A Brief Guide To Thinking Rationally And Why Deviating from Rationality May Harm Your Business

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Author’s Note

This guide will take you on a journey to the fundamentals of logical thinking and why it is critical for your business to ponder your choices and calm your emotions rather than acting rashly. It will teach you how to identify the knowledge foundations that underpin rational thinking in order to improve your critical judgement skills.

As always, I never give recipes in my writings, and I strongly dislike anyone who postures as a guru and pontificates on this and that. I can just share my experience, report my expertise, and give an account of the findings and techniques I learnt during my studies and career.

In the first part of this handbook, I illustrate my intellectual journey, or my knowledge, as I want it to be evident the assumptions on which I base my study and findings. In addition, I discuss the fundamentals of rationality and why it is critical that we approach things rationally.

In the second part, I'll explain why we shouldn't listen to baseless opinions and be carried away by emotion if we do care about our business whether as owners or employees.

Last but not least, regardless of what you think of the Dunning-Kruger effect, according to which a knowledgeable person can never be absolutely sure of anything, uncertainty is the essence of scientific inquiry.

Have fun reading!

PART I

The path to rationality and its implications for the business world.

Introduction

I am not a psychologist and have no intention of offering psychological advice.

There are many people out there who promise knowledge of this and that without being qualified; I am not one of them.

Throughout my career, I've witnessed business owners make fatal errors due to a lack of rationality and sound judgement.

As I observed these errors, I realised that I required a more solid foundation of technical knowledge to assist businesses in streamlining their processes and, consequently, the actions of their managers and staff.

Thanks to my education, I've always had a decent supply of rational abilities, and this has allowed me to recognise where I could improve my knowledge and my profession. Thus, I supplemented my knowledge in economics and computer science with business engineering. This specialisation has helped me strengthen my analytical and technical skills in the face of antiquated methods of management.

As a trainer for managers and employees, I place a strong emphasis on the importance of ongoing practice of critical thinking.

If I've learnt anything, it's that thinking illogically is a big mistake for living a peaceful life cognizant of one's means and limits, and it's also bad for business.

Therefore, whether you are an employee or a business owner, illogical thinking irreversibly affects your business and, undoubtedly, your life.

In general, what is a company?

A company is an organism composed of several elements, some are simple but most are complex. Human behaviour adds to the complexity, not because people behave erratically, but because processes are often unclear, which is a responsibility of management rather than staff.

We instantly recognise the need to organise and optimise a large number of processes in order to make them rational, that is, intelligible and easily executable by the parties involved.

One of the domains of knowledge that enables us to respond effectively to this is business engineering.

This discipline assists us in designing processes and workflows, better understanding and solving problems, and acting logically.

Business engineering is an interdisciplinary field that combines principles and methods from business administration, engineering, and information technology to optimise and improve business processes and systems. It focuses on applying engineering concepts and techniques to enhance the efficiency, effectiveness, and competitiveness of organisations.

The goal of business engineering is to analyse and restructure business processes, workflows, and systems in order to achieve better performance, productivity, and profitability. It involves a systematic approach to understanding the different components of a business, including its strategy, operations, technology, employees, and finding ways to align and integrate them more effectively.

Therefore, starting from the assumption that a company is a system helps us in our path of rationalising and giving a logical sense to all its activities.

When we refer to a company as a system, it means that we view it as a complex and interconnected entity composed of various interdependent components, processes, and people working together towards common goals. Just like a system in general, a company has inputs, processes, and outputs.

Companies receive inputs in the form of resources, such as financial capital, employees, raw materials, information, technology, and various other assets required to operate. These inputs are essential for the company's functioning and growth.

Within a company, there are numerous interconnected processes and functions that work together to transform inputs into outputs. These processes can include production, marketing, sales, finance, personnel

management, research and development, customer service, and more. Each process interacts with others, influencing and being influenced by them.

The outputs of a company can vary depending on its nature and industry. It can be products, services, information, solutions, or a combination of these. The goal of a company is to create valuable outputs that meet customer needs, generate revenue, and achieve its objectives.

Moreover, viewing a company as a system allows us to understand how changes or disruptions in one part of the system can affect other parts. It helps in identifying inefficiencies, optimising processes, and improving overall performance. A system perspective also emphasises the importance of collaboration, communication, and alignment between different components of the company to achieve its objectives.

Viewing things as a system provides a holistic framework to understand its functioning, interdependencies, and the dynamics at play within it.

The most important thing to keep in mind is that you can't get anywhere without being methodical and practical. Furthermore, don’t forget that impulsiveness is always a significant threat.

To run a successful business, it is not necessary for the owner to have expert knowledge in these areas; rather, what is required is that the owner appreciates the significance of these abilities and hires the appropriate personnel to implement them, and that the owner considers employee training to be essential to the success of the company.

Personnel training must be continual and not just for learning this or that procedure or tool; it must also be a time for reflection and encouragement of critical and rational thinking.

Yet again, to avoid missing the target, the entrepreneur must maintain a logical and sensible mindset. Never trust an emotional attitude.

My path to knowledge

I’ve always considered physics a fascinating subject, electricity is a branch of physics, but when I decided to study electrical engineering I did it more because many of my friends did than because I was interested in it. I didn't enjoy designing power plants and engines.

The topics I liked the most about that course of study were chemistry and electromagnetism. Electricity and magnetism are the same natural forces, and this element of physics has long piqued my interest; Maxwell's equations are a marvel of human creativity.

Later, I got hooked on quantum physics, although I never truly studied it, merely dabbling out of curiosity.

Actually, I was interested in philosophy, and what is philosophy if not an exercise in learning to double-check what you know?

So, before embarking on studying economics, I studied philosophy of law. A very exciting subject. It was like an epiphany for me, it helped me a lot towards my path to logical thinking.

