

# THE SOCRATIC WAY OF QUESTIONING

How To Use Socrates' Method To  
Discover The Truth And Argue Wisely



  
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TRUTH AND ARGUE WISELY

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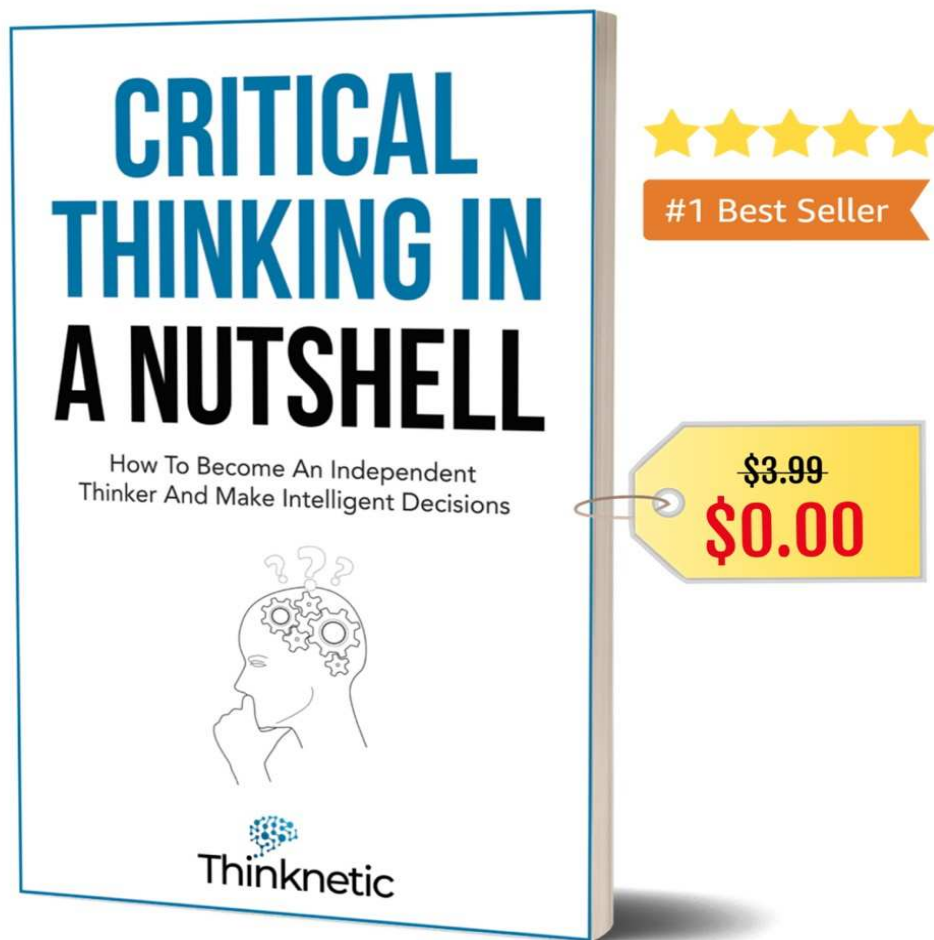
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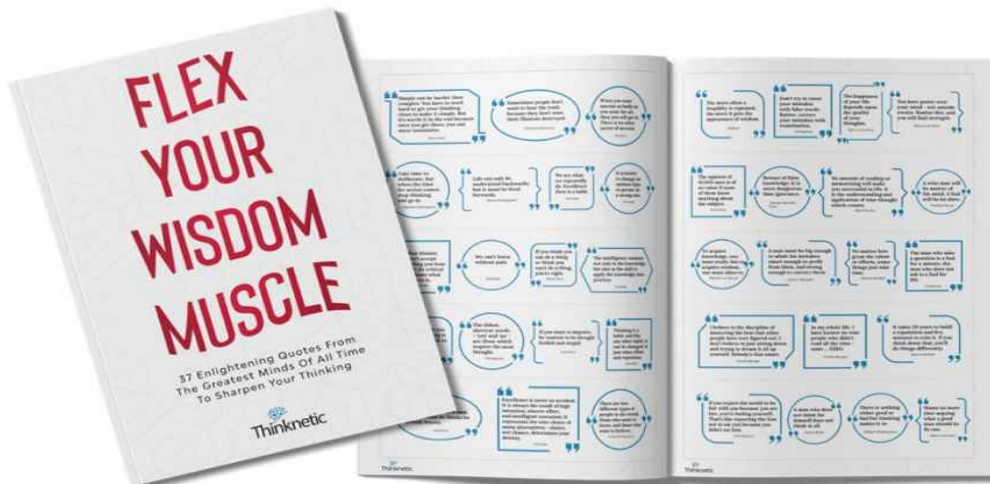
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## INTRODUCTION

Gustave Flaubert wrote, "Let us think of nothing, neither of the future nor of ourselves, for to think is to suffer."

Flaubert is right, but only up to a point and only from a particular point of view. First, we need to try and see what he was going through to cause him suffering and pain when he thought. The quote is from a letter, written at midnight on August 4, 1846, to his mistress, Louise Colet. "Twelve hours ago we were still together, and at this very moment yesterday I was holding you in my arms!" he writes. In this context, the source of his pain is obvious. He is in love and the suffering stems from his thoughts of her.

However, most of us do not see thinking as a cause of suffering. Usually, this is because many people consider thinking to be something that happens when we are not busy and our thoughts flit, like a bee, without pausing or considering deeply. There is no pain here, unless your thoughts touch on a painful memory. But this isn't really thinking. It is daydreaming, simply allowing your mind to wander.

When you need to apply your mind to a specific problem, or to a major decision that may impact on you and/or your family's future, thinking can be painful—particularly to a mind not used to concentrated thought. And it's unlikely that you will go through life without being presented with problems and dilemmas that trouble you. For example:

- You need to decide whether to accept the new job you have been offered in a different city.
- You need to plan for uncertainty because of climate change.

- You need to factor in changes necessary because of the current pandemic.

These are important decisions in your life, but you put off making them because you fear making a decision that you will later regret. You believe in your own abilities, and know you are usually right. After all, you have more experience and are more knowledgeable than most people you know.

But you have deep concerns about the future because of the uncertainty around climate change and the pandemic. You worry about how the 'new normal' might affect your life. How will it be for you financially and health-wise?

At the same time, all the news about disinformation has you distrusting what you read and hear. Yes, there are those you consider to be authorities and still believe them, but the doubts creep in and unsettle you.

However, you can still achieve your goals and realize your dreams despite what the socio-economic outlook might bring. The book you have in your hands will help you resolve all your dilemmas and uncertainty.

Most of you have probably come across the concept of critical thinking. A good proportion of you will have heard about the Socratic Method. But what do these two have in common and how do they relate to each other? Take a short journey into the mindset of Socrates and critical thinking through the pages of this book and discover exactly what it involves.

In it, you will find techniques to help you think rationally, communicate with reason, and ask only meaningful questions to get the answers that you want. You will learn how to 'get to the truth' of matters that concern you, without being influenced by what others think or say. As a result, you will be equipped to reach considered decisions and arrive at sound conclusions in all aspects of your life.

I am a published author and professional writer, with an award-winning short story and a BBC radio play under my belt. A solid background in systems analysis, design and development taught me the power of deep analysis and to look beyond the obvious and expect the unexpected. This is my tenth book, and in a way, a lot of my previous writing, such as my second book, *Systems Analysis and Design*, has led to my writing a book on the Socratic method and critical thinking.

My childhood in various wayside stations in the African bush, and my school years in boarding schools in what was Southern Rhodesia (now Zimbabwe) set the tone for my search for answers that neither my parents nor my teachers could provide.

Never mind trying to find the meaning of life, I wanted to know what a communist was and why did the deputy head of the school call me a communist organizer? To put it in context, it was 1965—the year the government of Rhodesia unilaterally declared independence from Britain. I was 14-years-old at the time, and had been partly responsible for a “food riot” at school, a protest over the quality of hostel food. Not much made sense to me in those days. This was my sixth year in boarding school and I felt like an unwanted child, an orphan.

This is no reflection on my parents, who were loving, upright, and well-meaning people. But their world was not my world. It was the decade of anti-Vietnam war protests, of rock ‘n’ roll, and teenagers around the world were questioning the way things were done and why they had to be this way.

This was an unknown area for me, so I pushed boundaries, got into trouble for it, and have never stopped questioning since then. When I received a request to write this book, it was as if all those years of being an outsider suddenly had a point of focus. All my travels around the world, all my experiences bumping into walls and falling down rabbit holes were prompting me to write this. In some ways, it has answered questions I haven’t asked yet. I hope you get as much out of reading it as I got out of writing it.

## THE CRUCIAL ROLE OF CRITICAL THINKING

Dave was 27 when he moved to a small city in the Eastern Cape province of South Africa. He had enrolled at the local university and was looking forward to student life, leaving the stresses of alternating between being a soldier and a farmer in what had just become Zimbabwe. One Saturday in January, he rode his motorcycle to an out-of-town hotel where a friend worked as a barman. Dave declined Brad's invitation to sleep over. On his way home, as he crested a hill on a curved stretch of road, he saw a car on his side of the road coming straight at him.

Larry's sister got married on the same Saturday in January. As Larry left the wedding reception to drive home, friends and family tried to dissuade him, knowing how much he had drunk. Invitations to stay over with them for the night and leave the next day came from all sides. Larry laughed, said he was fine to drive, that he knew the road and travelled from his smallholding to town hundreds of times. Waving off their protests, he got into his car, and in a few minutes, he was beyond the city limits.

Larry is not sure what happened next. He remembers seeing a single headlamp coming over the hill directly in front of him.

What did Larry think when he got into his car? What were his friends thinking when he left, knowing he was in no state to drive? If they were thinking, they were not thinking clearly.

