If America’s booming economy depends on people’s using consumer credit beyond their means, thus creating poverty, do we really have a healthy economy?”\(^{30}\) But the role and the results of consumer credit remain to be addressed.

One critic of research in genetics hides his assumptions in this question: “What are the consequences of reducing the world’s gene pool to patented intellectual property, controlled by a handful of life-science corporations?”\(^{31}\) The “consequences” asked about are never actually discussed; they are only a device with which the reader may be frightened by the assumptions of the question—that the world’s gene pool is soon likely to be reduced to patented intellectual property, and that a handful of corporations will soon control that gene pool. Establishing the plausibility of such threats requires much more than asking questions designed to presuppose them.

The appearance of a question in an editorial or headline often has the purpose of suggesting the truth of the unstated assumptions on which it is built: “Judge Took Bribe?” This technique is a common mark of what is called “yellow journalism.” And in debate, whenever a question is accompanied by the aggressive demand that it be answered “yes or no,” there is reason to suspect that the question is “loaded”—that it is unfairly complex.

Does the distinguished senator believe that the American public is really so naive that they will endorse just any stopgap measure? This “question,” of course, cannot be answered “Yes.” It conceals several unchallenged assumptions: that what is proposed is a “stopgap” measure, that it is inadequate, and that the American public would reject it.
The mistake that underlies the fallacy of complex question also underlies a common problem in parliamentary procedure. Deliberative bodies sometimes confront a motion that, although not intended deceptively, is covertly complex. In such circumstances there is a need, before discussion, to simplify the issues confronting the body. This accounts for the privileged position, in parliamentary procedure governed by Robert’s Rules of Order or similar manuals, of the motion to divide the question. For example, a motion that the body “postpone for one year” action on some controversial matter may wisely be divided into the questions of whether to postpone action, and if that is done, then to determine the length of the postponement. Some members may support the postponement itself yet find the one-year period intolerably long; if the opportunity to divide the question were not given priority, the body might be maneuvered into taking action on a motion that, because of its complexity, cannot be decided in a way that captures the true will of the body. A presiding officer, having the duty to promote a fully rational debate, may solicit the motion to divide the question before beginning the substantive discussion.

Egregious examples of the fallacy of the complex question arise in dialogue or cross-examination in which one party poses a question that is complex, a second party answers the question, and the first party then draws a fallacious inference for which that answer was the ground. For example:

**Lawyer:** The figures seem to indicate that your sales increased as a result of these misleading advertisements. Is that correct?

**Witness:** They did not!

**Lawyer:** But you do admit, then, that your advertising was misleading. How long have you been engaging in practices like these?

When a question is complex, and all of its presuppositions are to be denied, they must be denied individually. The denial of only one presupposition may lead to the assumption of the truth of the other. In law, this has been called “the negative pregnant.” Here is an illustration from a notorious murder trial:

**Q:** Lizzie, did you not take an axe and whack your mother forty times, and then whack your father forty-one times when faced with the prospect of cold mutton stew?

**A:** Not true. We were to eat brussel sprouts fondue that day.

**P3. BEGGING THE QUESTION (PETITIO PRINCIPII)**

The fallacy called begging the question is widely misunderstood, partly because its name is misleading. It is in fact the mistake of assuming the truth of what one seeks to prove. The “question” in a formal debate is the
issue that is in dispute; to “beg” the question is to ask, or to suppose, that
the very matter in controversy be conceded. This is an argument with no
merit at all, of course, and one who makes such an assumption commits a
gross fallacy.

The Latin name of the fallacy, for which “begging the question” is the
translation, is *petitio principii*, so each instance of it is called a *petitio*. One might
think the fallacy would be so obvious that no one would ever commit it, but
that is not the case. The logical mistake arises because it is obscured, even from
its author, by the language used. Logician Richard Whately used this classic
example of a deceptive *petitio*:

To allow every man unbounded freedom of speech must always be, on the whole,
advantageous to the state; for it is highly conducive to the interests of the com-
munity that each individual should enjoy a liberty, perfectly unlimited, of express-
ing his sentiments.\(^32\)

This statement says only that freedom of speech is a good thing because it is a
good thing—which is not much of an argument.