Studying economics and computer science with a background in philosophy, and my previous technical knowledge in physics, helped me put things together.

Consideration and deliberation prior to action are akin to a golden rule.

Of course, I consider my route to knowledge to include other aspects of human culture, such as sports, which I practised and continue to appreciate, as well as arts. I've enjoyed literature, music, and the figurative arts since I was a kid. Rock & roll was my passion, and I saw a good blend of everything in it: poetry, music, painting, and cinema. This, along with the fact that I am a social creature and a member of the Homo Sapiens species, has shaped me into the person I am today.

I am a firm believer in Socrates, I am well aware of my ignorance.

The world is probabilistic; we cannot know it deterministically, and I find this to be fantastic because it makes acquiring knowledge an exciting journey.

In a nutshell, what is science?

Karl Popper (1902 - 1994) was an Austrian-British philosopher who devoted his academic life to philosophy of science. He is best known for his attempt to undermine the classical positivist view of the

scientific method by substituting the falsification principle for induction.

Popper taught us that science is the polar opposite of dogma, and hence any scientific theory must be refutable. In his own words: "*If observation shows that the predicted effect is definitely absent, then the theory is simply refuted*."

Science, in fact, requires testability, is not a form of religion, as the cultural movement known as scientism believed.

Scientism, which began with Francis Bacon (1561 - 1626) - one of the fathers of modern science - and which lasted until the early 1900s before succumbing to Einstein's theory of relativity, is the belief that science and the scientific method are the best or only means of determining the truth about the world and reality. Simply put, science can explain everything in a deterministic way, and when it does, its assumptions are proven to be accurate once and for all.

Popper defined scientism "*the aping of what is widely mistaken for the method of science*."

And I completely agree! And, by chance, not only myself, but the entire scientific community nowadays!!

The lesson here is that scientific knowledge is provisional - that it represents the best we can accomplish at the time.

Science is a path fraught with uncertainty, and this is what draws people to it; science is research. Its allure is in discovering that what we know reveals what we don't know; that is, when we solve a problem, we immediately recognise the value of knowing more because the solution implies new questions. Yes, we’re aware of our ignorance.

To put it simply, when our ancestors discovered that they could use a stick to clear their path through the forest or pick fruit from trees, they also realised what the stick couldn't do, such as defending against certain animals or hunting, and so they invented spears, but spears couldn't be thrown very far, so they invented bows and arrows, and so on.

What is a scientific theory?

Since I used the word "theory" in my brief definition of science above, perhaps it is appropriate to reframe the question as follows: What does the word theory mean in scientific terms?

In science, the word "theory" has a specific meaning that differs from its colloquial usage.

In scientific terms, a theory is a well-substantiated explanation of some aspect of the natural world that is based on a vast body of evidence, experimentation, and observations. It is a comprehensive framework that is supported by multiple lines of empirical data and has withstood rigorous testing and scrutiny.

As a result, it's important to note that in science, a theory is not just a guess or a random idea; as above mentioned it is a well-supported and widely accepted explanation that has been subjected to extensive investigation.

Examples of scientific theories include, among the others, the theory of evolution, the theory of relativity, and the germ theory of disease. These theories have been extensively tested and are supported by a vast amount of evidence from various scientific disciplines.

So, the next time someone says Darwin's theory of evolution is simply a theory, dismiss them or inform them that it is a scientific theory because it is built upon hypotheses, which are educated guesses or tentative explanations that are subject to testing. When a hypothesis has been extensively tested and is supported by a substantial amount of evidence, it can be elevated to the status of a theory.

This does not imply that it is unquestionably true, but rather that it is true until experimental evidence indicate otherwise, not certainly lucubrations of hallucinated and fanatical minds, but experimental data.

The probabilistic ship of knowledge ploughs over the rough seas of uncertainty.

Ding an sich, or Thing-in-itself

It comes as no surprise that German, along with Greek, is one of the most important languages in philosophy. Many philosophers, from the Middle Ages until contemporary age, are Germans or German speakers.

One of them, Immanuel Kant (1724 - 1804), among other things, explored the concept of *Ding an sich* - thing-in-itself - and made clear that it is and it remains unknown. We can never get to know the thing as it is, or the thing-in-itself if you will.

Ding an sich is also generally called *noumenon* in the Kantian philosophical jargon, although a specification is required.

Noumenon refers to the metaphysical reality underlying the phenomena we experience. *Noumena*, in contrast to phenomena, are things as they exist independently of our perceptions and mental constructs, whereas *Ding an sich* is the thing itself as it is.

In essence, "*Ding an sich*" refers specifically to the inaccessible reality beyond our perception, as Kant described it, while "*noumenon*" refers more broadly to the underlying reality that exists independently of our subjective experiences.

Besides, *Ding an sich* is a term used within Kant's specific philosophical framework, whereas *noumenon* has been employed more generally in philosophical discussions beyond Kant's philosophy.

I'll use here the same example I was given in university to make it easier to understand.

Well, so, let's consider an example of *noumenon* and phenomenon using the concept of "an apple."

The phenomenon refers to the apple as it appears to us, the sensory experience we have of it. When we see, touch, taste, or smell an apple, we perceive its sensory qualities such as its round shape, its colour, smooth texture, and sweet taste; unfortunately, not all apples are sweet, and some of them taste awful.

These sensory qualities are the phenomena associated with the apple. They are the subjective experiences or appearances of the apple in our perception.

The *noumenon*, on the other hand, refers to the apple as it exists independently of our perception or sensory experience. It represents the apple's true nature or essence, which is beyond our direct perception. The *noumenal* aspect of the apple includes its fundamental properties, such as its molecular composition, cellular structure, and existence as an object in physical space. However, since we can only access the apple through our senses, we can never fully grasp its *noumenal* aspect.