Dave died that night. What did he think when he declined Brad's suggestion that he sleep over? He lived alone and had no pets needing his attention. If he was thinking at all, it was muddled thinking.

I am fairly certain that none of the role players that fateful night knew anything about critical thinking. And the results were deadly.

Of course, not every event where you fail to think critically will end in tragedy. So, what exactly is critical thinking? And will it make a difference in your life? To answer the second question first, critical thinking will undoubtedly make a positive difference to you and your worldview.

As for what critical thinking is, it's a way of thinking about the big and small questions you will face for as long as you're alive. Critical thinking is a way of thinking – about events and ideas – instead of simply accepting them at face value. One definition that is all over the internet is that critical thinking is “disciplined thinking that is clear, rational, open-minded, and informed by evidence.” <sup>1</sup>

While the above definition is concise, it is also limited. It doesn't mention the important aspect of context or the methods and standards you should apply to the process. The definition below, from Peter Facione and the Delphi Project, is more precise. “Purposeful, reflective judgment which manifests itself in reasoned consideration of the evidence, context, methods, standards, and conceptualization in deciding what to believe or what to do.” <sup>2</sup>

We will open a window onto the elements of critical thinking now, and we will also begin to examine the traits, the mindset, and the standards that you should apply in your considerations and deliberations.

## The Elements Of Critical Thinking

The ability to think clearly and logically is at the heart of critical thinking. Fortunately, clear and logical thinking are skills that you can learn.

Critical thinking is far more than a skill. It is a habit and is also called a mindset or a habit of mind. In addition, it is a combination of traits and attitudes. To examine the traits of critical thinkers, the list prepared by Dr. Peter Facione for the executive summary of the Delphi Report is a good place to start.

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<b>Open-minded</b>	You are open to all ideas until you have analyzed the reasoning and evidence.
<b>Analytic</b>	You want to understand what is happening in the world. So you ask questions and look for sound logic and reasoning.
<b>Systematic</b>	You don't jump to conclusions, but take the time to systematically examine a message.
<b>Inquisitive</b>	You are curious by nature and want to know more, so you take active steps to learn more.
<b>Judicious</b>	You are careful and sensible in actions and judgments. You don't just jump to conclusions, but consider the evidence carefully.
<b>Truth-Seeking</b>	You are ethical in your search for the truth, and know that even you may be wrong at times.
<b>Confident in Reasoning</b>	You trust the power of logic and sound reasoning, and you value the power of letting others draw their own conclusions.

*Table 1: Traits of Critical Thinkers*

Critical thinking goes beyond the traits listed in Table 1. But before expanding on the traits and attitudes of critical thinkers, think about the number of people you know who think critically. Now think of the number of people you know who might think deeply, even philosophically, but are not critical thinkers. Compare the numbers in those two groups to the total number of people you know. Now ask yourself if you could safely, and truthfully, say, "Many people I know don't think critically." Or "most people I know don't think critically."

It is certainly the case with many people I know. Instead of thinking critically and questioning the status quo, they will excuse the situation by saying things like, "It's the norm," or "It's par for the course" (and please excuse the clichés, but it's how they talk). These are people who are capable of critical thinking, both educationally and intellectually, but have settled into a comfort zone or become complacent about the world around them.



Let's examine those two platitudes and ask: what if nobody had ever questioned the norm? Would we have the science and technology servicing the world that we have today? Would we have the extraordinary artworks of van Gogh, or Picasso, or Dali? Would we have the superlative literary works available in libraries around the world?

Then, some people say, "It's always been like this," and "what difference can one person make?" Here, we could question what the adverb 'always' means in this context. Does it mean ever since time began, or is it more limited, such as in your father's memory? As for questioning what difference one person can make, consider this story.

A woman who lives in a coastal city goes for long walks on the beach every day. Each time she walks, she always comes back with one piece of rubbish she did not take to the beach, such as a plastic bottle or a crisps wrapper. Friends point out to her the volume of litter on the beach and ask, "Why bother? What difference does it make?"

And she would reply, "Because next time I come here, I will know there is one piece of rubbish less than there would have been if I'd done nothing."

To take this story one step further, what if all her friends started doing the same thing, and if the idea caught on and became a habit of more and more people? Clean beaches, anyone?

Consider also that Socrates was one person. If he had not begun questioning, you would not be reading this book. We would, maybe, still be living in a city like ancient Athens.

You can make a difference, even if you act on your own. Besides, you never know who it might encourage to examine the roadblocks and handbrakes in their thinking.

Critical thinking does not start with analyzing and questioning the major and immediate changes you need to make to the world you live in. It starts with you making small changes in your life – and the first change is to begin thinking critically. Perhaps you can start by interrogating any superstitions you may have learned at the feet of your grandparents or in the lap of your mother.

For example, if you spill salt at the table and throw a pinch over your shoulder, why do you do that? What will happen if you don't throw a pinch over your shoulder? Answering that something terrible will happen

is not precise enough. Establish exactly what this terrible thing will be. And ask yourself why you still follow this obscure practice.

Is Friday the 13th an unlucky day in your family or your beliefs? If so, why is that?

Even if walking under a ladder is not considered unlucky, it still makes sense not to do so. If anyone is working up top, there is always the possibility something could fall on you. But even if nobody is up the ladder, it still makes sense not to walk under it. If, for example, someone walking around the outside of the ladder stumbles against the leg or dislodges the ladder, it could fall on you.

Examining your superstitions is a fairly easy way to begin interrogating aspects of your life you have previously accepted without question. If you would like something a bit more challenging, examine your behavior, your moods, and irritations.

Establish when, and under what circumstances, you are at your worst. Next, analyze what events, words, or actions change your mood and what pushes the buttons that trigger a despicable you. Discover what brings out the worst in you, and go on to question how it makes you feel.

Make notes as you go along to help clarify and review the steps and choices you make. Now, knowing how you feel when your worst self surfaces, ask what it was that brought that aspect of your shadow self to the fore. Then question the shadow as to why it is now front and center.

## **Skills You Need to Think Critically**

Critical thinking requires more than understanding and applying the elements of critical thinking listed earlier. You will also need specific skills. Some of these you may already have, and even if you don't have all of these skills, they can be learned. To think critically, you will need the skills listed in Table 2. You will not always apply these skills in the order they appear, but you need to know them and understand how they are applied.

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Observation	Through observation become aware of issues around you
Reflection	Think objectively about the topic, consider the implications
Analysis	Identify the components within any particular issue
Evaluation	Examine a point of view to establish if it is strong or valid
Interpretation	Recognize weakness in the evidence or vague points in the argument
Inference	Be aware of the implications that lie behind a statement or argument
Problem solving	Provide support with structured reasoning for any argument you make
Decision making	Making decisions will become easier when you think critically
Explanation	Can you explain the criteria on which your decision is based, and how you arrived at a conclusion

*Table 2: Skills for critical thinking*

Have you ever wondered about how our mind works? For example, can you arrive at a judgment without first understanding the situation? Of course, some people will jump to conclusions without understanding the situation and without even the most elementary reasoning. To understand the logical connection between ideas, you need to be rational and think clearly.

First, you would need to assess if there is any logical connection between the ideas. Just because someone says there is a connection, it doesn't mean it is strong or valid. For example, Alan walked under a ladder on his way to work this morning. At lunchtime, Alan's boss fired him. As a result, Alan now believes walking under ladders is unlucky because he got fired the day he walked under a ladder. There is no valid connection between being fired and walking under a ladder, apart from both happening on the same day.

However, it is common to hear people link two separate events and conclude that the first two events cause the third event. People find it easy to understand simple cause-and-effect stories such as this. Does this mean we naturally look for easy ways to explain the random events we stumble across regularly? Are we on a constant search for meaning?

If that is the case, we are far better off when we think critically. As critical thinkers, we train our minds to question a bit more deeply and are therefore not fooled easily. We examine events, statements, and outcomes to test their validity. We analyze and evaluate.

Before you can reach a reasoned decision, one that is based on evidence and supported by verifiable data, you have to use the skills for critical thinking listed in Table 2. These skills do not necessarily define your ability to reason, but your reasoning will be supported, deepened, and strengthened. Let's look at an example of where applying the traits and skills of critical thinking might make a difference.

Claire S. runs a school in the center of a small city. The school is on the 4th and 5th floors of a building across the municipal building. It is within easy reach of public transport, but it has no playground or sports facilities. An opportunity arises to move the school to the grounds of an old hotel in a rural area 10 miles from the city center. The hotel buildings are in good condition and include a swimming pool and spacious grounds for outdoor activities, all overlooking a dam cradled in the arms of an ancient mountain range.

The rent is lower out of town; the buildings are clustered, making it easy to set up classrooms around an admin building, and no high-rise building in sight. The village surrounding the hotel is expanding quickly, as a large poultry farm had set up operations a couple of miles away.

In the city, where the school is currently, there is easy access to public transport and shops, with many parents wanting education for their children. Parents can drop their children at school and be at the office minutes later.

Now, let's do some critical thinking about this issue for Claire. And we will do it in an objective way, which means doing it without bringing our biases and prejudices along.

First, we identify the arguments concerning the moving of the school. The current school premises do not have playing fields or sports facilities. Spread over two floors of a multi-story building, there is a constant noise of children or staff clattering up and down stairs from admin offices and staff rooms to classrooms. Rents are high in the city center.

Next, we need to evaluate the two choices – stay in the city or move to the country – and determine how valid or strong the supporting arguments are. On the face of it, there are strong arguments for moving

the school. And, at first glance, it would seem that there are no or few arguments against moving the school.

We assess any weaknesses in assumptions or points where assumptions are vague or where little evidence for the argument exists. Let's also examine what implications there are for moving and for staying.