In the effort to establish the desired conclusion, an author may cast about,
searching for premises that will do the trick. Of course, the conclusion itself,
reformulated in other words, will do the trick very nicely. Another illustration,
equally fallacious, is found in this claim by a sixteenth-century Chinese
philosopher:

There is no such thing as knowledge which cannot be carried into practice, for
such knowledge is really no knowledge at all.\(^33\)

This fallacy, like the fallacy of missing the point, is often a *mistake* that is not
recognized by the author of the passage. The presumption that is the heart of
the fallacy is buried in the verbiage of the premises, sometimes obscured by
confusing or unrecognized synonyms. The arguments are circular—every
*petitio* is a circular argument—but the circle that has been constructed may be
large and confusing, and thus the logical mistake goes unseen.

It would be wrong to suppose that only silly authors make this mistake. Even
powerful minds are on occasion snared by this fallacy as is illustrated by
a highly controversial issue in the history of philosophy. Logicians have long
sought to establish the reliability of inductive procedures by establishing the
truth of what is called the *principle of induction*. This is the principle that the
laws of nature will operate tomorrow as they operate today, that in basic ways
nature is essentially uniform, and that therefore we may rely on past experi-
ence to guide our conduct in the future. “That the future will be essentially
like the past” is the claim at issue, but this claim, never doubted in ordinary
life, turns out to be very difficult to prove. Some thinkers have claimed that
they could prove it by showing that, when we have in the past relied on the
inductive principle, we have always found that this method has helped us to achieve our objectives. They ask, “Why conclude that the future will be like the past?” and answer, “Because it always has been like the past.”

As David Hume pointed out, however, this common argument is a petitio—it begs the question. The point at issue is whether nature will continue to behave regularly. That it has done so in the past cannot serve as proof that it will do so in the future, unless one assumes the very principle that is here in question: that the future will be like the past. And so Hume, granting that in the past the future has been like the past, asked the telling question with which philosophers still tussle: How can we know that future futures will be like past futures? They may be so, of course, but we cannot assume that they will be for the sake of proving that they will.34

Because the name of this fallacy is widely misunderstood, that name is sometimes wrongly used to refer to a linguistic device that is not a fallacy, not even an argument of any kind, but merely a provocative observation. A claim “begs” the question (in this sense) when it raises some question or opens the door to some controversy. Thus a magazine headline may mistakenly read, “The President’s decision to invade Iraq begs the question: What are the limits of the President’s war-making authority?” This use of the phrase is simply a linguistic mistake. To “beg the question” is not to raise the issue, but to assume the truth of the conclusion sought.

Circular arguments are certainly fallacious, but the premises are not irrelevant to the conclusions drawn. They are relevant; indeed, they prove the conclusion, but they do so trivially—they end where they began. A petitio principii is always technically valid, but always worthless.

OVERVIEW

Fallacies of Presumption

P1. Accident
An informal fallacy in which a generalization is applied to individual cases that it does not govern.

P2. Complex Question
An informal fallacy in which a question is asked in such a way as to presuppose the truth of some proposition buried in the question.

P3. Begging the Question (petitio principii)
An informal fallacy in which the conclusion of an argument is stated or assumed in one of the premises.
EXERCISES

Identify and explain any fallacies of defective induction or of presumption in the following passages.

1. My generation was taught about the dangers of social diseases, how they were contracted, and the value of abstinence. Our schools did not teach us about contraception. They did not pass out condoms, as many of today’s schools do. And not one of the girls in any of my classes, not even in college, became pregnant out of wedlock. It wasn’t until people began teaching the children about contraceptives that our problems with pregnancy began.


2. A national mailing soliciting funds, by People for the Ethical Treatment of Animals (PETA), included a survey in which questions were to be answered “yes” or “no.” Two of the questions asked were these:
   “Do you realize that the vast majority of painful animal experimentation has no relation at all to human survival or the elimination of disease?”
   “Are you aware that product testing on animals does not keep unsafe products off the market?”

