

FREE FIRST CHAPTER

COGNITIVE BIASES IN A NUTSHELL

Understanding Cognitive Biases And Why They Exist

How To Spot And Stop The Hidden Errors Sabotaging Your Thinking — Chapter One. About a 9-minute read.

Our daughter, Bernadette, is a ballerina par excellence.

During the staging of *The Peacock Empress* in the prestigious Center of the Performing Arts, she danced with international ballet stars from Russia and China. After the elegant *pas de deux* executed with flawless triple *pirouettes* and a flamboyant *grand jeté*, I jumped to my feet to unabashedly yell, "*Brava, Bernadette, brava!*"

No, my daughter was not the prima ballerina. It just happened that her part, the Frolic of the Reindeer, immediately followed the *pas de deux*. Berna was three feet tall and six years old, dressed in a brown, furry jumpsuit and felt antlers. She was the smallest "reindeer" in beginners' class, so she was at the front of the line and the first of her group to make an entrance. She ran tiptoed across the stage in her tiny ballet slippers, arms waving in the air with childlike abandon. She was the most charming, bedimpled, joyful Bambi look-alike that ever graced the ballet stage.

Over the next decade and a half, she blossomed into an accomplished soloist in a professional ballet company, but rank is just a label. Berna could be standing motionless in a ballet pose as part of the *corps de ballet*, yet for us, her parents, she commanded the entire stage.

Me, biased? You bet! And so were the other parents of the kinder ballet class. (I wasn't yelling alone, you know.) "Biased" is regarded as a bad word these days, but that notoriety is not justified. Bias simply means partiality, and everyone is partial to something. "Bias" is now used interchangeably with "prejudice," although a fine line separates the two. Prejudice means fostering a preconceived judgment or unfair opinion; when prejudice is acted upon, it turns to discrimination. Bias is an attitude or belief, frequently unconscious, shaped by a multitude of factors – culture, upbringing, and past experiences. The law is biased in particular situations. For instance, "Those who have less in life should have more in law"* is a justified bias. Biases become wrong when they are out of control and tend to inflict harm on oneself or others.

This book was written with ordinary, everyday people in mind, people like you and me. We encounter many instances when we think and act intuitively. It is a part of us, and more often than not, we are unaware that we are doing it. And even if we suspect that we might have decided or acted rashly, we frequently do not have a ready plan to avert its effects. That is where this book comes in handy.

Each chapter you are about to read examines a different type of cognitive bias – how we may recognize it, its nature and origins, and how we may address it. Examples in short anecdotes provide a practical understanding of how and why the bias may be recognized. At the end of each chapter, action steps are suggested to help develop the habit of avoiding negative cognitive biases.

The book brings together information found in academic studies and online sources, relayed in an informal and conversational format. It does not purport to provide all the details about cognitive biases, but it focuses on nuggets of practical knowledge that can be applied to situations in our daily lives. Most importantly, we seek to inject warmth and humor into these conversations. You are more than an audience, more than mere readers of our publications. We are more than book vendors. We are, you and us together, kindred spirits on a journey of discovery about ourselves that hopefully will be as enjoyable as it is informative.

I consider it an honor that you would devote a portion of your valuable time and attention to reading this book. I include personal experiences relevant to the cognitive biases discussed in the hope that you would find this same relevance in your own daily life. I am, like you, an ordinary traveler – a teacher and writer with knowledge and experience in engineering, business and finance, and law. I am a wife, mother, sister, and daughter. After you have perused this book, I hope that I will have gained your trust and confidence.

We hope you may find some valuable insights for self-improvement, including some moments of delight and entertainment. With this, let us now begin our journey.

— Dianna Gene P. Aquino

Sir Christopher Lee

In the 1970s, a news article was published about Christopher Lee exchanging pleasantries with a group of nuns and indulging their request for his autograph. This was before social media, and the story appeared in the entertainment section of a widely distributed broadsheet. The story was picked up in the broadcast news and garnered quite a stir. Who was Christopher Lee? Why was it unusual for nuns to be asking for his autograph? And why was this encounter so important that it is reported as news?

Vampire movies today are better associated with stars like Kristen Stewart and Robert Pattinson. Still, from the late fifties to the mid-seventies, Christopher Lee was the Lord of the Celluloid Undead, pitted against Peter Cushing's Van Helsing. Lee practically cemented the image of Dracula with fangs, blood-red contact lenses, pointed wooden stakes, and the dark figure with an underlying sensuality. To be sure, he performed outstandingly in other roles throughout his career of 60 years, but he was the quintessential Prince of Darkness.

Why was it unusual for nuns to be asking for his autograph? After all, Lee was a famous actor, and the nuns were no different than the multitude of Hollywood's star-struck admirers. There is nothing out-of-place about fans asking for their star's autograph. Unless, of course, a reporter associated Sir Christopher Lee with his on-screen persona and that the nuns, who are people of a religious persuasion, defied some secret taboo by watching

his vampire movies. The reporter would naturally seek an angle to make his article sell among its readers.

