

PREFACE

Before we begin . . .

D*ance with Chance* was created from a meeting of minds. The minds belong to three professors with a shared interest in the human need to predict and influence the future.

It all began way back in the 1970s, when one of the professors, a statistician by training, had an unpleasant surprise. He'd noticed that business people were failing to use the latest statistical techniques in their forecasting and so embarked on some research to persuade them to become more mathematically sophisticated. But – to the professor's intellectual horror (not to mention a little shame) – the research showed that the practitioners' simple methods were better at predicting than his own clever ones.¹ He reluctantly began to wonder whether people should put more faith in human intuition than mathematics when predicting the future.

The statistician happened to mention this dilemma to one of his colleagues, a cognitive psychologist. “Sorry,” said the second professor, “empirical findings in my field show that human judgment is even less accurate at making predictions than statistical models.”² And for a long time, they both carried on thinking about this, which is what professors do best. Years later, the two men returned to the famous business school where they'd first met and got talking to a third professor. He turned out to be a decision scientist, whose research was all about reconciling theory with practice, the irrational with the rational, statistical models with gut feeling.

And so *Dance with Chance* was ignited by this intellectual spark, with the goal of helping people make better decisions in situations where accurate forecasting is just not possible. The key insight, it turns out, is to accept uncertainty and recognize exactly what can and cannot be predicted – the limits to predictability. Only then can we realistically manage the uncertainty we confront in our daily lives and avoid falling victim to the vagaries of chance.

But why, it's only natural to ask, don't people already understand the implications of these limits? The reason is that, for much of our lives, we don't need to. For example, although there are uncertainties involved in everyday activities such as eating, going to the cinema, reading, or even walking down a street, we can deal with each of these as they arise. They require neither accurate forecasts nor much advance planning. At the same time, there are many events that we *can* predict accurately – consider the times of high and low tides, sunrise and sunset, or our favorite TV shows. Regularity and predictability rule much of our daily lives.

Yet, we also have to make many important decisions under quite different conditions – where we have only limited ability to predict and lack control over outcomes. Who knows, for example, what tomorrow's or next year's stock prices will be? When will a subprime crisis develop and cost financial firms, supposedly experts in handling risk, several trillion dollars in losses? Where and when will the next major earthquake or terrorist attack occur? Will your new boss like the way you work – and will she promote you? Then there's that new product you're launching after two years of intensive preparation. Will it be successful or will it flop?

The two kinds of situations are quite different. And yet, people still tend to treat the uncertainties of the second as though they were like those of the first – that is, predictable. Doing so may be psychologically comforting but it is actually illusory. In short, we suffer from an “illusion of control” that fools us into thinking the future is more predictable and less uncertain than it really is. Or worse, we believe we can influence chance events through our own actions.³

It's tempting to believe that these kinds of misconceptions no longer exist. After all, rational thinking is supposed to drive today's educated and technologically advanced societies. But superstition is still strangely prevalent. As recently as 2004, the National Science Foundation in the US reported that

28% of Americans believe in astrology, that 15% read their horoscopes every day or “quite often,” and that 70% of students claim good luck charms help them perform better academically. On the other side of the planet, millions of Chinese people think that the color red will bring happiness, wealth, fame, and good luck. The Chinese also believe that the number 8 is super lucky. Indeed, one person paid 2.33 million Yuan, or \$280,000 (at the time), to get the super lucky 8888–8888 telephone number consisting of eight 8s.⁴ And beliefs like these are everywhere.⁵ Italians omit the number 13 from their national lottery, more than 80% of high-rises in many parts of the world lack a thirteenth floor, airports often skip the thirteenth gate, airplanes have no thirteenth aisle, and hospitals and hotels regularly have no room number 13. These are superstitions that have no place in the twenty-first century, yet they’re still to be found all over the world influencing the way billions of people behave.

Are we crazy? Absolutely not. We have an innate desire to control our environments and, in order to do so we need to predict the future. This has helped us evolve as a species over the centuries. But it can also lead us astray. Above all it prevents us from recognizing the substantial and irreducible role of chance in our lives and leads us into making irrational decisions, often based on superstitious beliefs. This is true in practically all important aspects of our lives and work. Even if you *think* you are immune to all superstition, even if you *think* you are an expert in your field, even if you *think* you never behave irrationally, you can’t help being human. You’re born with an instinct to deny chance its rightful place – and your emotions only make this instinct stronger.

The advantage of superstition is that it comforts us into believing there are things we can do to control the uncontrollable. This is important because failure to feel in control of our lives is psychologically disturbing; it leads to both anxiety and stress. It’s no wonder people succumb to the “illusion of control,” which assumes predictability, ignores uncertainty, and minimizes the role of luck. Why be realistic and worry when it’s much easier to believe that our own ability and actions can overcome the effects of chance?

In this book we show that being realistic and giving up the illusion of control actually increases the *genuine* control we have over our lives. We call this the “paradox of control.” To dance with chance is to accept the role and

importance of chance and to take advantage of the opportunities it creates while avoiding its negative consequences. Although psychologically discomfoting, we will show you that this is actually beneficial and increases your control over your destiny. It lets you harness the role of luck to improve your personal well-being or – as we call it – your “personal Fortune.”

Consider, for instance, the following questions:

- Why do banks use simple computer programs to assess the creditworthiness of potential customers rather than trusting the judgments of their managers?
- Why do the investment portfolios created by blindfolded monkeys throwing darts at stock listings often outperform those chosen by professional money managers earning six-figure salaries?
- Why did a study in a major metropolitan hospital show that more accurate decisions would have been made in admitting patients to the cardiac unit if, instead of trusting physicians' judgments, decisions had been made using a simple statistical rule?
- Why are the richest Americans (as identified by *Forbes* magazine's list of billionaires) no happier than the Inuit people who live in the polar cold of northern Greenland?
- Why do countries that control their economies through central planning fare worse than those that don't?

As we will discuss in this book, the answers to all of these questions illustrate how giving up illusory control actually increases control and results in substantial benefits.

The illusion of control pervades almost all aspects of our lives and can have serious negative implications for our well-being. Ideally, we would like to have covered all the important issues affecting our lives in this book. But this is impossible. So, heeding our own advice, we ceded control to our potential readers by conducting a survey to find out what was most important to them. This revealed four critical areas that we'll cover extensively in this book. We then asked our respondents to estimate how much of what happens to them in these areas is due to their own abilities or actions as opposed to chance. Their answers revealed strong illusions of control and translate into

the sad fact that our friends, families, students, and colleagues stand to suffer many unnecessary disappointments. Our goal, then, is to help them – and, of course you – overcome the illusion of control. Once you accept the inherent limits to predictability, we will show you how the paradox of control actually allows you to gain more control.

In short, this book was conceived to help you avoid costly mistakes and to exploit the role of luck in the most important aspects of your life. You should not be afraid to “dance with chance.” Instead, you should seek both beauty and opportunity in randomness and take some life-enhancing steps of your own.

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