Chapter 5: Gathering Information and Analyzing Possibilities

Key points of chapter

This chapter has some very basic statistics concepts in it, and has been know to cause mass hypnosis of a classroom. Take the advice offered in *The Restaurant at the End of the Universe*: "Don't Panic!" Your author tried very hard to make it approachable.

We begin with emphasizing the need for collecting the right data, and not too much or too little of it to make the decision or solve the problem. Pareto Analysis is a way of helping people understand that there's lots of detail out there, but most of it is unimportant. The difference between a known and unknown universe of samples is mentioned, and the basic concept of probability is introduced using cards, dice, and other simple ideas. The term gambler's fallacy is defined, as is the concept of risk-aversiveness. A brief introduction to stratification and data samples is given, but you certainly won't be ready to work for Harris Polls or J.D.Powers. Correlation, minus the formula, is discussed. I didn't even give the formula in the mathematical appendix, since no one does it by hand anymore unless the teacher is totally sadistic.

More information can be found on these concepts in the appendix.

Answers to Study Questions

1. Primary data is facts and figures collected specifically to use for a particular problem or issue. Secondary data has already been collected for some other purpose, but can apply to the issue at hand. Examples of primary data would be a survey or experiment. Examples of secondary data would be articles in *Consumer Reports*.
2. Make a list of the categories of data which could be collected, then arrange them in order starting with most useful. Start collecting the first (practical) one on that list. When you have enough data or run out of money and time to collect more, stop.
3. Known.
4. Personality, resources available, peer pressure, extent of inebriation, etc.
5. Dividing up information in a useful and representative fashion. Insuring that a sample population is composed of appropriate combinations of sub-groups in order to accurately represent the true population being studied.
6. Correlated.
7. It's predictably accurate (when done properly) and far less expensive and time consuming than doing a 100% study.

Answers to Exercises

Are you sweating yet?

Primary sources would include your customers, suppliers and employees. Secondary sources would be all sorts of market and government information including such things as cost of living, tax rates, airport data, and so on. The "Places Rated Almanac" is an example of a market data resource. Each student might be asked to list things appropriate to his or her job.

Example: Collect (anonymously, of course) the height in inches and weight in pounds of each person in the class. Are height and weight correlated? If you have a business calculator, you can actually test for the correlation coefficient. Your author did this for a past class and came up with a correlation of +0.41 and a regression equation of $W = -140 + 4.4 H$. Any topic will do, of course.

Other Materials

Answers to Brain Teasers from Chapter 4:

First page answers:
- Add "S" in front
- Alphabetical
- S (first letters of the numbers; the next is seven)
- All straight vs. all curved.

Second page answers (left to right, top to bottom):
- Man overboard
- I understand
- Open and shut case
- Neon light
- Split level (bi-level)
- Three degrees below zero
- Circles under the eyes (yeah, that's a toughie)
- Mousetrap (that one makes up for the previous)
- Backwards glance
- Partly cloudy (mostly cloudy)
- Man in the moon
- Reading between the lines
- Better late than never
- Bottom half of the ninth
- A round on me (heard at the watering hole after the game)

How'd you do with the second page?
0-6   Hello? Anybody there?
7-10   Keep practicing.
11-13   Above average.
14-15   Write a book on decision making!