In this example, the phenomenon is the sensory experience of the apple — the taste, colour, shape, and texture we perceive. The *noumenon* is the apple's existence and properties independent of our perception — the underlying reality of the apple beyond what we can directly experience. It's important to note that *noumena* are hypothetical constructs, as our access to reality is always mediated by our perceptions.

In sum, while our understanding of the apple's molecular and cellular structure has advanced, our grasp on the fruit's true nature has not.

Us and Them

No, I'm not talking about the title of that amazing Pink Floyd song; I won't discuss rock music here, despite the fact that it is one of my great interests.

How could I not like rock music, literature, and visual arts? Art, as we all know, is part of the path to knowledge; the distinction between natural sciences and humanities is purely arbitrary; it makes no sense.

I use the "Us and Them" dichotomy to refer to us as humans and to them things, which are all things in the world that are not us.

We can only experience the world and so have a relationship with things through our bodies. Although we build tools that are extensions of our bodies, it is through our bodies that the experience we have with the world becomes tangible and real.

We, unlike other living beings, need to define things and give each one a shared meaning in order to develop communication, without which we would be unable to explain the world to ourselves and do science.

However, some of these things we define, measure, and assign a unit of measurement to, we have no idea of what they are. No one, for example, can give a precise description of time, intelligence, or energy.

Plato (approx. 427 – 347 BC), the Greek philosopher, realised that, in order to get to a shared understanding, the notion of soul was of great help. He classified the soul into three parts: the *logistikon* (reason), the *thymoeides* (spirit, which houses emotions like wrath and others), and the *epithymetikon* (appetite or desire, which houses the desire for physical pleasures). Of course, the logistikon was the most intriguing element, as he intended to provide the groundwork for actual knowledge for everybody without being polluted by our senses. And, as can be seen, logic and reason are entwined in the same concept and principle.

Plato’s theory of soul was purely functional, and it makes no difference whether he truly believed in the soul as a metaphysical and immortal object.

Descartes (1596 - 1650) expanded on this concept by distinguishing between the body (res extensa) and the soul (res cogitans), with "cogitans" referring to the soul or mind, that is the reasoning component of humans.

But Descartes had a legitimate reason for distinguishing between soul and body: he was aware of what had happened to Galileo (1564 - 1642) and did not want to infuriate the Church of Rome by claiming that the soul did not exist and that our knowledge experience is exercised through the body. Nevertheless, it makes no difference whether he believed it or not; we know that the soul-body, or mind-body, duality does not exist.

In the end, what are we saying? We’re saying that humans are not animals like the others, nor are they exceptional beings as some of us believe.

We are special not in the sense that we have a natural right to rule over nature, but because we have a dowry that other beings do not have, and this dowry has fallen to us not because nature has a purpose, but because chance has meant that it so. What, after all, is this gift if not technique itself?

Homo Technicus

Homo Sapiens is the scientific name of our species yet we are also Homo Technicus. In this case, the word “technicus” is used to mean the property of being technical, which is a strong prerogative of human beings.

You may have heard another popular definition of Homo Technicus, which is a human who lives in symbiosis with technology and machines. Well, I am not speaking of someone who is always linked to the digital world here. That is a vulgarisation of the term that serves no purpose other than to cause widespread confusion and has nothing to do with any scientific definition, let alone any meaningful cultural value.

Without technique we are lost, we are too frail to survive in this world. Other species have technical abilities, but none are as advanced as we humans.

Sticks, clubs, spears, bows, arrows, torches, shields, clothes, and shoes were all designed to be an extension of our bodies and to protect us. This is also true for the most sophisticated devices we design and build.

Consider how we make computers. They have a CPU (Central Processing Unit) that serves as their brain, a memory to store data, and peripherals that function similarly to human limbs; everything we do is in connection to our body and must adapt to it. The body is the vehicle through which we perceive and comprehend the world.

But what is our primary technical tool? Without a doubt, it is our language. Through our sophisticated language, capable of defining things, of describing facts, of telling stories, we can be who we are. Yes, language is our prime and most precious technology.

However, words do not say things, they are unable to convey the essence of the thing itself.

Words are conventions that we use to enable us to share knowledge and experiences of the world.

Clearly, we must convey this knowledge with some rationality, or else we may not comprehend each other at all.

The word “rationality”, from which the word “reason” derives, is etymologically linked to the latin word “ratio” which means compute, calculate, or reckon.

The latin motto *redde rationem*, means to give an account, that is, you must account for things.

Thus, reason is likewise a convention. We all agree that what we call a chair is used for sitting. It would be irrational to crash a chair on someone's back, although some do.

We don't worry when we see someone using a fork and knife while eating because those tools are for helping us pick and cut food; nevertheless, we are concerned when we witness a toddler using them because he or she has not reached the right age yet.

As a result, if our being cannot avoid being technical, we must answer the question, “What is technique?”

Technique and Technology

Sometimes the words “technique” and “technology” are used as synonyms, however there is a distinction between them.

Long story short, technique refers to a method, skill, or approach used to accomplish a specific task or achieve a desired outcome. Technology is the outcome, or the tool itself.

If we were to define what is the essence of Technique, we could undoubtedly say that it is to reach the maximum result with the minimum effort. This explains exactly what Technique is and this is the meaning of Technique regarded philosophically, most notably by Martin Heidegger, and sociologically by other authors. Nevertheless, in the English language it is translated as The Age of Technology, but I disagree for the same reason the two terms have different meanings as I explain here.

Then, there are different techniques based on what one must do and they are typically associated with human knowledge, expertise, and practices.

Technology, on the other hand, refers to the application of scientific knowledge, tools, and machinery to create products, solve problems, or facilitate human activities. It encompasses a broad range of tangible or intangible resources, systems, and processes developed through scientific research and engineering.

Again, while Technique is the method, Technology is the result.

As previously stated, our language is a technology that we use not just to communicate but also to experience the world.

