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—ROBERT CIALDINI, author of *Influence*

The Art of SUIXUUL Clearly

ROLF DOBELLI

The Art of Thinking Clearly

Rolf Dobelli

Translated by Nicky Griffin



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Dedication

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Introduction

In the fall of 2004, a European media mogul invited me to Munich to partake in what was described as an “informal exchange of intellectuals.” I had never considered myself an “intellectual”—I had studied business, which made me quite the opposite, really—but I had also written two literary novels and that, I guessed, must have qualified me for such an invitation.

Nassim Nicholas Taleb was sitting at the table. At that time, he was an obscure Wall Street trader with a penchant for philosophy. I was introduced to him as an authority on the English and Scottish Enlightenment, particularly the philosophy of David Hume. Obviously I had been mixed up with someone else. Stunned, I nevertheless flashed a hesitant smile around the room and let the resulting silence act as proof of my philosophical prowess. Right away, Taleb pulled over a free chair and patted the seat. I sat down. After a cursory exchange about Hume, the conversation mercifully shifted to Wall Street. We marveled at the systematic errors in decision making CEOs and business leaders make—ourselves included. We chatted about the fact that unexpected events seem much more likely in retrospect. We chuckled about why it is that investors cannot part with their shares when they drop below acquisition price.

Following the event, Taleb sent me pages from his manuscript, a gem of a book, which I commented on and partly criticized. These went on to form part of his international best seller, *The Black Swan*. The book catapulted Taleb into the intellectual all-star league. Meanwhile, my appetite whetted, I began to devour books and articles written by cognitive and social scientists on topics such as “heuristics and biases,” and I also increased my e-mail conversations with a large number researchers and started to visit their labs. By 2009, I realized that, alongside my job as a novelist, I had become a student of social and cognitive psychology.

The failure to think clearly, or what experts call a “cognitive error,” is a systematic deviation from logic—from optimal, rational, reasonable thought and behavior. By “systematic,” I mean that these are not just occasional errors in judgment but rather routine mistakes, barriers to logic we stumble over time and again, repeating patterns through generations and through the centuries. For example, it is much more common that we overestimate our knowledge than we underestimate it. Similarly, the danger of losing something stimulates us much more than the prospect of making a similar gain. In the presence of other people we tend to adjust our behavior to theirs, not the opposite. Anecdotes make us overlook the statistical distribution (base rate) behind it, not the other way round. The errors we make follow the same pattern over and over again, piling up in one specific, predictable corner like dirty laundry, while the other corner remains relatively clean (i.e., they pile up in the “overconfidence corner,” not the “underconfidence corner”).

To avoid frivolous gambles with the wealth I had accumulated over the course of my literary career, I began to put together a list of these systematic cognitive errors, complete with notes and personal anecdotes—with no intention of ever publishing them. The list was originally designed to be used by me alone. Some of these thinking errors have been known for centuries; others have been discovered in the last few years. Some come with two or three names attached to them. I chose the terms most widely used. Soon I realized that such a compilation of pitfalls was not only useful for making investing decisions but also for business and personal matters. Once I had prepared the list, I felt calmer and more levelheaded. I began to recognize my own errors sooner and was able to change course before any lasting damage was done. And, for the first time in my life, I was able to

recognize when others might be in the thrall of these very same systematic errors. Armed with my list, I could now resist their pull—and perhaps even gain an upper hand in my dealings. I now had categories, terms, and explanations with which to ward off the specter of irrationality. Since Benjamin Franklin’s kite-flying days, thunder and lightning have not grown less frequent, powerful, or loud—but they have become less worrisome. This is exactly how I feel about my own irrationality now.

Friends soon learned of my compendium and showed interest. This led to a weekly newspaper column in Germany, Holland, and Switzerland, countless presentations (mostly to medical doctors, investors, board members, CEOs, and government officials), and eventually to this book.