Moving will affect staff, pupils, and parents. Staying in the city means some parents can drop their children at school and be at work in five minutes. Moving means they need to allow for a 20-mile round trip that will take at least 30 minutes in the best traffic conditions.

So Claire must expect to lose some pupils. The question is, how many will leave? The next question is: how long will it be before the school picks up students from the village, the staff at local holiday hotels, and the surrounding farming community? Claire has done no real research. She did not send out any questionnaires, so we have no viable way to assess this. We are in the realm of guesswork. Staff may also leave because:

- They now have to travel further to get to work and back.
- They may have children at another school and usually go home at lunch to feed their children.
- They may have a child at the same school, but they would take the child to their grandmother, then return to work in the city. They can't do that if the school moves.

If we examine the move as a business proposition, we have to ignore the scenic views of the dam and the mountains. They have no commercial or academic value in making the decision. Of course, if you were doing this exercise for a spa offering meditation and reflection, the natural setting will carry more value than a city center setting.

At this point, as an entrepreneur or an investor, you would want to see financial reports, but we do not cover that here. You must decide on the given case study. Claire can replace staff who leave, although it will be disruptive to the students, and if more than two teachers leave, she could struggle for a couple of months.

Parents who still want to keep their children at the school could start lift clubs. The lower rent will help cover gaps left by students who leave,

but the question keeps coming back to how many students the school can afford to lose and how quickly a gap can be filled.

Of course, to do any sort of effective analysis and evaluation will require a basic understanding of logic.

## The Logic Behind A Critical Mindset

To use our ability to reason effectively, we need to understand the basic principles of logic. Logic is a process for arriving at a conclusion based on given information. As such, it's a tool you should use in your life.

Logic is a fundamental part of philosophy, as well as being an area of mathematics. There are essentially two main branches in the philosophical world of logic—informal logic and formal logic.

Critical thinking has been referred to as “informal” logic, although the structure and discipline required for critical thinking are anything but informal. More accurately, informal logic is seen as the process used for daily reasoning and casual debate. Formal logic, insofar as we are interested in it, is called classical elementary logic or first-order logic.

Before we can move on, you need to understand a few terms. The first is “argument.” Most people are already familiar with the other meaning, namely that of a heated quarrel or a shouted dispute. Except, in the logical sense, an argument is one or more statements or propositions supported by one or more premises and claims, leading to one conclusion, either stated or inferred. Thus, we can describe the elements of logic as follows: <sup>3</sup>

- Propositions - a statement used as the foundation of a logical argument. The proposition is either accurate (true) or not accurate (false).
- Premises, also called claims, are used to build the argument and provide support for it.
- Conclusions – the result of the argument is drawn from the premises or is inferred in the premises.

Let's look at an example. The argument is as follows:

- Proposition: Every person who lives in Arkansas lives in the USA.
- Premises: Every person who lives in the USA lives in North America.
- Conclusion: Every person who lives in Arkansas lives in North America.
- Explanation: The conclusion is true because the claims and premises are verifiable.

This uses a process called deductive reasoning. Other arguments might use inductive reasoning. In some cases, the argument could use both deductive and inductive reasoning. We look at inductive reasoning later, but for now, here is another example of deductive reasoning.

- Proposition: All trees have leaves.
- Premises: The trees in my neighborhood lose their leaves in winter.
- Conclusion: Trees lose their leaves in winter.
- Explanation: Both the proposition and the premise are true, but the conclusion is only true in certain circumstances. If we infer that all trees lose their leaves in winter, then the conclusion is false.

To correct the conclusion, we must add one word to the beginning. Doing so also removes the need to infer anything. The changed conclusion should say:

Deciduous trees lose their leaves in winter. The sentence is more specific, and the conclusion is now true.

The discussion around the above argument is an example of checking the proof of an argument. In effect, we tested the logical accuracy of the premises and the conclusion. For an argument to be valid, all the premises have to be true, and the conclusion has to be true. If the argument does not meet these conditions, it is an invalid argument.

You might think that commonsense would lead you to the same end as the above discussion. However, if we define commonsense as what you expect every person to have in a given situation, you can see that logic is deeper and more precise. For example, exactly what is meant by “every person” in the above definition? Does it mean every person on the planet, or does it mean only people with a specific educational background? If you analyze this, you will see that commonsense is not so common.

When you analyze and evaluate an argument, you may be suspicious of the evidence presented and want to question it. You may also find inferences that you can draw based on the premises. As soon as you start making inferences, or questioning assumptions, be careful to check if your prejudices or biases affect your objectivity regularly. Be aware that emotions will also play a role, so you need to put emotional distance between yourself and the issue. All too often, emotional or biased stances lead to faulty reasoning, which can affect our judgment.

A big part of approaching statements and questions without bias or emotion is keeping an open mind. An open mind is particularly important when assessing the alternatives, as you need to view the issue from different positions or points of view. In a way, trying to see things from a new point of view is like exploring boundaries. Imagine that you are part of a small group of blindfolded people led into a darkened room. The room contains an elephant. Each one of you is led to a different part of the room and asked to describe what you feel in front of you. Because you are each feeling a different part of the elephant—this person feels the tusk, that person feels a leg, another person feels the body—you all describe the elephant differently.

It is only when you remove the blindfold that you see the whole picture. Seeing things from an alternative position is like removing the blindfold from the people in the room with the elephant.

Asking questions, the heart of Socratic questioning is not you trying to be difficult—and there may well be people who accuse you of that. Rather, it’s you trying to deepen your understanding of the situation. For example, when you learn that other people have values that significantly differ from yours, you may begin to question their beliefs. Depending on how you go about questioning, their reactions will vary. At the extremes, reactions will range from defensiveness, mocking, and attempts to humiliate you, to anger. However, your questions should also go beyond that. If it is part of your search for truth and honesty in reasoning, you should also be questioning your own beliefs, not only those of other people.



To return to the story about Dave and Larry at the beginning of this chapter, Dave was my brother. It took days for the news of his death to reach me. I was a continent away, camping on the south coast of Portugal.

At the time, I knew nothing of critical thinking. In all my thinking about that event over the decades that followed, I always thought that Dave was an innocent victim of Larry's irresponsible behavior. At least, that was my belief until I examined the events with a critical mind.

Knowing my brother, he probably had a couple of drinks while visiting his friend, the hotel bartender. Did that play a role in how the night ended for those two young men?

A few years ago, my sister was in a queue for some official business in which she had to give her maiden name. The woman behind her in the queue said, "I know that name from a long time ago. Did you have a brother who died in a motorcycle accident outside Grahamstown?" It turns out she was Larry's sister, the one who got married the night Larry and Dave met head-on. Apparently, Larry has never been able to settle down, stay in any job for long, or maintain any relationship since that night.

Hearing how Larry was struggling with his life brought home to me, in a forcible way, how seemingly small decisions can have a significant impact on your future. Of course, this is an extreme example of the results of an unthinking or badly informed decision. But, if you apply any critical thinking to the event, you need to pay as much attention to analyzing the possible outcomes as you pay to your analysis of the probable outcomes.

This event, and my subsequent evaluation of it many years later, also brought home how easy it is to make judgments without applying critical thinking processes. For example, because this accident involved my brother, for decades I brought to my thinking all the biases and prejudices that close family ties carry, and blamed Larry for the accident. But the truth is, nobody will ever really know what happened on that road that night. We only know the outcome, and carry our wounds, and bear the scars.

## Exercises And Tasks

Any exercises, tasks, or challenges are entirely optional. We include them to help focus your attention on important aspects of your journey through the Socratic thinking and questioning processes.

### Exercise on received wisdom

Read the following discussion on received wisdom, then answer the questions below it.

The term “received wisdom” has been used for decades without any real agreement about its meaning. One definition is: “The usual way of doing things, the normal procedures to follow.” But this is too limited and more closely resembles definitions for common practice or the status quo.

Another definition is: “common knowledge that is held to be true, but may not be.” <sup>4</sup> This is closer to a fuller definition because it expresses some doubt. Then there is this definition, paraphrased from a discussion group:

Received wisdom is opposable to (but does not necessarily oppose) knowledge and scientific reason. <sup>5</sup>

In other words, it could be a block to personal growth, to being objective, to an inquisitive mind. As things stand today, received wisdom appears exempt from questioning. But it shouldn’t be. It should be the starting point for any argument you analyze.

*Conventional wisdom* is commonly used interchangeably with received wisdom, but they are not the same—although they both impose unhelpful restrictions and limitations on your rights to ask questions. Conventional wisdom, first used by John Kenneth Galbraith in *The Affluent Society*,<sup>6</sup> described a set of beliefs and thought patterns that society finds comfortable and acceptable. It is, in essence, a widely held belief on which most people act. However, all too frequently, the result of what is “comfortable and acceptable” for society leads to opposition to new ideas or barriers and hurdles to progress.

Given that “Wisdom is the ability to use your experience and knowledge to make sensible decisions or judgments” <sup>7</sup>, it’s time to start questioning your received wisdom. You have two tasks.

1. Think back to your childhood or your school days, and look for received wisdom that you can question. The aim is not to prove received

wisdom wrong but rather to question the validity of old beliefs and whether they still have value in the light of the 21st century. These could be from a parent, a grandparent, a teacher, your college professor, or a mentor at college or at work.

The received wisdom could be in the form of value systems or beliefs, such as a handshake is all you need to seal a deal. You pick the received wisdom for yourself. Ask if you still live by the handed-down values, or do you make adjustments in how you see the world?

Earlier in this chapter, we looked at questioning superstitions, and this exercise is part of a similar process. It questions beliefs handed down through the generations.

2. Read the discussion on received wisdom again, except this time, you are to examine it with a questioning mind. Apply what you have learned about critical thinking to the reasoning process, break it into bite-sized chunks, and analyze each part of it. Question the meaning of each definition and whether it adds value and weight to the argument.