However, we must keep in mind that nothing has properties that are independent of the rest of things; rather, everything has certain properties when it gets into a relationship with other things. We finally understood this thanks to twentieth-century physics, such as relativity and quantum mechanics, and it is because of this that new scientific discoveries have made great strides, allowing us to create extraordinary technologies in medicine, communications, the space industry, transportation, and so on.

Our relationship with Technology

There's been a lot of debate lately about the risks of artificial intelligence and it almost appears that we are on the verge of a disaster.

It seems to me to be absolutely pointless and improper.

This is not the place for political economic lectures, but I can tell you that all social things are dependent on the mode of production; everything from the legal system to the setting of work is based on the economic model in use.

Speaking of artificial intelligence as a monster capable of destroying humankind brings to mind science fiction films and books with no rational or scientific basis. A bunch of nonsense, sometimes fetishism, sometimes sensationalism, always hogwash.

No AI can accomplish anything except what the human programmer instructs it to do. Risk, therefore, is not AI itself but what we want it to do. That, as with almost everything, depends on who, not what, I guess you get what I mean.

Moreover, no AI can ever outdo human intelligence, all the knowledge it can acquire is the one coming from us. Machines are faster in making connections, finding correlations, calculating and so on, but they are not able to replace the human brain.

Technology can help us eliminate fatigue, make our lives easier and less dangerous, heal ourselves more effectively, and so on. It all depends on how we want to use it as a society and if we want it to always and only be in the hands of a few who decide for everyone and enjoy all the benefits at the expense of the majority of us. But, as I have already said, this is not the place to engage in politics, it is only to clarify that we must not be afraid of any technology, just as, instead of fearing scientific research and its practical applications, we should always ask for more and for the sake of all.

Whatever you think, the fact remains that we ended a recent pandemic with the help of science and government-funded research, which in turn was made possible by decades of studies, the dedication of a large number of excellent researchers, and extremely advanced technological capabilities. Another issue is whether or not to allow pharmaceutical companies to keep making money off of public funds. Again, though, these are debates best left to other venues.

One of my friends from New York would say “Don’t give in to the hype” meaning that one should not fall for sensationalism. The media constantly bombard us with stories that seem incredible, such as fresh findings that prove this or that, yet, they are frequently inaccurate.

They do, in fact, originate from prominent media outlets, but none of this is published in scholarly publications, not in quite the same way, though.

If anything is published in a scientific journal that later turns out to be inaccurate, it is retracted, and motivations are given to the scientific community and the public.

Scientific study, on the other hand, is subject to verification, exactly because it is science and not ruminations; in fact, what is not testable and verifiable is denied.

This is what happened to Andrew Wakefield's Autism-Vaccine Link. In 1998, Andrew Wakefield, by then a physician, published a study in the

prestigious medical journal the Lancet, suggesting a possible link between the measles, mumps, and rubella (MMR) vaccine and autism. However, subsequent investigations found serious flaws in the study's methodology and conflicts of interest. The research was retracted, and numerous subsequent studies have refuted any causal connection between vaccines and autism. Wakefield lost his medical licence and became an object of ridicule.

Be careful, the next time you read, especially in a non-scientific journal, that the gene that does this or that has been discovered, don't believe it until you've confirmed the study's scientific foundation.

To summarise, we have reached such a degree as a human community thanks to our technological being, and technology is our primary means of interacting with the world.

We are not machines

Clearly, humans are not machines; being rational and adopting logical thinking does not imply ignoring or cancelling out our emotional component.

There is no such thing as a soul; we perceive that something in us is more than cells, molecules, chemistry, and physics, but this does not mean that there is a soul as defined by religions or mystical philosophies. The divide between soul or mind and body is too archaic for us 21st-century humans to keep up with our level of knowledge and cultural evolution.

But this doesn't imply we should put all our faith in neuroscience; doing so would lead us down the slippery slope of scientism, fetishism, and anti-science.

While neuroscience has made significant progress in understanding the human brain, there is still much that remains unknown. The human brain is an incredibly complex organ, and its workings are not fully understood.

Neuroscience has provided valuable insights into areas such as sensory perception, motor control, memory, and emotions. Techniques like brain

imaging, electrophysiology, and molecular biology have advanced our understanding of the brain's structure and function.

However, what about human brain complexity?

The human brain consists of billions of neurons with trillions of connections, forming intricate networks. Understanding the exact functioning of each neuron and how they interact is an enormous challenge.

And what about the so-called emergent properties?

The brain exhibits emergent properties, meaning that the whole is more than the sum of its parts. Understanding how individual neurons give rise to complex cognitive processes such as consciousness, creativity, and decision-making is still a mystery.

And what do we know about individual variability?

Every person has a unique brain with individual differences in structure and function. Studying large populations helps identify general trends, but understanding the full range of individual variability is a significant challenge.

Not to mention that we're still trying to figure out what consciousness is.

The subjective experience of consciousness is one of the most profound mysteries in neuroscience. While there are theories about the neural correlates of consciousness, the precise mechanisms underlying conscious awareness are not fully understood.

Thus, neurons, of course, do this and that, but there are many more mysteries, and while we can claim that they are crucial in the action of thinking, we have no idea what cognition is.

Neuronal connections are developed through experience, human experience; no other living being has an equivalent system, let alone a machine.

Our brain system, which I call cerebrality, is the result of millennia of experience elaboration.

If we took two human groups, one made up of people who have lived in so-called affluent countries for hundreds of years or millennia and another of men and women who live in forests, we would notice that their neuronal connections produce different sensations. When interacting with a natural event, the former reacts differently than the latter. Not because they are *alternatively* human, but because their past and present are different.

Those who are from the forest will be able to see things that I do not notice. Things that are far away, even beyond their sight, but they can still feel. What is the significance of this link? Certainly in their neurons since he, or she, is that body, but their relationship with the world is formed by different experiences than mine as a city dweller.

