Chapter 8

1. X percent of the observed members of group A have property P. Therefore, X percent of all members of group A probably have property P.

2. Target group: The class of individuals about which an inductive generalization is made. Sample: The observed members of a target group. Relevant property: The property under study in a target group.

3. Its sample can be (1) too small or (2) not representative.

4. Thing A has properties P1, P2, P3 plus the property P4. Thing B has properties P1, P2, and P3. Therefore, thing B probably has property P4.

5. All the women in my yoga class are against the war. Ninety percent of the members of a national women’s group (twelve thousand members) are against the war. And all my women friends are against the war. The fact is, almost all American women oppose this war. Weak. Not representative.

6. Recently there was a racially motivated murder in Texas. Two white men killed a black man. Then another murder of a black man by some racist whites occurred in Louisiana. And in Mississippi an admitted racist finally was convicted of the murder of a black man that occurred years ago. The South has more racist killers than any other part of the country. Weak. Small sample; not representative.

7. Most professors at this college are not grading as strictly as they used to. They now give Bs for work to which they used to assign Cs. The grading standards in American colleges are dropping. Weak. Not representative; probably small sample.

8. The first time Ariana encountered trigonometry, she couldn’t understand it. And the first time she read Shakespeare, she didn’t get it. She will never understand anything. Weak. Small sample; not representative.

9. Americans are quite satisfied with the administration’s recent foreign policy decisions. An “instant poll” conducted yesterday on the CNN website got fifteen thousand responses from site visitors—and 95 percent of them said that American foreign policy was on the right track. Weak. Not representative.

10. Judging from what I’ve seen, anti-war demonstrators are just a bunch of peaceniks left over from the Vietnam War era. Weak (if “what I’ve seen” means personally witnessed). Small sample; not representative.

11. “Suppose that someone tells me that he has had a tooth extracted without an anaesthetic, and I express my sympathy, and suppose that I am then asked, ‘How do you know that it hurt him?’ I might reasonably reply, ‘Well, I know that it would hurt me. I have been to the dentist and know how painful it is to have a tooth stopped without an anaesthetic, let alone taken out. And he has the same sort of nervous system as I have. I infer, therefore, that in these conditions he felt considerable pain, just as I should myself.’” [Alfred J. Ayer]

Two things compared: experiences of tooth extraction; conclusion: that the other person was in considerable pain; strong.
12. “As for one who is choosy about what he learns . . . we shall not call him a lover of learning or a philosopher, just as we shall not say that a man who is difficult about his food is hungry or has an appetite for food. We shall not call him a lover of food but a poor eater. . . . But we shall call a philosopher the man who is easily willing to learn every kind of knowledge, gladly turns to learning things, and is insatiable in this respect.” [Socrates]

Two things compared: philosopher and eater; conclusion: that a philosopher is someone easily willing to learn every kind of knowledge; strong.

13. “Let us begin with a parable [showing that statements about God have no meaning]. . . . Once upon a time two explorers came upon a clearing in the jungle. In the clearing were growing many flowers and many weeds. One explorer says, ‘Some gardener must tend this plot.’ The other disagrees, ‘There is no gardener.’ So they pitch their tents and set a watch. No gardener is ever seen. ‘But perhaps he is an invisible gardener.’ So they set up a barbed-wire fence. They electrify it. . . . But no shrieks ever suggest that some intruder has received a shock. No movements of the wire ever betray an invisible climber. . . . Yet still the Believer is not convinced. ‘But there is a gardener, invisible, intangible, insensible.’ . . . At last the Sceptic despairs, ‘But what remains of your original assertion? Just how does what you call an invisible, intangible, eternally elusive gardener differ from an imaginary gardener or even from no gardener at all?’” [Antony Flew]

Two things compared: belief in an elusive gardener and belief in God; conclusion: that talk of an undetectable being such as God is meaningless. Weak.

14. School violence is caused mainly by teens playing violent video games. Incidents of violence in schools have increased as more and more teens are playing violent video games, as the video games themselves have become more graphically and realistically violent, and as the number and variety of video games have expanded dramatically.

Conclusion: School violence is caused mainly by teens playing violent video games. Weak. Overlooking relevant factors, failing to rule out coincidence.

15. Smoking and exposure to secondhand smoke among pregnant women pose a significant risk to both infants and the unborn. According to numerous studies, each year the use of tobacco causes thousands of spontaneous births, infant deaths, and deaths from SIDS. Death rates for fetuses are 35 percent higher among pregnant women who smoke than among pregnant women who don’t smoke.

Conclusion: Smoking and exposure to secondhand smoke among pregnant women pose a significant risk to both infants and the unborn. Strong.

16. Why are crime rates so high, the economy so bad, and our children so prone to violence, promiscuity, and vulgarity? These social ills have arisen—as they always have—from the “moral vacuum” created when Americans turn away from religion. Our current slide into chaos started when prayer was banned from public schools and secular humanism swooped in to replace it. And as God has slowly faded from public life, we have got deeper in the hole.

Conclusion: Serious social ills occur because Americans turn away from religion. Weak. Overlooking relevant factors, failing to rule out coincidence.

17. The twelve of us went on a hike through the mountains. We all drank bottled water except Lisa, who drank from a stream. Later she got really sick. Some intestinal thing. But the rest of us were fine. We’ve repeated this adventure many times on other hikes, with all but one of us drinking bottled water and one drinking from a stream. Everything else was the same. Each time, the person who drank from the stream got really ill. Drinking from streams on these hikes causes intestinal illness. Don’t do it.

Conclusion: Drinking from streams on these hikes causes intestinal illness. Strong.
18. Ever since I started drinking herbal tea in the morning, my energy level has improved and I’m a lot calmer during the day. That stuff works.
Conclusion: Herbal tea boosts energy and calms the nerves. Weak. Overlooking relevant factors, failing to rule out coincidence, possibly confusing cause and effect.

19. Yesterday my astrological chart—prepared by a top astrologer—said that I would meet an attractive person today, and I did. Last week, it said I’d come into some money, and I did. (Jack paid me that hundred dollars he owed me.) Now I’m a believer. The stars really do rule.
Conclusion: The stars rule. Weak. Failing to rule out coincidence.

20. Most of the terminal cancer patients in this ward who had positive attitudes about their disease lived longer than expected. Most of the negative-attitude patients didn’t live as long as expected. A positive attitude can increase the life expectancy of people with terminal cancer.
Conclusion: A positive attitude can increase the life expectancy of people with terminal cancer. Weak. Failing to rule out other relevant factors, failing to rule out coincidence, possibly confusing cause and effect.