## Chapter Summary

The elements of critical thinking, and how they are used, consist of:

- Being open-minded, in that you look for new or different perspectives.
- Analytical in your approach to questioning.
- Systematic in building an argument or finding weaknesses in an argument.
- Inquisitive, if not by nature, then by training.
- Judicious in your approach to evaluating the evidence before you reach any conclusions.
- Truth-seeking and ethical and ready to acknowledge being wrong.
- Confidence in reasoning and in examining alternatives.

When you work with the elements of critical thinking, you need to bring specific skills to bear on them. Skills such as observation, reflection, interpretation, problem solving, analysis, and evaluation.

Understanding the logic that informs a critical mindset helps you to interrogate arguments presented to you and to build strong arguments of your own.

Critical thinking is vital to the Socratic method of questioning and thinking. The systematic application of logic supported by evaluation and analysis, the courage to question deeply, confidence in your thinking, and the humility to admit you were wrong, all embody the spirit of Socratic dialogue. In the next chapter, we will cover:

Who Socrates was, and how he became known for his method of thinking and questioning. We will work through the methods developed to gain insight and find the truth.

By exploring the boundaries of an issue and questioning assumptions, the Socratic ways have led to discovering universal definitions and inductive arguments. These have come to be regarded as the essence of the scientific method of inquiry.

You will learn to first understand an issue, then look for any weaknesses in an argument. In the process, you learn to reflect on alternatives and acknowledge limitations.

The Socratic method is effective and beneficial because:

- It starts with an initial definition or opinion about a subject.
- Then it asks a question that raises an exception to that definition or opinion.
- The resulting dialogue yields a better definition or alternate opinion.

## THE SOCRATIC METHOD OF THINKING

“Judge a man by his questions, not his answers” is a well-known quote attributed to Voltaire. Websites, such as Forbes.com, GoodReads.com, and BrainyQuote.com,<sup>1</sup> all tell you it was Voltaire. You’ll find the quote in various formats, such as cards and posters, on Pinterest and Instagram, and hundreds of pages across the Internet. Except, there is no record of where Voltaire ever wrote this.

If you dig deeper (by rephrasing the question, or asking another question, or going beyond the first ten items presented by a search engine), you’ll find that Wikiquote says this quote is misattributed.<sup>2</sup> The original is from a book of maxims by Pierre Marc Gaston de L  vis. In the original French the quote is:

“*Il est encore plus facile de juger de l’esprit d’un homme par ses questions que par ses r  ponses.*”<sup>3</sup>

— PIERRE MARC GASTON DE L  VIS

This translates as: “It is easier to judge a man by his questions rather than his answers.”

This is just one example of how misleading the Internet can be. But the relevance of the quote to the Socratic method of questioning is undeniable, as is the result of looking a little further than the stated “fact.”

"The unexamined life is not worth living" is one of the most famous quotes by Socrates. However, the only source we have for this is Plato's Apology. All we can question here is Plato's memory of exactly what Socrates said. Which is not to say that we doubt Plato, but this discussion is really about you having no boundaries as to what you can or can't question. No doubt, had Socrates been in a position to speak for himself, he too would encourage you to question.

What we know about Socrates' life comes from only a few sources. These are:

- The plays of Aristophanes, in which Socrates is satirized and ridiculed.
- The writing of Xenophon, a soldier, philosopher and historian.
- The dialogues of Plato, who is most sympathetic towards Socrates.

It is unlikely that any of the versions present a complete or even an accurate picture of Socrates. But all three agree on two things: Socrates was physically unattractive, and he had a brilliant mind. Collectively, the three accounts give us a unique portrayal.

Socrates was also a man who ignored the standards of dress and cleanliness that were common in Athens. He wore shabby robes, grew his hair long, and walked around barefoot in a society with refined standards of cleanliness and comeliness. It may have added to the distaste Athenian society came to feel about him.

Socrates (470-399 BCE) was a stonemason and soldier in Athens before building his reputation as a philosopher. The son of a stonemason and a midwife, he received a basic education and learned his father's craft at a young age. As a stonemason, Socrates must have had well-muscled arms and torso, but he did not have the classic beauty seen in Grecian statues or on Grecian urns.

By law, all able-bodied Athenian males were to "serve as citizen soldiers, on-call for duty from ages 18 until 60." <sup>4</sup> According to Cambridge philosopher Iain King, "Socrates had two years' military training in his early twenties." <sup>5</sup> King also writes that men who could afford the armor joined the city's army as hoplites, or armored infantry, which Socrates

did. Socrates had peacetime deployments to the Athenian borders, but he was 37 before his first active service in a war.

His war record begins with a three-year campaign to subdue Potidaea, a city-state attempting to break away from Athens. On the way home, the victorious Athenian army was ambushed, suffering severe losses. It was here that Socrates saved the life of Alcibiades, a man who went on to become a leading military general and politician.<sup>6</sup> Socrates' next active service was five years later, at the Battle of Delium, with his final military service at Amphipolis when he was almost 48.

This is Socrates' background: fighting for his country and working as a stonemason.

It is difficult to say exactly when Socrates began the questioning that led to his fame as a philosopher. According to Plato, Socrates had a desire to learn, and he records Socrates' eagerness to acquire the writings of Anaxagoras, a leading contemporary philosopher<sup>7</sup>. We can assume Socrates had an insatiable curiosity and that this, in combination with his desire to learn, played a role in developing his questioning methods.

Socrates was 45 years older than Plato and Xenophon, both of whom were regarded as students of his, and they could only have known him in his fifties and sixties, or for the last 15 years of his life.<sup>8</sup> Aristophanes, the third source of our knowledge of Socrates, had already parodied Socrates in the play *Clouds*, in 423 BCE, when Plato and Xenophon were still infants. Socrates was 46 when the play premiered, so Socrates had probably been asking his probing questions and building a reputation for a few years before Aristophanes' created an unflattering character based on Socrates.

So, who was being questioned by Socrates, and why? Initially, it was the politicians, merchants, community leaders, or those believed to be wise. But that doesn't tell us why they were being questioned.

## Who, What, Where, When, Why, and How

Chaerephon, a friend of Socrates, asked the Oracle of Delphi "if there was anyone wiser than Socrates."<sup>9</sup> To which the Oracle replied, there was not. Socrates did not accept this and certain there was a wiser man in Athens, he set out to find him. So he began to ask questions of the elders, the statesmen, the teachers, and the politicians, or at least those of them who were thought to be wise and sagacious.



His efforts to prove the Oracle of Delphi wrong, in itself an unheard of impudence in Athens, is what gave rise to the Socratic method of questioning. We must keep in mind that all Socrates wanted to do was establish the truth, and hopefully, find someone who knew more than he did. But we all know that your truth might differ from my truth. In addition, Socrates needed his questions to be understood, so he required a common understanding of what any given thing is. Instead, he found that commonly used words, terms, and actions did not mean the same thing to everybody.

Let's look at one example: the differing answers to the question, *what is justice?* said more about the loose interpretations of the thing than it did about a distinct meaning of what justice is.

Person X might believe that justice is that you get what you deserve. In which case, who decides what any given person deserves?

Person Y might think it is defined in scriptural terms, from one or another sacred book, that justice is an eye for an eye. This is a short step from justice = retribution.

Person Z may declare justice to be what is fair, what is ethical and what follows natural law. In which case we now need to define natural law, and fairness.

As a result of the lack of agreement on common things, it became apparent that things need to be defined with greater precision. So Socrates began asking questions to establish definitions that held true under all conditions. His efforts to arrive at the truth embarrassed some people, and created animosity and resentment among others, particularly the rich and powerful.

However, one thing was clear. "Definition is crucial to the Socratic Method." <sup>10</sup> Socrates would apparently spend at least half of each dialogue defining the terms being discussed and questioned. Plato's *Republic*, which is probably the most famous Socratic dialogue, "spends most of its time in defining just one term, *justice*." <sup>11</sup>

Today, we have easy access to dictionaries, either at home, in a library, or online, so you can quickly find a definition of justice or any other word. An ideal definition defines a thing in such a way that there can be no confusion or doubt about the meaning of it. This begins with separating the nominal definition, or the meaning of the word itself, from the essence of the thing defined.

This difference is best expressed by Peter Kreeft and Trent Dougherty in their book, *Socratic Logic*. They write: "Nominal definitions are definitions of a *name*, or a *word*, not necessarily of a reality. They answer the question, 'How is this word used?' rather than 'what is this thing?'" <sup>12</sup>

A definition, to be effective, must be both clear and distinct. In other words, a definition must express "the maximum, or perfect, idea of a thing; but if we cannot have perfect clarity, we should at least have perfect distinctness." <sup>13</sup>

The minimum standard for a definition is that it must differentiate the thing defined from every other thing. It must be so distinct that we do not mistake it for some other thing.

By exploring the boundaries of a given issue and questioning assumptions, Socrates' methods were a defining moment for words and terms. The Socratic way led to the establishment of universal rules for definitions.

Kreeft and Dougherty list the six rules required for definitions to be logically acceptable. <sup>14</sup>

1. A definition should be coextensive with the thing defined: neither too broad nor too narrow. (This is the most important rule and the hardest to obey. It concerns the extension of the term rather than the comprehension.)
2. A definition should be clear, not obscure.
3. A definition should be literal, not metaphorical.
4. A definition should be brief, not long.
5. A definition should be positive, not negative, if possible. (Only negative realities call for negative definitions.)
6. A definition should not be circular. (The term defined cannot appear in the definition.)

An argument can be made for excluding Rule 5 as it allows for both positive and negative definitions. In which case, it is a stated preference, not a rule. But we are not going to make that argument here. We will

look at deductive and inductive arguments now and the influence of the Socratic method on the Scientific method.