We are the result of our millennial past; many things are already within us; yet, culture is not something inherited; it is acquired via social interaction. If a child is born in England into an English family that has been there for tens of generations and is immediately taken to Japan and fostered and nurtured by a Japanese family, he will grow up as a Japanese because his social identity is being formed there.

Identity is not something we have at birth but rather something we earn via social acknowledgment.

In other words, we are our biological being but also our social being. This testifies once again that distinguishing between scientific knowledge and humanities makes no sense and is an antiquated separation that cannot be maintained in our current time.

As we gain experiences, they influence us, for better or worse; hence, retaining our rationality does not mean ignoring who we are with our dreams and desires. Furthermore, we must not even consider that the things we do must be absolutely perfect.

Perfection does not exist in nature, some of us are misled by this concept as they think that all that is natural is perfect and good; yet, it is not the way it works.

Get certain ideas out of your head: nature does not operate morally, it does not have the responsibility of creating perfection, and it has no purpose.

Nature is not an engineer who uses sophisticated calculations and equations to construct structures that must pass through checks and balances; rather, nature is more like an artisan who creates things with the ingredients he or she is given.

There are numerous myths that lead people to believe that what is natural is good and what is man-made is bad. I won't get into these intricacies here; instead, I'll use the well-known Aspirin as an example.

We know from Herodotus, a Greek historian from the fifth century BC, that ancient peoples employed willow leaves to treat a variety of diseases. Hippocrates, the father of medicine and another renowned Greek from the same period, reported on a bitter powder made from willow bark that was used to relieve pain and lower fever. Many other civilizations, including the Egyptians, Sumerians, Assyrians, and Native Americans, recognised the benefits of willow leaves and bark, whose active ingredient is none other than salicylic acid. However, this substance is also reported for causing gastrointestinal side effects.

In 1897, Bayer chemist Felix Hoffmann used acetic anhydride to esterify the hydroxyl group (-OH) of salicylic acid with an acetyl group (-COCH3), yielding acetylsalicylic acid, or aspirin. This medication maintains its effectiveness while avoiding the undesirable side effects.

As you can see, through a process in a laboratory something beneficial and useful was created thanks to human ingenuity.

And consider, the chemical composition of a substance found in nature and the same substance created in the laboratory are identical; there is no difference. In fact, there are many things in nature that are extremely lethal and many man-made things that are extremely beneficial and vice versa.

The sun is the star that provides life on Earth, yet it can also cause cancer; similarly, lasers can be used to heal but also to kill.

To realise, simply pause and think rationally. Many of these things can be ascertained by everyday experience, while others can be confirmed

through scientific investigations, rather than through films, blogs, magazines, or social media.

Finally, to say that the world is probabilistic means that it is uncertain, as is our understanding. No scientific discovery or artistic creation is possible without the thrust of doubt.

We are reason, but reason does not explain everything; we are also emotions, but feelings are insufficient.

This is the wonder of life.

When it comes to business, feelings might work in our advantage, but their unpredictability can lead to disaster. At that time, logic is our most powerful ally.

My experience in the business world

As with anything I can’t but convey my experience. I can offer advice but there is no such thing as a recipe for success.

Don't fall for blaring proclamations like "Do this and you will certainly succeed" or "Become a guru by following my advice" because they are nothing more than deception.

Con artists abound, and improvisation reigns supreme, particularly when people are prone to buying whatever they read. Your weapon against naive and incorrect beliefs is critical thinking, and reasoning is our fundamental virtue.

Reasoning entails taking notes, knowing your limits, and being practical.

Certainly, dreaming is both beautiful and beneficial; without dreams, we would not have achieved the level of technology and art that we do today; yet, one must overlook the limits.

Dreaming does not imply believing that you can become something you cannot due to objective social and personal limits; rather, it means accepting that getting where you want to go typically entails a lengthy and exhausting path, or a long and winding road if you love the fab four the way I do.

Einstein could never have imagined relativity if, aside from his intellect, he had only a hazy understanding of physics. Just as Mozart could never have dreamt of any of his amazing masterpieces if he had not mastered music as he did.

Nothing can be learnt in a matter of weeks; it takes years of study, application, dedication, and a lot of practice.

In my line of work, I've always attempted to take a systematic and organic approach because a company's needs are never simple, even when they appear to be. A company is a complicated organism with many intermingled variables. Everything must have a logic, and all processes must follow that logic.

I was not born with a genetic disposition towards rationality; this trait does not exist in our DNA. Instead, apart from the social and cultural legacy as a human being, I was extremely fortunate because I had exceptional teachers and worked with excellent professionals from whom I gained a wealth of knowledge and experience.

My disposition was, so to say, born later. We are the product of our history, and as humans, we are adaptable and able to discern the appropriate tools based on necessity. We do not use a screwdriver to cut a steak, nor do we comb our hair with a fork. We make and employ the right instruments for every task. We don’t need to study medicine to comprehend Shakespeare just as we don't need to know how to build a house to solve differential equations. Seemingly trivial? In fact, it’s not. This is the core of both human technique and intelligence.

One of the most egregious mistakes I've seen certain entrepreneurs make on the spur of the moment, impulsive and emotional decisions, is to hand management roles to persons with no preparation or aptitude to fill the role.

The most disappointing aspect I often noticed is that the majority of these lucky individuals have no intention of training to better perform their duties. Furthermore, since they must conceal their incompetence they start imposing inflexible authoritarian procedures that are detrimental to staff and hence to the proper operation of the organisation.

In these instances, the typical outcome is a quick collapse.

However, I could sometimes see how much some businesses were kissed by Lady Luck. With little or no competition and the utility of their product or service, they were able to keep things afloat and still make profits.