Please keep in mind three things as you peruse these pages: First, the list of fallacies in this book is not complete. Undoubtedly new ones will be discovered. Second, the majority of these errors are related to one another. This should come as no surprise. After all, all brain regions are linked. Neural projections travel from region to region in the brain; no area functions independently. Third, I am primarily a novelist and an entrepreneur, not a social scientist; I don’t have my own lab where I can conduct experiments on cognitive errors, nor do I have a staff of researchers I can dispatch to scout for behavioral errors. In writing this book, I think of myself as a translator whose job is to interpret and synthesize what I’ve read and learned—to put it in terms others can understand. My great respect goes to the researchers who, in recent decades, have uncovered these behavioral and cognitive errors. The success of this book is fundamentally a tribute to their research. I am enormously indebted to them.

This is not a how-to book. You won’t find “seven steps to an error-free life” here. Cognitive errors are far too engrained to rid ourselves of them completely. Silencing them would require superhuman willpower, but that isn’t even a worthy goal. Not all cognitive errors are toxic, and some are even necessary for leading a good life. Although this book may not hold the key to happiness, at the very least it acts as insurance against too much self-induced unhappiness.

Indeed, my wish is quite simple: If we could learn to recognize and evade the biggest errors in thinking—in our private lives, at work, or in government—we might experience a leap in prosperity. We need no extra

cunning, no new ideas, no unnecessary gadgets, no frantic hyperactivity—
all we need is less irrationality.

1

Why You Should Visit Cemeteries

Survivorship Bias

No matter where Rick looks, he sees rock stars. They appear on television, on the front pages of magazines, in concert programs, and at online fan sites. Their songs are unavoidable—in the mall, on his playlist, in the gym. The rock stars are everywhere. There are lots of them. And they are successful. Motivated by the stories of countless guitar heroes, Rick starts a band. Will he make it big? The probability lies a fraction above zero. Like so many others, he will most likely end up in the graveyard of failed musicians. This burial ground houses ten thousand times more musicians than the stage does, but no journalist is interested in failures—with the exception of fallen superstars. This makes the cemetery invisible to outsiders.

In daily life, because triumph is made more visible than failure, you systematically overestimate your chances of succeeding. As an outsider, you (like Rick) succumb to an illusion, and you mistake how minuscule the probability of success really is. Rick, like so many others, is a victim of *survivorship bias*.

Behind every popular author you can find a hundred other writers whose books will never sell. Behind them are another hundred who haven't found publishers. Behind them are yet another hundred whose unfinished manuscripts gather dust in drawers. And behind each one of these are a hundred people who dream of—one day—writing a book. You, however, hear of only the successful authors (these days, many of them self-published) and fail to recognize how unlikely literary success is. The same goes for photographers, entrepreneurs, artists, athletes, architects, Nobel Prize winners, television presenters, and beauty queens. The media is not interested in digging around in the graveyards of the unsuccessful. Nor is this its job. To elude the *survivorship bias*, you must do the digging yourself.

You will also come across *survivorship bias* when dealing with money and risk: Imagine that a friend founds a start-up. You belong to the circle of potential investors and you sense a real opportunity: This could be the next Google. Maybe you'll be lucky. But what is the reality? The most likely scenario is that the company will not even make it off the starting line. The second most likely outcome is that it will go bankrupt within three years. Of the companies that survive these first three years, most never grow to more than ten employees. So, should you never put your hard-earned money at risk? Not necessarily. But you should recognize that the *survivorship bias* is at work, distorting the probability of success like cut glass.

Take the Dow Jones Industrial Average index. It consists of out-and-out survivors. Failed and small businesses do not enter the stock market, and yet these represent the majority of business ventures. A stock index is not indicative of a country's economy. Similarly, the press does not report proportionately on all musicians. The vast number of books and coaches dealing with success should also make you skeptical: The unsuccessful don't write books or give lectures on their failures.

Survivorship bias can become especially pernicious when you become a member of the "winning" team. Even if your success stems from pure coincidence, you'll discover similarities with other winners and be tempted to mark these as "success factors." However, if you ever visit the graveyard of failed individuals and companies, you will realize that its tenants possessed many of the same traits that characterize your success.