## Arguments And The Scientific Method

The methods of questioning used by Socrates to such telling effect led to the establishment of deductive and inductive arguments, and laid the groundwork for universal definitions. This combination of reasoning and definitions, along with the critical thinking methodology, can be regarded as the essence of the scientific method.

In Chapter 1, we had a brief look at deductive reasoning, but didn't look at inductive reasoning or define either of them clearly.

- Deductive reasoning: a process of inference that supports a conclusion with certainty.
- Inductive reasoning: a process of inference providing strong enough support to offer high probability (but not absolute certainty) for the conclusion. <sup>15</sup>

Deductive reasoning is also called top-down reasoning, and it uses a "general to specifics" approach to building an argument. For example:

All fruits have seeds inside them.

Cucumber has the seeds inside.

Therefore, cucumber is a fruit.

This is a logically valid argument—the premises are true, so the conclusion is therefore true. "Valid" or "invalid" are the attributes that denote the logical strength of deductive arguments. True or false are the attributes that you apply to the premises.

With deductive arguments, if the premises are true then it follows that the conclusion is true. It's important to note that it is the form of the argument that is valid or invalid, not whether the premises are true or false. The premises can be false, but the logical form can be valid, as in this example:

All birds can fly.

All snakes are birds.

Therefore, all snakes can fly.

In a world where the premises are both true (and let's pretend that they are) then the conclusion is true. This is then a valid argument. Even if the premises are false, as they are in this case, the logical form is still valid.

Inductive reasoning is something we all do without thinking much, or realizing we are reasoning inductively. As you go about your daily business your brain is processing hundreds of snippets of information. Most of us are also instinctively making connections between what we see or hear and drawing conclusions based on that. For example, the last two buses didn't stop here, so probably the next one won't stop either.

Inductive reasoning is also called bottom-up reasoning. It uses a "specific to general" approach to building an argument, as in this example:

Most birds with two wings can fly.

This bird has two wings.

Therefore, this bird can probably fly.

This is a logically strong argument, as its premises are true, and therefore the conclusion is probably true. Inductive arguments are not valid or invalid—they are inductively "strong" or "weak." Inductive strength is the attribute for inductive arguments that indicates logical strength.

If all the premises of an inductive argument are true, it is highly probable that its conclusion is true. An inductive argument is strong when all its premises are true, because then it's very probable that its conclusion is also true. If an inductive argument is strong, and has true premises, it cannot have a false conclusion.

For both deductive and inductive reasoning, a good argument proves its conclusion if it is logically strong and if all of its premises are true.

Critical thinking and the Socratic questioning method, along with inductive and deductive reasoning, all come together in the scientific method. In its simplest form, the scientific method is a practical way of gaining knowledge.

Irving Rothchild says “Being a good scientist requires patience, perseverance, imagination, curiosity, and scepticism.” He goes on to say that you also need to know how to ask the right questions, how to observe before judging, and interpret what you see from different points of view.” <sup>16</sup>

We recognize all these traits and attitudes from what we have already learned in this book. Let’s look at a deductive argument based on Rothchild’s statement.

*Proposition:* A scientist requires perseverance, patience, imagination, curiosity, and skepticism, can ask the right questions, knows how to observe before judging, and how to see the issue from different points of view.

*Premise:* A critical thinker requires imagination, curiosity, and skepticism, can ask the right questions, knows how to observe before judging, and can see things from different points of view.

*Conclusion:* All scientists are critical thinkers.

You can change the arguments around a bit to yield a conclusion that all critical thinkers are scientists. But this conclusion is not supported by the evidence, no matter how you present it. Of course, an argument could be made against the conclusion that all scientists are critical thinkers.

On the difference between a scientist and a non-scientist Richard Muller, emeritus professor of physics at the University of California, Berkeley, says <sup>17</sup>

<b>A non-scientist</b>	<b>A scientist</b>
Is easily fooled	Is easily fooled
is particularly vulnerable to self-deception	is particularly vulnerable to self-deception
	and knows that.

The Socratic method has grown into the scientific method because it works – and it works well. Critical thinking, and Socratic questioning, have many uses in a variety of business situations. Socratic questioning is commonly used by lawyers because it lends itself to interrogatory techniques. For example, a lawyer will build a series of questions around the central issue, intending to expose contradictions in any testimony being given.

In other business areas, critical thinking helps in assessing business opportunities or in analyzing possible competition. In essence, any activity that requires analysis or assessment will benefit from applying critical thinking, whether it is evaluating customer service or allocating resources to projects.

Critical thinking is also a superb personal growth tool. It is the process we use to think about and assess the basis for our beliefs. In doing so, we examine the assumptions underlying our lives, and the role that assumptions play in our ideas and actions.

When applying critical thinking techniques, it is important you first learn to understand the issue. This is a case of you needing to understand rather than a case of you wanting to be understood. Until you understand the issue, you're not in any position to look for weaknesses in an argument. To identify weaknesses in an argument, question the assumptions. What are the assumptions based on, and do they really support the argument?

Look for distinctness and clarity in all of the definitions, and look at it from alternative points of view. In exploring the boundaries of an issue, you learn to see it in greater depth, and with broader ramifications. In other words, you see the issue from new perspectives, which is a vital part of the Socratic mindset.

If the issue in question is complex, or has unclear elements, the best course is to break it down into chunks. If it is a subject that you have limited experience of, or includes elements outside your areas of expertise, acknowledge your limitations. This shows intellectual humility, which we discuss in the next chapter.

Let's recap on how the Socratic method works and why it works. Socratic questioning begins with you asking for an opinion, or a definition of a word or phrase.

Building on the initial definition or opinion, ask a question to help get greater clarity on some aspect, to find a more precise definition. The

resulting dialogue is advantageous to both parties, and usually yields a better definition or an alternate opinion.

The Socratic method works if both parties approach the dialogue with honesty and in search of truth. It works because it could refine definitions, and thus give greater understanding, it could broaden an opinion and thus give it greater depth. It also reminds us to look for bias in our opinions, and to acknowledge it if it's there. We need to be mindful of our prejudices and biases, and the potential for self-deception that they carry.

## Universal Intellectual Standards

The elements of critical thinking and the skills you need to bring to bear on them were discussed in Chapter 1. In addition to those skills, you have tools, in the form of universal intellectual standards to help you to determine the quality of reasoning. Richard Paul and Linda Elder (2006) state, "The ultimate goal is for the standards of reasoning to become infused in all thinking so as to become the guide to better and better reasoning." <sup>18</sup> Strong critical thinking requires having a command of the intellectual standards. They have the advantage of highlighting areas that are open to questioning in your search for truth. The intellectual standards, and the things you can ask about, are: <sup>19</sup>

### Clarity.

- Could you elaborate on what you mean?
- Could you give me an example?

### Accuracy.

- How could we check on this?
- How could we find out if that is true?

### Precision

- Could you give me more details?
- Could you be more exact?

### Relevance

- How does that relate to the problem?
- How does that help us with the issue?

### Depth

- What are the things that make this difficult?
- What are the complexities of this question?

### Breadth

- Do we need to look at this from another perspective?
- How can we look at this in other ways?

### Logic

- Does all of this make sense together?
- Does what you say follow from the evidence?

### Significance

- Is this the central idea to focus on?
- Which of these facts are most important?

### Fairness

- Is my thinking justifiable in context?
- Is my purpose fair given the situation?
- Am I distorting my concepts to get what I want?

The processes and methodologies that come from Socrates' search for truth are still as effective and as important today as they were 2500 years ago. Given the amount of disinformation we receive daily in our information society, critical thinking and Socratic questioning is needed



more than it ever was in the past. So, what is truth? How do we define it?

Aristotle defined it in the most appealing and most sensible way. He said, "If a man says of what is that it is, or of what is not that it is not, he speaks the truth, but if he says of what is not that it is, or of what is that it is not, he does not speak the truth." <sup>20</sup>

The appeal in the definition lies in the fact that although the sentence consists of 48 words, they are all words of one syllable each.

## Exercises And Tasks

1. Richard Muller, Professor of Physics at UC Berkeley, tells a story about a visiting scientist who made a presentation to Muller's research group. After the visiting scientist had left, Muller asked his students to identify the one statement made that had him rolling his eyes. Unfortunately, none were able to name the specific statement that had so infuriated Muller. The offending statement was:

"What I am trying to prove is the following "

- a. Think about this, and consider why Muller would have been upset by this statement. (Hint: Think in terms of the elements of critical thinking.)
- b. Is there another way to phrase the statement of intent?

(Note: Muller's reasoning and his preferred statement of intent are given at the end of the exercises)

2. Read the statement below, posted by JJ\* to a social media discussion group, then answer the questions that follow it.

"I am 26, never had a job, and ruined my life with wrong decisions. Is there a book that can help me change my life?"

*\*Not their real initials.*

Analyze the statement first.

- a. What does JJ mean by "wrong decisions"?

b. Were the decisions made by somebody else, and if so, why does JJ go along with the decisions?

c. What does “ruined my life” mean to a 26-year-old?

Now analyze the question.

d. Can JJ be more specific about the type of change he or she wants in their life?

e. What area of their life is affected: health, career, family, relationships, emotions?

f. In what way does the book change anything? Isn't JJ just shifting the decision to “change my life” to somebody else?

Model answer to question 1: Muller says: “To me, that indicated a bias in favor of one particular answer. With that bias, there would be great difficulty in evaluating the data in a truly objective way.”

He says the statement of intent should have been: “There is speculation that “X” is valid. I would like to test that hypothesis, and see if it is true or false.”

## Chapter Summary

Socrates, an Athenian stonemason, soldier and philosopher who died about 2500 years ago, is known and honored for his thinking and ethics, and because of his method of questioning. We can all benefit from the methods he developed to gain insight into the world around him and to find the true meaning of things.