Yet, this does not mean you can afford to make the same mistake without consequence. Even when the circumstances are favourable, inefficiencies consume resources and reduce earnings over time. Furthermore, customers show their unhappiness and begin to glance around. When the prospect of switching suppliers arises, the company finds itself in the eye of a maelstrom. In fact, I've seen many of them fall apart even when they thought they were in a good spot; sooner or later, the competition comes along and blows you away.

It's not whether, but when it will happen.

At this point, we can't help but wonder, "What causes an irrational approach?"

There are people who abandon or don’t exercise their critical judgement, in addition, some of them suffer from what I term the "overconfidence syndrome," which is nothing more than hubris.

Well, the preceding examples speak for themselves.

However the entrepreneur has a high level of expertise in his or her field, and the profits are still satisfactory, delegating managerial responsibilities to persons with minimal technical or human value, as above mentioned, shows a lack of certain entrepreneurial skills, to say the least.

Knowing how to recognise good people is one of an entrepreneur's crucial abilities, as is putting aside hubris, acknowledging one's incapacity in certain matters and entrusting professionals when technical expertise is required.

If the company is not functioning properly, unhappiness grows among employees, and customers complain, then you must investigate what is going on at the level of decision-making functions.

Why is it not operating properly? Why does the mechanism become stuck? Do we have the necessary training to overcome the most significant challenges? Do we have the right equipment and tools?

You'll need some humility, the kind that comes from knowing you've messed up before you can ask yourself these questions.

In other words, one must be willing to admit to his or her own lack of knowledge and be less presumptuous.

The upshot of an unreasonable approach is that problem is added to trouble.

An illogical mindset can indeed pose a danger to businesses. And when this happens, you will face these repercussions:

Inefficient decision-making.

Illogical thinking can lead to poor decision-making. When individuals make decisions based on emotions, biases, or faulty reasoning instead of relying on logical analysis and data, they are more likely to make choices that are detrimental to the business. This can result in wasted resources, missed opportunities, and ultimately, negative impacts on the bottom line.

Inability to adapt to change.

Business environments are dynamic, and successful businesses need to be able to adapt to new technologies, market trends, and customer demands. An illogical mindset can make it difficult for individuals to embrace change and think creatively to address new challenges. This can lead to stagnation, loss of competitiveness, and even business failure.

Inaccurate risk assessment.

Illogical thinking can distort one's perception of risks and rewards. This can lead to either excessive risk-taking or excessive risk-aversion, both of which can be detrimental to business growth. A balanced and logical approach to risk assessment is essential for making informed decisions and managing potential threats.

Poor communication and teamwork.

An illogical mindset can hinder effective communication and collaboration within a business. When individuals are unable to think critically and express their ideas logically, it can lead to misunderstandings, conflicts, and a breakdown of teamwork. This can

impede productivity, innovation, and the overall success of the business.

Lack of foresight.

Logical thinking helps individuals consider the long-term implications of their actions and make strategic plans accordingly. However, an illogical mindset may prioritise short-term gains or instant gratification over long-term sustainability. This shortsightedness can prevent businesses from capitalising on opportunities, anticipating market shifts, and making necessary investments for future growth.

To mitigate these dangers, businesses should promote a culture of critical thinking, rational decision-making, and continuous learning. Encouraging logical reasoning, providing training and development opportunities, and fostering an open and collaborative environment can help prevent the negative impacts of an illogical mindset on business operations.

PART II

The Hidden Danger: How Irrational Thinking Can Undermine Your Business Success

The implications of irrational thinking

In the fast-paced world of business, success often hinges on making rational decisions and strategic moves. However, there is a hidden danger lurking beneath the surface that can undermine even the most well-thought-out plans – irrational thinking. This often overlooked aspect of decision-making can have a profound impact on business success, leading to missed opportunities, flawed strategies, and even financial ruin. But what exactly is irrational thinking, and how does it manifest itself in the business world? In this article, we will delve into the depths of this hidden danger, exploring its various forms and the detrimental effects it can have on your business. We will also provide valuable insights and practical tips on how to recognize and combat irrational thinking, enabling you to make more informed and rational decisions that will drive your business towards greater success. Don't let irrational thinking be the silent killer of your business – arm yourself with knowledge and take proactive steps to mitigate its influence.

The power of rational thinking in business

Rational thinking is a cornerstone of effective decision-making in the business world. It involves analysing information, weighing the pros and cons, and making logical choices based on evidence and reason. When business leaders employ rational thinking, they can anticipate potential risks, identify opportunities, and develop sound strategies to achieve their goals. Rational thinking allows for objective assessment of situations and enables businesses to adapt and thrive in an ever-changing marketplace.

However, despite its importance, rational thinking is often overshadowed by its counterpart – irrational thinking. Irrational thinking refers to cognitive biases and flawed decision-making processes that deviate from logical reasoning. These biases can cloud judgement and lead to poor decision-making, which can have dire consequences for businesses. Understanding and addressing these biases is crucial for maintaining a competitive edge and ensuring long-term success.

Understanding cognitive biases

Cognitive biases are inherent mental shortcuts or patterns of thinking that can lead to irrational decision-making. They are a product of our brain's attempt to simplify information processing and make quick judgments. While these biases may have evolved as survival mechanisms, they can hinder rational decision-making in the business world.

One common cognitive bias is confirmation bias, which involves seeking out information that confirms pre-existing beliefs or hypotheses while disregarding contradictory evidence. This bias can lead to a skewed perception of reality and prevent businesses from objectively evaluating alternative solutions or strategies.

Another prevalent bias is the anchoring bias, where individuals rely heavily on the first piece of information they encounter when making decisions. This bias can result in overemphasising initial data points and neglecting other relevant information, leading to flawed analysis and ineffective decision-making.

Additionally, the availability bias influences decision-making by giving more weight to easily accessible or memorable information. This bias can lead to an overemphasis on recent events or vivid examples, skewing the perception of risks and opportunities.

