Chapter 14

Is behavior probabilistic?

Many psychologists say that predicting actions with certainty cannot be done, because behavior is probabilistic. That is, given any set of conditions in which we find a person, we will be able to say only that there is a probability less than one that the person will do a particular thing. Therefore, the argument goes, any experiment that shows more people doing the predicted thing than you would expect from the base rate—enough more than you would expect from chance variation—shows that you have learned something about the causes of behavior.

But is behavior randomly variable?

Well, consider walking. For the purpose of argument, let's suppose your chance of taking another successful step is 999 in 1000 or .999. To say it another way, let's suppose you would expect to fall once in every 1000 steps. Suppose, to make the arithmetic simple, you walk fairly briskly along the street at 100 steps per minute. You would fall, on the average, once in 10 x 100 steps or once every 10 minutes. Other people walking on the street at that same rate would also be falling down every ten minutes. If ten people were walking near you, going in your direction, one of them would fall, on the average, every minute. But 100 steps per minute is a little fast for most people out on most errands. Fifty steps per minute, on the other hand, is a mere saunter. Let's suppose that 75 steps per minute is fairly close to the average on a city street where people are not just hanging out, but actually going someplace. You would fall, on the average, once in 13.3 x 75 = 1000 steps or once every 13.3 minutes. Among 13.3 other people, one of them would fall, on the average, every minute. Is this an accurate description of your experience when you walk on a city street? Among the people around you, do you see one falling, or even stumbling, every minute or so?

Well, you might say, taking a step could still be probabilistic, but the probability could be very, very high. All right, suppose the probability of a successful step to be 999,999 in a million. You would expect to fall only once in a million steps. At 75 steps per minute, a million steps would take 13,333 minutes or 222 hours. Suppose you are pretty sedentary and walk only one hour per day (counting *all* walking) on the average. Then you should expect to fall once in 222 days. Is that your experience? Do you fall—not from interferences such as an unseen object underfoot, but from inexplicable misfunctioning—once or twice a year? Do you know anyone—any physically normal adult—who does? I don't fall that often even from stumbling over something—and even at my age. Indeed, if my leg were to fail to carry through the intent of my step, I would not think, "Oh, well, that's just the normal unpredictability of behavior." On the contrary, I would hasten to my physician.

From my own experience (and yours, I believe) it is obvious to me that we walk with much better odds than a million to one that we will take the next step successfully. When the probability is that great, it seems to me to be stretching things a great deal to claim that behavior is intrinsically shot through with only probabilistic regularities. It seems to me much simpler and more reasonable to suppose that walking is under very precise control and is not probabilistic at all. Environmental events that can interfere with walking, it is true, *are* probabilistic; we cannot know when a dog will dart between our feet or when we will step into an unseen hole in a meadow. But the management of walking, one foot after another, is highly controlled and successful almost without exception.

Tom Bourbon made some similar calculations some years ago to illustrate the tenacity and success with which humans can control the perceptions