What made him particularly effective was that his method of questioning was probing and direct, yet remained respectful. One of the legacies of his questioning methods is the standards established for the definitions of things. For a definition to be perfect, it must be perfectly clear, and perfectly distinct. The minimum standard for a definition is that it must differentiate the thing defined from every other thing. It must be so distinct that we do not mistake it for some other thing.

The Socratic method of inquiry uses questions to clarify beliefs, expose contradictions in arguments raised, understand any assumptions, and probe the evidence and the reasons used to support them. Socrates pushed the boundaries of the purpose of philosophy by expanding it to include trying to understand personal values as well as the place of humanity in the greater scheme of things.. His passion for detailed and specific answers inspired the development of formal logic systems.

Structured arguments, as seen with inductive and deductive reasoning, offer established ways to test a new hypothesis. This became possible as the scientific method grew out of the Socratic method. It is popular and well regarded because it works – and it works well.

The universal intellectual standards can help you to test and probe the quality of reasoning in any argument, and they deepen your insights into Socratic thinking and questioning. The universal intellectual standards are:

<b>Clarity</b>	Could you elaborate on what you mean? Could you give me an example?
<b>Accuracy</b>	How could we check on this? How could we find out if it is true?
<b>Precision</b>	Could you give me more details? Could you be more exact, and more precise?
<b>Relevance</b>	How does that relate to the problem? How does that help us with this issue?
<b>Depth</b>	What are the things that make this difficult? What are the complexities of this question?
<b>Breadth</b>	Do we need to look at this from another perspective? How can we look at this in other ways?
<b>Logic</b>	Does all of this make sense together? Does what you say follow from the evidence?
<b>Significance</b>	Is this the central idea to focus on? Which of these facts are most important?
<b>Fairness</b>	Is my thinking justifiable and is my purpose fair in the given situation? Am I distorting my concepts to get what I want?

*Table 3: Universal Intellectual Standards*

## TRAITS OF A SOCRATIC MIND

Socrates was a humble man, from humble beginnings. He portrayed that in the image he projected, hanging around the marketplace shabbily dressed, unkempt, and barefoot, even though he probably didn't think of it in terms of his image. His humility was also evident in his thinking, believing as he did, that he knew nothing. To think and reason from a perspective of intellectual humility means you need a constantly curious mind, a wide open-mind, and a listening mindset. In truth, you also need a thirst for truth.

Socrates was, to an extent, focused on ethics. His search was not just for truth, but also for what is good and right. We know we each have our own concept of what is true, what is good and what is right. And your truth and right might differ from my truth and right. They may also differ from country to country, and from culture to culture. Socrates was searching for objective truth, a truth that would hold up to examination in all situations and for all people. If something is objectively good, it must be good for all parties.

For example, a logging operation in a forest where there are threatened or endangered species, or a coal mine that will affect the local pastoral community, might be good for a few business people, and for a few politicians, but not good for the local people who live in the area. Whose good takes precedence in this situation?

How can we know ourselves if we do not examine our lives, our beliefs? How stable is the foundation on which you build your thoughts and behavior? Are your rights, or good, or truth more important than my rights, good, or truth? Does where I live make a difference? Does my language or my skin pigmentation make a difference?

We have now moved into the area of virtue, specifically the cardinal virtues. Wikipedia lists them as Prudence, Justice, Fortitude, and Temperance, and says, “They form a virtue theory of ethics.” <sup>1</sup> Three of the names are not in common use today, but it is the meaning behind them that counts. Table 4 lists them by different names, with other meanings to help clarify what each one represents.

<b>Virtue</b>	<b>Meanings and Synonyms</b>
<b>Wisdom</b>	Prudence, the ability to see the right course of action to be taken
<b>Justice</b>	Also called fairness and righteousness
<b>Courage</b>	Fortitude, or endurance
<b>Temperance</b>	Restraint, abstention, moderation, and discretion

*Table 4: The Cardinal Virtues*

Plato, apparently, thought sound-mindedness to be the foremost virtue. How, in this instance, would Plato define sound-mindedness? Sound could be synonymous with healthy, thus healthy-minded. But again, what yardstick do we use to measure healthy mindedness?

To think like Socrates and to effectively use his method of questioning, you will need to assume the freedom to question statements like “sound-mindedness is the foremost virtue,” and then pursue the argument until you have a definition all parties agree to. You will also need to develop specific traits, or mental characteristics, a task that requires consistent practice and constant awareness. Whether you see the traits as habits of mind or think of them as part of a mindset, the effort to develop these traits or characteristics is rewarding and satisfying.

Richard Paul and Linda Elder call them intellectual traits, and say “Consistent application of the standards of thinking to the elements of thinking result in the development of intellectual traits.” <sup>2</sup>

In effect, by consistently applying the universal intellectual standards to the elements of critical thinking, you will develop the mental and intellectual traits of a Socratic mind. Paul and Elder go on to list the traits as:

- Intellectual humility
- Intellectual courage
- Intellectual empathy
- Intellectual autonomy
- Intellectual integrity
- Intellectual perseverance
- Confidence in reason
- Fair-mindedness

Let's go through these, expand on what they are and what they are not, and reflect on where and how you can apply them to improve your critical thinking.

### Intellectual Humility

In the words of Mark Leary, intellectual humility is “the recognition that the things you believe in might in fact be wrong.”<sup>3</sup> Intellectual humility is the scientist working to disprove their own hypothesis. Acknowledging your limitations, or admitting you were wrong about something, requires courage. It also requires an ability to identify bias, pretentiousness, and conceit, and to work on eliminating them from your thinking.

If you are truly curious about things around you, intellectual humility is a necessity, else you'll limit your learning. Socrates questioned people he believed knew more than he did. This is intellectual humility in action.

### Intellectual Courage

A Japanese proverb says, *“If you believe everything you read, you better not read.”* Or you need to question why you believe everything you read. To do that takes courage. Because part of your reading matter will be books and papers you have grown up trusting, or that you rely on for keeping up to date with your profession, or that guide you spiritually. When you start to question your beliefs and values, you will need lots of intellectual courage.

I doubt if you believe everything you read on the internet, but we all find our computers, smartphones, and the internet, an almost irresistible attraction. So much so, we need to be online, one way or another, all day and every day. Now question your compulsion to be online. What are you getting in return for giving your devices so much control over you? Even when you're shopping, or in your car, or juggling the cooking for a five-course meal, you're online and talking or texting.

In an interview for CNN, Steve Wozniak said, "All of a sudden, we've lost a lot of control. We can't turn off our internet; we can't turn off our smartphones; we can't turn off our computers. You used to ask a smart person a question. Now, who do you ask? It starts with g-o, and it's not God." <sup>4</sup>

Question your devotion to social media, the internet, and to always being on. What part of your life will suffer if you're unconnected for six hours per day, or 10 hours per day? Would you suffer emotionally or spiritually? Will you experience physical withdrawal symptoms?

## Intellectual Empathy

Being conscious of the need to understand others, and of the need to see things from their perspective is where intellectual empathy begins. To understand the needs of others, we must put our agendas aside, park our prejudices, and try to see other views, other reasoning, and remember those times where we were wrong, despite being convinced we were right. Intellectual empathy requires that you not just put yourself in someone else's shoes, but also that you walk in them for two months.

## Intellectual Autonomy

The freedom to form your own beliefs, to conceive and conceptualize how and where you limit your thinking, and if you limit it at all. As with intellectual humility, courage, empathy, and intellectual integrity, your starting point is a consciousness of what is around you, what is within you, and what impact these influences, feelings, and impressions have on the rational control of your beliefs and values.

Collins Concise English Dictionary defines autonomy as "the right or state of self-government the freedom to determine one's own actions, behavior." <sup>5</sup> It should go without saying that this would require a well developed sense of social responsibility and high moral standards.



Autonomy without taking any responsibility for outcomes, or autonomy without standards, opens the doors for immoral or corrupt behavior.

Your ability to think critically must underlie intellectual autonomy. To begin with, you need to gain control over your thinking and be aware of what influences your thought processes. You need to make a commitment to yourself to analyze and evaluate your beliefs. Look at the evidence that you use to justify your values, think about your behavior patterns and the reasons you act as you do. If somebody else believes and acts as you do, would it be acceptable in all situations? If not, why do you tolerate it in yourself?

### **Intellectual Integrity**

We should be living our lives with integrity, whether intellectual or otherwise. If we cannot be honest with ourselves, how can we be honest with others? Acting with integrity means you need to be consistent in all your doing, and thinking, and dealing. The standards you apply to the thinking and behavior of other people should apply to your own thinking behavior.

Intellectual integrity requires a recognition of fairness in how and where you apply standards. If you are honest enough to admit to errors in your thinking or actions, you are beginning to apply fair-mindedness.

### **Intellectual Perseverance**

Along with integrity you need perseverance, because in spite of good intentions to be honest and ethical, you will encounter times when the breakthrough to intellectual insights is difficult and frustrating. You may struggle to adhere to rational principles in the face of irrational ideas and beliefs—yours and those of others. You may have to wrestle with confusion or uproot your prejudices, because to achieve full understanding takes focused effort.

If you are afraid of what you might find by pushing through the difficulties and obstructions, then you need to find some other way to get to the truth, such as a constructive argument with yourself, or a close companion who will help push you through to your goal.

To cultivate a positive critical thinking mindset, begin by affirming, on a daily basis, your intention to live by the values embodied in critical

thinking. Then live by those values for that day.

## Confidence In Reason

Whatever obstacles you encounter in your critical thinking journey, your ultimate success is, to some extent, dependent on your ability to reason. If you trust your logic, and believe that what you are doing is in the best interests of humanity, and that it serves your own higher interests, you will be able to argue with confidence in your reasoning. However, this is not the full picture. Without good listening skills you might find yourself arguing at cross purposes. If you cannot hear the opposing arguments, hear with a careful, attentive ear what they had to say, then all your reasoning is of little value.