Common cognitive biases that can undermine business success

Cognitive biases can manifest themselves in various ways within the business context, undermining success and hindering growth. One such bias is the sunk cost fallacy, where decision-makers continue investing resources into a failing project or strategy simply because they have already committed time, money, or effort into it. This bias can prevent businesses from cutting their losses and redirecting resources towards more promising opportunities.

The bandwagon effect is another bias that can impact business decision-making. It occurs when individuals adopt certain beliefs or behaviours because they perceive others doing the same. In a business context, this bias can lead to herd mentality and a reluctance to deviate from industry norms or conventional wisdom, stifling innovation and limiting potential growth.

The overconfidence bias is a particularly dangerous bias in business, as it leads decision-makers to overestimate their own abilities and underestimate risks. This can result in reckless decision-making and a failure to adequately assess and mitigate potential threats or challenges.

Another bias that can undermine business success is the halo effect, where an individual's positive impression of a particular attribute or characteristic influences their overall perception of a person, product, or company. This bias can lead to biassed evaluations, overlooking potential flaws or weaknesses in favour of a positive impression.

The impact of irrational thinking on decision-making

The detrimental effects of irrational thinking on decision-making within businesses cannot be overstated. When decision-makers succumb to cognitive biases and engage in irrational thinking, they may fail to consider alternative perspectives, overlook critical information, and make decisions based on flawed reasoning. This can result in missed opportunities, poor strategic choices, and ultimately, a decline in business performance.

For example, a business leader who is influenced by confirmation bias may dismiss valuable feedback or dissenting opinions, leading to a lack of innovation and stifled creativity within their organisation. Similarly, a decision-maker who falls victim to the anchoring bias may fixate on a single data point or piece of information, failing to consider more comprehensive data that could provide a more accurate assessment of a situation.

Moreover, irrational thinking can lead to impulsive decision-making, driven by emotions rather than logic. This can result in reactive rather than proactive strategies, leaving businesses ill-prepared to address emerging challenges or capitalise on new opportunities. The long-term consequences of such decisions can be devastating, with businesses losing their competitive edge and struggling to stay afloat.

How to recognize and overcome cognitive biases

Recognizing and overcoming cognitive biases requires a combination of self-awareness, critical thinking, and a commitment to objective decision-making. Here are some strategies that can help mitigate the impact of cognitive biases:

★ Develop self-awareness: Recognize that cognitive biases are a natural part of human thinking and that everyone is susceptible to them. By acknowledging this, you can be more vigilant in identifying biases in your own decision-making processes.

★ Seek diverse perspectives: Encourage a culture of open dialogue and diverse opinions within your organisation. By actively seeking out alternative viewpoints, you can challenge your own biases and make more informed decisions.

★ Question your assumptions: Regularly question your assumptions and challenge your own thought processes. Actively seek out contradictory evidence and consider alternative explanations before making decisions.

★ Make decisions collaboratively: Involve multiple stakeholders in the decision-making process to minimise individual biases. This can help ensure a more objective and well-rounded assessment of the situation.

★ Take time for reflection: Avoid making snap decisions and allow yourself time for reflection. By stepping back and considering the situation from different angles, you can mitigate the influence of biases and make more rational choices.

★ Use decision-making frameworks: Implement decision-making frameworks or checklists that prompt you to consider different factors and potential biases. These tools can help structure your decision-making process and reduce the impact of cognitive biases.

By adopting these strategies, you can enhance your ability to recognize and overcome cognitive biases, leading to more rational and informed decision-making within your business.

The role of emotional intelligence in rational decision-making

Emotional intelligence plays a significant role in rational decision-making. It involves the ability to recognise and manage emotions in oneself and others, and it can help mitigate the influence of cognitive biases. Emotionally intelligent decision-makers are better equipped to assess situations objectively, regulate their emotions, and make decisions based on logic rather than impulse.

One key aspect of emotional intelligence is self-awareness. By being aware of your own emotions, biases, and triggers, you can avoid making decisions driven solely by emotional responses. Self-regulation is another important component, as it allows decision-makers to manage their emotions effectively and avoid impulsive or irrational choices.

Empathy is also crucial for rational decision-making. By understanding the emotions and perspectives of others, decision-makers can consider a wider range of information and perspectives, leading to more well-rounded and rational decisions.

Additionally, emotional intelligence can foster effective communication and collaboration within an organisation. By understanding and empathising with the emotions of employees, leaders can build trust, encourage open dialogue, and create an environment that values rational decision-making.

Strategies for fostering rational thinking within your organisation

Fostering rational thinking within your organisation requires a concerted effort to build a culture that values critical thinking, objective analysis, and evidence-based decision-making. Here are some strategies to promote rational thinking:

★ Encourage questioning and dissent: Create an environment where employees feel comfortable questioning assumptions and challenging ideas. Encourage constructive dissent and reward critical thinking.

★ Promote a growth mindset: Cultivate a culture that embraces learning and growth. Encourage employees to adopt a growth mindset, where

they see challenges as opportunities for development and are open to learning from mistakes.

★ Provide training and education: Offer training programs or workshops on critical thinking, decision-making, and cognitive biases. Equip employees with the knowledge and skills needed to recognize and overcome biases.

★ Facilitate collaboration: Encourage collaboration and diverse perspectives by fostering cross-functional teams and creating opportunities for employees to work together on projects or problem-solving initiatives.

★ Establish decision-making processes: Implement structured decision-making processes that encourage objective analysis and consideration of different viewpoints. This can help mitigate the influence of individual biases and promote rational decision-making.

★ Lead by example: As a leader, model rational thinking and objective decision-making. Demonstrate the importance of critical thinking and evidence-based decision-making in your own actions and decisions.

By implementing these strategies, you can create an organisational culture that values rational thinking and fosters an environment conducive to making informed and rational decisions.