So why report this as news? The reporter played on readers' likely pattern of thinking that associates Lee with his role as Dracula and the nuns' religious affiliation. Given these associations, it is amusing that religious nuns would be avid admirers of the Prince of Darkness. The reporter was not wrong in piquing the readers' interest, and his story sold well. But in doing so, he relied on several cognitive biases – that the readers equated Lee with evil (which is untrue), that the nuns were the agents of good (ignoring that they are movie enthusiasts), and "never the twain shall meet," in the immortal words of Rudyard Kipling*. But the truth was Lee is not Dracula, nuns enjoy motion pictures, and the dichotomy between good and evil played no part at all in their meeting.

What Are Cognitive Biases?

You can tell from the story that cognitive biases make people arrive at a wrong conclusion. A concise definition of cognitive bias is that it is:

"A systematic error in thinking that occurs when people are processing and interpreting information in the world around them."

This error in interpretation "affects the decisions and judgments that they make"*. It is a systematic error because it is not accidental but rather the result of a chronic inaccuracy in how a person observes or interprets information. The bad news is that since it is habitual, it evades the awareness of the person committing the error. The good news is that, once the person is made aware of the habit and resolves to do away with it, there is a good chance that the error may be avoided or reduced.

For instance, growing up our mothers told us that tomatoes are vegetables, and we eat them in our vegetable salad. As a matter of habit, therefore, we think of tomatoes as veggies. However, when we studied biology, our biology teachers told us that tomatoes are fruits, not vegetables. "Ah! But how could that be, since I have never seen tomatoes in fruit salads, only in vegetable salads?" one would think. Our moms (and almost every culinary

expert on the planet) had programmed us to think in terms of what goes into a fruit or a vegetable salad. By scientific definition, however, tomatoes are the seed-bearing part of the plant and are therefore fruits. Knowing this, we adjust our decisions and the acts we take involving tomatoes. In a scientific context, we think of tomatoes as fruits, but they are still vegetables in food preparation, so never tell your mom that she was wrong in this respect.

Cognitive biases are habitual mistakes that arise due to attention limitations, embedded memories, and a myriad of other mental lapses that intervene in our rational thinking. Anything habitual is challenging to eliminate because it is ingrained in us. So, even though we can make a mighty effort to eliminate our errors, we are bound to repeat them occasionally. Unbeknownst to ourselves when we make them, cognitive biases can be pretty obvious to others or even to us in hindsight. But they can also be so subtle that they are nearly impossible to identify.

Let's say as you are walking, you come to an open ladder right in your path. Without skipping a step, you deviate either to the left or right to avoid walking under it. Someone sees you and remarks, "I didn't know you were superstitious! Do you believe that it is bad luck to walk under a ladder?" Your first retort is, "Of course I'm not superstitious! Something might fall on my head if I walked under it!" You have just performed a rational thought process because you thought of the possible consequence of your act. But you know in your heart of hearts that, during your most impressionable years, your grandfather told you: "Never walk under a ladder. It is bad luck!" So, although you contemplate the situation as much as you can, it is impossible, even for you, to say whether you avoided the ladder because of a memory (cognitive bias) or the desire to avoid being clunked by a falling hammer (rational thought).

It is an advantage to rely on intuition and reason, but intuitive thinking can generate cognitive biases that may lead us astray. Therefore, it is essential to be wary of the more critical and frequent cognitive biases we may be making and avoid the harmful ones.

The Cognitive Bias Codex

Before we close this chapter, let us take a quick look at the attempt by John Manoogian III and Buster Benson to create a conceptual diagram of all known biases that exist to date. While it is as exhaustive as possible, its creators take care to frequently update the diagram. There are four quadrants according to which the biases are grouped – *Too Much Information*, *Not Enough Meaning*, *Need to Act Fast*, and *What Should We Remember?* We include it here just to have an idea of the complexity of cognitive biases as a window to our human mind.

Action Steps

The Cognitive Bias Codex provides the classifications of more than 180 cognitive biases grouped according to categories and descriptions. There are four principal categories and 20 descriptions, with the cognitive biases designated within each description. The descriptions may be situated within a category, or midway between two categories.

The four categories are:

1. Too Much Information
2. Not Enough Meaning
3. Need To Act Fast
4. What Should We Remember?

Select any one description within the four categories. Reflect upon a past experience that appears to fall in this description. You need not be particular about the specific cognitive bias.

For example, under "Need to Act Fast," one of the descriptions of the cognitive biases is "To stay focused, we favor the immediate, relatable thing in front of us." A situation that may fall under this heuristic would be when we go shopping in a grocery store whose shelves are stocked with multiple brands and variants of the same goods. There is no time to read all the labels or compare all the prices of all the items, so we typically focus on

those products we could remember from commercials or from word-of-mouth among friends and family. Sometimes, we are not even aware of the information source that influences our thinking.

Try to cite one actual experience for each of the four categories of cognitive biases.

Moving On

We all have our biases, and sometimes we recognize them as irrational, inexplicable tendencies to think about or do something. Many times, they are harmless, and we just dismiss them as quickly as we form them in our minds. Sometimes, however, our irrational action under the influence of a cognitive bias has negative consequences that we regret in hindsight. What could these be, and how can we avoid them? The following chapters may shed some light on these biases.

References

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2. Kipling, Rudyard. "The Ballad of East and West," Kipling Society, 1889. Accessed 29 August 2021.
3. Cherry, Kendra. "What is Cognitive Bias?" *Very Well Mind*, July 19, 2020. Accessed 28 August 2021.