Listening is a key element of your critical thinking skills. In the words of McCoy Mrubata, a jazz saxophonist, responding to a question about what a musician should do while someone else is playing their solo, he said, "Listen. Don't fiddle with your instrument. Listen, because you need to respond to the conversation."

Try and encourage friends and family to come to their own conclusions by using their own innate faculties. You can only do this if you carefully listen to what is said, think logically, form rational arguments, and draw reasoned conclusions. If you aim to persuade others to become reasonable people, do it by means of a confidently reasoned argument.

## Fair-Mindedness

Objectivity is the goal here. Are there other points of view to take into account? Are my biases working against the best outcome? Do I have any vested interests that might influence my thinking and decision making?

Being conscious of the need to treat all viewpoints with the same care and attention, without reference to entrenched beliefs of friends and community, is extremely difficult. Yet, you need to make an effort to fulfill the demands of fair-mindedness. Approach all such situations with an inquiring mind. This is where you will benefit from the curiosity of a child.

As you can see, these intellectual traits support each other, and applying one without the others achieves little. You will also have noticed that

emotion does not play a role in critical thinking. The reason should be obvious: emotion is the enemy of reason. If you have any emotional attachments to your beliefs, whether personal, religious or political beliefs, you need to look closely at the reasons behind the attachments.

Dr. Okadigbo Chuba, a Nigerian philosopher, political scientist, and academic, puts it well: "If you are emotionally attached to your tribe, religion or political leaning to the point that truth and justice become secondary considerations, your education is useless. Your exposure is useless. If you cannot reason beyond petty sentiments, you are a liability to mankind." <sup>6</sup>

Paul and Elder encourage you to make a habit of thinking critically, make a habit of using the intellectual traits, and use these skills to: <sup>7</sup>

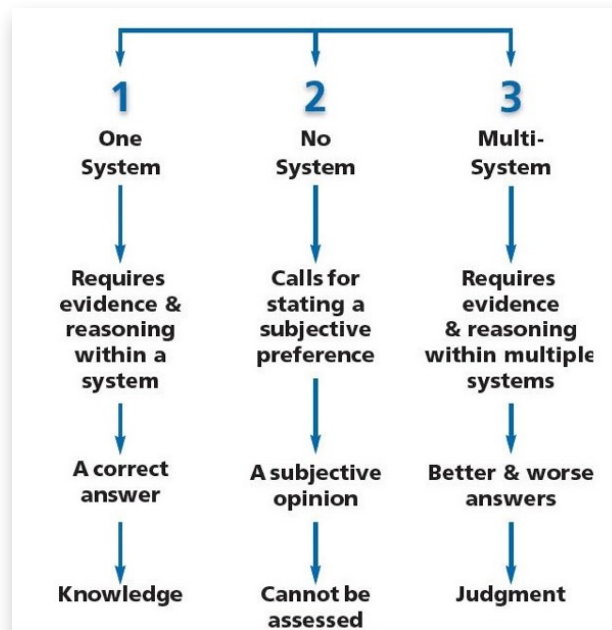
- Raise vital questions and formulate the question clearly and precisely.
- Gather relevant information about the question and assess it, using logic and abstract ideas to interpret it effectively.
- Arrive at well-considered conclusions and be prepared to test them against intellectual standards, using relevant criteria to do so.
- Approach the issue with open-minded curiosity, apply alternative thought systems to recognize any assumptions and assess the implications and consequences.
- Communicate effectively with other people to arrive at workable solutions to complex problems.

In addition, maintain your curiosity throughout to keep your mind agile and active. An agile and active mind is important for critical thinking because it opens you up to new ideas and new possibilities.

Under characteristics of a well-cultivated critical thinker, Paul and Elder mention that when approaching a question, it helps to know what type of question it is. "Is it a question with one definitive answer? Is it a question that calls for a subjective choice? Or does the question require you to consider competing points of view?" <sup>8</sup> The question types are graphically illustrated in Figure 1.

To establish what type of question it is, first ask if there are relevant facts we need to consider to answer the question.

If there are facts to consider, and the facts alone settle the question, it is a one system question. If the facts can be interpreted differently, then the question is open to debate and is a multi-system question. If there are no facts to consider, then there is no system and the answer is a matter of personal preference.<sup>9</sup>



*Figure 1: The three types of questions*

In *Cultivating A Critical Thinking Mindset*, Dr. Peter Facione discusses the value of critical thinking. He says, “if we value critical thinking, we desire to be ever more truth-seeking, open-minded, mindful of consequences, systematic, inquisitive, confident in our critical thinking, and mature in our judgment.”<sup>10</sup> Which is a good way to summarize the traits and methods we cover in this chapter. But it does not end there. We need to be on the lookout for ways to improve our critical thinking skills.

One of the ways to improve those skills is to be on the lookout for opportunities to use critical thinking to support you in making decisions and to influence how you solve problems. Instead of just reacting, take some time to be reflective and thoughtful. The more you look for such opportunities, the more you will find. Make it a habit.

Forgive yourself if you go back to your old ways of tackling problems and making decisions. Forgive yourself if you miss an opportunity to practice critical thinking. It's not a disaster, so be gentle with yourself. Humility, integrity, courage, open-mindedness, and empathy are ideals we strive to achieve. There will be missteps and stumbles, but do not let them stop your journey to become a strong critical thinker.

Dr. Peter Facione refers to "strong critical thinker" as opposed to "good critical thinker" because, as he says, good is too ambiguous. Is a good critical thinker also an ethical person? In this context, good could be interpreted as a judgment on the person's ethics or critical thinking skills.

For example, a lawyer defending a multinational corporation in court for violating environmental legislation may be adept at presenting well-reasoned arguments, and skillful at finding the weaknesses in opposing arguments, but that doesn't make them good in the ethical sense of the word. If that lawyer uses these same skills to mislead and exploit gullible people, or perpetrate a fraud, you can see the lawyer as a skilled, or strong critical thinker, but hardly as an ethical thinker.

Critical thinking is useful in decision making, but like any tool or process, it can be used in unworthy ways. Facione uses the example of the revelations that Victor Crawford made in a *60 Minutes* interview. Crawford, a lobbyist for the tobacco industry, "admits that he deliberately misled and manipulated legislators and the general public."

This is nicely summed up by the comedian, George Carlin, when he says, "They spend billions of dollars every year lobbying ... lobbying, to get what they want ... Well, we know what they want. They want more for themselves and less for everybody else, but I'll tell you what they don't want ... they don't want a population of citizens capable of critical thinking. They don't want well-informed, well-educated people capable of critical thinking. They're not interested in that ... that doesn't help them. That's against their interests." <sup>11</sup>

## Exercises And Tasks

Think about Steve Wozniak's quote regarding how fixated we are with our electronic devices:

"All of a sudden, we've lost a lot of control. We can't turn off our internet; we can't turn off our smartphones; we can't turn off our

computers. You used to ask a smart person a question. Now, who do you ask? It starts with g-o, and it's not God."

Think about the loss of control he mentions.

Bring this up with your family for discussion. Could you reach an agreement on no devices at the dinner table?

Try this: Each day for a week, record how much time you are separated from your electronic lifeline. Then work on increasing the periods you are not connected, not carrying your device from the bedroom to bathroom, not staring at a computer screen.

Report back to your family on the outcome of your one-week trial. Ask them to try it with you for a week.

Could you persuade them to continue this habit beyond one week?

## Chapter Summary

Socrates was a humble man and portrayed that image throughout his life. His philosophical search, focused on ethics and truth, extended to what is good and right. This is in line with the virtues of Prudence, Justice, Fortitude, and Temperance, which form a “virtue theory of ethics.”

<b>Virtue</b>	<b>Meanings and Synonyms</b>
<b>Wisdom</b>	Prudence, the ability to see the right course of action to be taken
<b>Justice</b>	Also called fairness and righteousness
<b>Courage</b>	Fortitude, or endurance
<b>Temperance</b>	Restraint, abstention, moderation, and discretion

*Table 4: The Cardinal Virtues*

To think like Socrates, and to effectively use his method of questioning, you need to assume the freedom to question statements like “sound-mindedness is the foremost virtue,” and then pursue the argument until you have a definition all parties agree to. You will also need to develop specific traits, or mental characteristics, which requires consistent practice and constant awareness. By consistently applying the universal intellectual standards to the elements of critical thinking, you will develop the mental and intellectual traits of a Socratic mind. The traits are:

- Intellectual humility
- Intellectual courage
- Intellectual empathy
- Intellectual autonomy
- Intellectual integrity

- Intellectual perseverance
- Confidence in reason
- Fair-mindedness

Use the intellectual traits to:

- Raise vital questions and formulate the question clearly and precisely.
- Gather relevant information about the question and assess it using logic and abstract ideas to interpret it effectively.
- Arrive at well-considered conclusions and be prepared to test them against intellectual standards using relevant criteria to do so.
- Approach the issue with open-minded curiosity and apply alternative systems of thought to recognize assumptions, and assess the implications.
- Communicate effectively with other people to arrive at workable solutions to complex problems.

Maintain your curiosity throughout because curiosity will keep your mind agile and active. An agile and active mind is important for critical thinking because it opens you up to new ideas, new possibilities.

When approaching a question, it helps to know whether you are dealing with a one system question, a multi-system question, or a no system question.

Practice critical thinking and forgive yourself if you miss an opportunity to do so. Humility, integrity, courage, open-mindedness, and empathy are ideals we strive to achieve. There will be missteps and stumbles, but do not let them stop your journey to become a strong critical thinker.