The importance of critical thinking in business

Critical thinking is a fundamental skill for rational decision-making in business. It involves the ability to objectively analyse information, evaluate different perspectives, and draw logical conclusions. By honing critical thinking skills, business leaders can make more informed decisions, identify potential risks, and seize opportunities that others may overlook.

Critical thinking allows for the identification of potential biases and the ability to challenge assumptions. It enables decision-makers to assess the credibility and reliability of information and make decisions based on a comprehensive understanding of the situation.

Moreover, critical thinking fosters innovation and creative problem-solving. By encouraging employees to think critically,

businesses can uncover new insights, develop unique solutions, and stay ahead of the competition. Critical thinking also helps identify potential flaws in strategies or processes, allowing for continuous improvement and adaptation to changing market conditions.

Case studies of businesses that have overcome irrational thinking

Numerous businesses have faced the consequences of irrational thinking but have successfully turned their fortunes around by embracing rational decision-making. One such example is Blockbuster, the once-dominant video rental company.

Blockbuster's downfall can be attributed, in part, to its failure to adapt to emerging technologies and consumer preferences. The company dismissed the potential of online streaming and clung to its brick-and-mortar model. This reliance on outdated thinking and a resistance to change ultimately led to Blockbuster's demise.

In contrast, Netflix, a competitor that recognized the shifting landscape and embraced online streaming, thrived. By adopting a rational approach to decision-making, Netflix revolutionised the industry and became a global streaming giant.

Another case study is Nokia, the Finnish telecommunications company. At its peak, Nokia was the market leader in mobile phones. However, the company's irrational thinking and failure to adapt to the rise of smartphones led to a significant decline in market share. Nokia's management was slow to recognize the potential of touch screen smartphones and continued to focus on traditional mobile phone designs. This irrational thinking ultimately resulted in Nokia's downfall, as competitors such as Apple and Samsung capitalised on the smartphone revolution.

These case studies highlight the importance of rational thinking and the consequences of irrational decision-making. By learning from these examples, businesses can avoid similar pitfalls and embrace rational decision-making for long-term success.

Embracing rational thinking for long-term business success

In the fast-paced and competitive world of business, irrational thinking can be a silent killer, undermining success and hindering growth. Recognizing and overcoming cognitive biases, fostering a culture of rational thinking, and embracing critical thinking are essential for making informed and rational decisions.

By understanding the impact of irrational thinking on decision-making, business leaders can mitigate its influence and drive their organisations towards greater success. Armed with knowledge and equipped with strategies to combat irrational thinking, businesses can navigate the complexities of the modern marketplace, seize opportunities, and make sound strategic choices.

Don't let irrational thinking be the hidden danger that derails your business. Embrace rational thinking, make informed decisions, and set your business on a path towards long-term success.

Last but not least, what about misconceptions?

Misconceptions can indeed have a detrimental impact on the way you manage your company. This harmful attitude is the result of a lack of reasoning skills and impulsiveness.

In my experience I have spotted the following six ones as the most common and pernicious.

Good management means exerting strict control

This misconception assumes that effective management involves micromanaging every aspect of the company and closely monitoring employees' activities. However, such an approach can stifle creativity, demotivate employees, and hinder innovation. It's essential to strike a balance between guidance and autonomy, allowing employees to take ownership of their work.

The boss knows best

Assuming that the manager or business owner possesses all the answers can lead to a top-down decision-making approach. This can limit collaboration, suppress diverse perspectives, and ignore valuable insights from employees who are closer to the operational details. Embracing a more inclusive and participatory decision-making process can foster engagement and enhance problem-solving.

Failure is unacceptable

Fear of failure can hinder innovation and risk-taking within an organisation. When managers perceive failure as unacceptable, employees may avoid taking risks or suggesting new ideas, limiting the company's growth potential. Encouraging a culture that views failures as learning opportunities and promotes experimentation can lead to greater creativity and long-term success.

Work-life balance is a sign of laziness

This misconception assumes that working long hours and sacrificing personal life is necessary to be successful. However, an imbalance between work and personal life can lead to burnout, reduced productivity, and high employee turnover. Promoting work-life balance helps maintain employee well-being, productivity, and overall job satisfaction.

Employees are replaceable

Viewing employees as easily replaceable assets can undermine team morale and engagement. When employees feel dispensable, their commitment and loyalty may decrease, impacting productivity and overall company culture. Recognizing and valuing employees' contributions fosters a sense of belonging and encourages loyalty, leading to higher retention rates and a more positive work environment.

Leadership and management are the same

Assuming that management and leadership are interchangeable overlooks their distinct roles. Effective management focuses on organising resources, setting goals, and ensuring efficient operations. On the other hand, leadership involves inspiring, motivating, and guiding teams towards a shared vision. Recognizing the importance of both

managerial and leadership skills can help create a well-rounded management approach.

To overcome these misconceptions, it's crucial to foster open communication, empower employees, promote a positive work culture, and continuously adapt management practices based on feedback and evolving industry trends.

Go OKRs

OKR software are tools and platforms designed to facilitate the implementation, tracking, and management of Objectives and Key Results (OKRs) within organisations. OKRs are a goal-setting framework that helps businesses define and measure their objectives and outcomes in a clear and measurable way.

You may track your progress towards your goals and make any necessary adjustments to your strategy with the aid of these tools.

However, while they can help you get things in order, they won't be able to perform miracles if you persist in being an irrational thinker.

There are many OKR software that are good, such as Perdoo, Microsoft Viva, 15Five and many others.

If you own a business in the UK, I suggest the best in the market, Reclaro, an amazing and efficient tool you can’t do without. Try and call my friend Pete Wilkinson, Founder and CEO of Reclaro, he sure knows how to help you.

Please note that all of the software above are not affiliate links.

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