If enough scientists examine a particular phenomenon, a few of these studies will deliver statistically significant results through pure coincidence—for example, the relationship between red wine consumption and high life expectancy. Such (false) studies immediately attain a high degree of popularity and attention. As a result, you will not read about the studies with the “boring” but correct results.

Survivorship bias means this: People systematically overestimate their chances of success. Guard against it by frequently visiting the graves of once-promising projects, investments, and careers. It is a sad walk but one that should clear your mind.

2

Does Harvard Make You Smarter?

Swimmer's Body Illusion

As essayist and trader Nassim Taleb resolved to do something about the stubborn extra pounds he'd been carrying, he contemplated taking up various sports. However, joggers seemed scrawny and unhappy, and bodybuilders looked broad and stupid, and tennis players? Oh, so upper-middle-class! Swimmers, though, appealed to him with their well-built, streamlined bodies. He decided to sign up at his local swimming pool and to train hard twice a week.

A short while later, he realized that he had succumbed to an illusion. Professional swimmers don't have perfect bodies because they train extensively. Rather, they are good swimmers because of their physiques. How their bodies are designed is a factor for selection and not the result of their activities. Similarly, female models advertise cosmetics and, thus, many female consumers believe that these products make you beautiful. But it is not the cosmetics that make these women model-like. Quite simply, the models are born attractive, and only for this reason are they candidates for

cosmetics advertising. As with the swimmers' bodies, beauty is a factor for selection and not the result.

Whenever we confuse selection factors with results, we fall prey to what Taleb calls the *swimmer's body illusion*. Without this illusion, half of advertising campaigns would not work. But this bias has to do with more than just the pursuit of chiseled cheekbones and chests. For example, Harvard has the reputation of being a top university. Many highly successful people have studied there. Does this mean that Harvard is a good school? We don't know. Perhaps the school is terrible, and it simply recruits the brightest students around. I experienced this phenomenon at the University of St. Gallen in Switzerland. It is said to be one of the top ten business schools in Europe, but the lessons I received (albeit twenty-five years ago) were mediocre. Nevertheless, many of its graduates were successful. The reason behind this is unknown—perhaps it was due to the climate in the narrow valley or even the cafeteria food. Most probable, however, is the rigorous selection.

All over the world, MBA schools lure candidates with statistics regarding future income. This simple calculation is supposed to show that the horrendously high tuition fees pay for themselves over a short period of time. Many prospective students fall for this approach. I am not implying that the schools doctor the statistics, but still their statements must not be swallowed wholesale. Why? Because those who pursue an MBA are different from those who do not. The income gap between both groups stems from a multitude of reasons that have nothing to do with the MBA degree itself. Once again we see the *swimmer's body illusion* at work: the factor for selection confused with the result. So, if you are considering further study, do it for reasons other than a bigger paycheck.

When I ask happy people about the secret of their contentment, I often hear answers like “You have to see the glass half full rather than half empty.” It is as if these individuals do not realize that they were born happy and now tend to see the positive in everything. They do not realize that cheerfulness—according to many studies, such as those conducted by Harvard's Dan Gilbert—is largely a personality trait that remains constant throughout life. Or, as social scientists David Lykken and Auke Tellegen starkly suggest, “trying to be happier is as futile as trying to be taller.” Thus, the *swimmer's body illusion* is also a self-illusion. When these optimists

write self-help books, the illusion can become treacherous. That's why it's important to give wide berth to tips and advice from self-help authors. For billions of people, these pieces of advice are unlikely to help. But because the unhappy don't write self-help books about their failures, this fact remains hidden.

In conclusion: Be wary when you are encouraged to strive for certain things—be it abs of steel, immaculate looks, a higher income, a long life, a particular demeanor, or happiness. You might fall prey to the *swimmer's body illusion*. Before you decide to take the plunge, look in the mirror—and be honest about what you see.