3. If you want a life full of sexual pleasures, don’t graduate from college. A study to be published next month in American Demographics magazine shows that people with the most education have the least amount of sex.


4. There is no surprise in discovering that acupuncture can relieve pain and nausea. It will probably also be found to work on anxiety, insomnia, and itching, because these are all conditions in which placebos work. Acupuncture works by suggestion, a mechanism whose effects on humans are well known.

   The danger in using such placebo methods is that they will be applied by people inadequately trained in medicine in cases where essential preliminary work has not been done and where a correct diagnosis has not been established.

5. In a motion picture featuring the famous French comedian Sacha Guitry, three thieves are arguing over division of seven pearls worth a king’s ransom. One of them hands two to the man on his right, then two to the man on his left. “I,” he says, “will keep three.” The man on his right says, “How come you keep three?” “Because I am the leader.” “Oh. But how come you are the leader?” “Because I have more pearls.”

6. “…I’ve always reckoned that looking at the new moon over your left shoulder is one of the carelessest and foolishest things a body can do. Old Hank Bunker done it once, and bragged about it; and in less than two years he got drunk and fell off of the shot tower, and spread himself out so that he was just a kind of a layer, as you may say; and they slid him edgeways between two barn doors for a coffin, and buried him so, so they say, but I didn’t see it. Pap told me. But anyway it all come of looking at the moon that way, like a fool.”

—Mark Twain, The Adventures of Huckleberry Finn, 1885

7. Former Senator Robert Packwood of Oregon became so angry at the state’s leading newspaper, the Portland Oregonian, that in response to a request from that paper for a quote, he offered this: “Since I quit talking to the Oregonian, my business has prospered beyond all measure. I assume that my business has prospered because I don’t talk to the Oregonian. Therefore I will continue that policy. Thanks.”

—The New York Times, 7 February 1999

8. Mr. Farrakhan, the Black Muslim leader, citing the example of Israel, said black Americans should also be able to form a country of their own on the African continent, and said he plans to ask African leaders to “carve out a territory for all people in the diaspora.” He said black Americans should also be granted dual citizenship by all African countries. “We want dual citizenship,” he said, “and because we don’t know where we came from, we want dual citizenship everywhere.”


9. The French claim to be a nation of rebels. In fact their heyday of revolution is over. Twenty-first century France rebels against change, not for it. What typically happens is that a French government
decides to do something radical like, say, enable companies to fire service-sector workers who assault their customers. The unions see this as the first step on the road to slavery and call a national strike. After a week of posturing the government backs down and waiters and sales clerks go back to insulting customers just as they have done since time immemorial.


10. Hiroyuki Suzuki was formerly a member of the Sakaume gumi, an independent crime family in Japan known for its role in gambling. Mr. Suzuki’s wife Mariko broke her kneecap, and when Mariko went to church the next Sunday, the minister put his hands on her broken knee and pronounced it healed. She walked away from church that day. Mr. Suzuki regarded her religion as a silly waste of time—but he was fascinated by the recovery of her knee. “In gambling,” he said, “you use dice. Dice are made from bone. If God could heal her bone, I figured he could probably assist my dice and make me the best dice thrower in all of Japan.” Mr. Suzuki’s gambling skills did improve, enabling him to pay off his debts. He now says his allegiance is to Jesus.


4.6 Fallacies of Ambiguity

The meaning of words or phrases may shift as a result of inattention, or may be deliberately manipulated within the course of an argument. A term may have one sense in a premise but quite a different sense in the conclusion. When the inference drawn depends on such changes it is, of course, fallacious. Mistakes of this kind are called fallacies of ambiguity or sometimes “sophisms.” The deliberate use of such devices is usually crude and readily detected—but at times the ambiguity may be obscure, the error accidental, the fallacy subtle. Five varieties are distinguished here.

A1. EQUIVOCATION

Most words have more than one literal meaning, and most of the time we have no difficulty keeping those meanings separate by noting the context and using our good sense when reading and listening. Yet when we confuse the several meanings of a word or phrase—accidentally or deliberately—we are