## QUESTIONING: THE HEART OF THE SOCRATIC METHOD

“ In many shamanic societies, if you came to a shaman or medicine person complaining of being disheartened, dispirited, or depressed, they would ask one of four questions.

When did you stop dancing?

When did you stop singing?

When did you stop being enchanted by stories?

When did you stop finding comfort in the sweet territory of silence?

— GABRIELLE ROTH

This quote is attributed to Gabrielle Roth, and can be found in many places on the internet with her name as the author. While the quote is in Roth's book, *Maps to Ecstasy: The Healing Power of Movement*, the quoted text is in the foreword and is written by Angeles Arrien.

This is another example of an incorrect attribution on the internet, but its importance here is as an example of knowing what questions to ask. Fortunately, you do not need to be a shaman, or a medicine person, to know what questions to ask. Next time you go to a doctor, pay attention to the questions your doctor asks. Or, next time you consult a mechanic about strange and unusual noises from your car, pay attention to the

questions they ask. Essentially, they are working through a list of questions that will help them diagnose the problem.

Please understand that knowing what questions to ask is a matter of practice. Yes, in the case of your doctor or mechanic, they have some in-depth training and specialist knowledge. But do not underestimate your depth of knowledge about the problems and issues that concern you and trouble you, whether they are business and career-related, or home and family-related. If you can approach them from a dispassionate and detached point of view, so much the better. Emotional distance lets you see any clues that may help, find a significant pattern, or source of additional information that will help you.

If necessary, ask a close friend to help you debate the issue. Let them play devil's advocate, present an opposing view, and push you to critically examine your position. Ask questions about the source of the information or problem. Is it supported by any other source? Can it be verified independently? You may be surprised at how much you can establish with a little effort. But most of all, you are practicing and establishing your critical thinking and analytical habits.

To help you break through your standard thought patterns and access the questioning mindset you strive for, have a close look at what you have been conditioned to think and believe. Question what you have been taught. How accurate is the history you were taught at school? How valid are the scientific facts we learned in childhood? For example, Newtonian physics is no longer the only physics that matters. This is not to say that what you already know is wrong, but accept the possibility that it might be wrong.

In the book *Future Shock*, Alvin Toffler is reputed to have said: "The illiterate of the 21st century will not be those who cannot read and write but those who cannot learn, unlearn and relearn." While the general idea of what Toffler said is valid, he didn't say it quite like that.

The original Toffler quote is: "By instructing students how to learn, unlearn and relearn, a powerful new dimension can be added to education Tomorrow's illiterate will not be the man who can't read; he will be the man who has not learned how to learn." <sup>1</sup>

To compound the issue, his misquoted quote has been misappropriated and modified to read: "The illiterate of the 21st Century will not be those that cannot read or write, but those who cannot unlearn the many lies they have been conditioned to believe." <sup>2</sup>

If there is anything to learn from this, it is to question every source, question every statement—particularly if it comes from the internet. That, and to know that learning is a continuous process, not something you stop doing after college.

## What Is Piety?

In Chapter 2, in the discussion on definitions, we looked at the words of Peter Kreeft and Trent Dougherty, who said, “ if we cannot have perfect clarity, we should at least have perfect distinctness. If we cannot know exactly what a thing is, we should at least know what it isn't, that is, know its limits.”

This is important and was what Socrates was trying to establish in his dialogue with Euthyphro on piety. To quote Kreeft and Dougherty again, “The minimum for an acceptable definition is that it at least distinguishes the thing defined from all other things, so that we will not confuse it with other things.” <sup>3</sup>

One of the charges that Socrates faced was impiety, in that he offended the gods of Athens by introducing new gods. On the day of his trial, Socrates encountered Euthyphro, who was at the People's Court for another matter. The story below comes from a summary of Plato's “Euthyphro” by Emrys Westacott, a professor of philosophy at Alfred University. We begin with Westacott's definitions of the term “piety” which, he says, has two senses:

1. A narrow sense: knowing and doing what is correct in religious rituals. For example, knowing what prayers should be said on any specific occasion or knowing how to perform a sacrifice.

2. A broad sense: righteousness; being a good person.<sup>4</sup>

On seeing Euthyphro, Socrates expresses his delight at finding someone who is, by Euthyphro's own claims, an expert on piety. “This is just what I need in my current circumstances,” says Socrates, and he asks Euthyphro to explain to him what piety is.

“Piety is prosecuting wrongdoers,” says Euthyphro, “and that is what I am doing now. Impiety is failing to prosecute wrongdoers.”

Socrates objects, saying that what Euthyphro describes as piety is simply an example of piety, but it does not define the wholeness of the concept of piety.

"Yes, yes," says Euthyphro, "I was just getting to that. Piety is what is loved by the gods, impiety is what is hated by the gods."

Again Socrates objects, saying, "Euthyphro, we all know that the gods sometimes disagree with each other about questions of justice. So, we agree that some things are loved by some gods and disliked by other gods. Therefore the things the gods disagree about will be both pious and impious, which makes no sense."

To which Euthyphro replies, "Yes, that is true, Socrates. But what I meant was that piety is what is loved by all the gods. Impiety is what all the gods hate."

Socrates accepts this as a good starting point for defining piety, but then poses the question that is the key to this dialogue and goes to its heart. He asks, respectfully, "Do the gods love piety because it is pious, or is it pious because the gods love it?"

This is a delicious question, along the lines of: are works of art in museums because they are works of art, or do we call them "works of art" because they are in museums?

What Socrates has done is bring the argument around to the beginning. What is piety? What makes an action pious? Is something pious only because the gods see it as pious, or do the gods love actions such as helping a stranger in need because such actions have the property of piety?

This line of questioning results in Euthyphro trying to clarify the position by saying that piety is concerned with caring for the gods. This too, is subjected to the questioning of Socrates, who says the notion of care, in this sense, is not clear.

Socrates asks if this sense of care is the same care a dog owner gives to the dog or is it care in the sense of slaves caring for their owner? If piety is concerned with caring for the gods, what is the goal of giving such care? Is the goal to improve the health and wellbeing of the gods (as it would be in the case of caring for a dog), or is the goal to improve the comfort and contentment of the gods (as it would be in the case of slaves caring for their owner)? Euthyphro can't say what the goal of such care is but changes tack and gives his fifth definition of piety.

He says, “Piety is saying and doing what is pleasing to the gods at prayer and sacrifice.”

Socrates points out that this definition takes them back to the third definition, but in a disguised form, namely that some gods will disagree about what it is that is pleasing to them. At this point, Euthyphro decides he has better things to do and takes his leave.

You can see how Socrates developed his line of questioning and how he applied logic to the answers given by Euthyphro. Of course, logic and questioning rely on critical thinking.

## A Useful Technique

When you engage in a dialogue with friends or colleagues, you need to carefully consider what has been said or what you will say next. Take your time when you think about what question to ask next or how to answer. This is called the awkward silence or the pregnant pause. And it is a powerful tool in your critical thinking skillset.

When faced with a difficult question, pause and think deeply about how you want to answer. Often, as the silence lengthens, you rush to fill it with words. A deliberate awkward silence is a pause of at least 10 or 15 seconds. You may think a pause as long as 10 seconds is too long, so practice delaying your answer to give you time to consider all the possibilities.

You can break the silence with a sigh, as used here <sup>5</sup> by Elon Musk. Or with an incomplete phrase, as in this Q&A session <sup>6</sup> with Steve Jobs, as he responds to a question made more difficult as it ends with what can only be an insult.

As these examples illustrate, the awkward silence is a powerful tool.

- It can help you give deeper, more analytical, more thoughtful answers.
- It can help you get to the root of problems more effectively, leading to greater understanding. <sup>7</sup>

These examples of awkward silence are not directly related to critical thinking, but they are more than a useful tool. Critical thinking is not something that should be rushed. Instead, every statement that forms part of your argument needs to be carefully considered. Does the logic hold true in the current context? Does the conclusion follow naturally, or is it contrived?

It helps to pause for a minute, if necessary, and recap the flow of the argument. Is there a direct and logical connection from the main ideas to the conclusion?

Critical thinking is the Socratic way of thinking. It forms the framework for the systematic and disciplined exploration of the fundamental concepts, principles, and theories on which our 21st-century society is built. It is made possible by conducting a dialogue that digs deep, engaging with the issues and problems that confront modern society. It should be focused. It must be disciplined. It has to be systematic.

When faced with words like critical and argument, it is easy to assume that the tone of the debate should be antagonistic and that the aim is to destroy the stance or viewpoint of the other party. But this is not the case. Remember that Socrates was humble, and his dialogues were conducted from the standpoint of humility. Therefore, treat your interlocutor with respect. Your aim is to focus their thinking through a series of questions that encourage a reassessment of a belief or theory. It is not about trying to prove anyone wrong. Rather it is a sincere attempt to grow or increase the knowledge and understanding of all parties.

Socratic questioning is a process that may or may not end with a satisfactory conclusion. This is because you engage in questioning to deepen your understanding instead of trying to prove a point. If, in the process, you cause the other person to rethink their initial premise or see things from a different perspective, you have both grown in understanding and knowledge. The idea, at all times, is to avoid causing conflict.

When you begin to consider the arguments presented, you could face a dilemma over where to start. What do you question? How do you question it? What questions could you possibly ask? Begin by summarizing the argument presented and clarifying the terms used, such as words or phrases that might be ambiguous. Drs Richard Paul and Linda Elder, in *The Thinker's Guide to The Art of Socratic Questioning*, set out eight possible areas to question. <sup>8</sup>

### 1. Questioning goals and purposes.

Is there an agenda, either hidden or on display? Do you understand the thought processes at work? Here are a few questions that focus on purpose in thinking:

- What is your purpose right now?
- What was your purpose when you made that comment?
- What is the central aim of this line of thought?
- What other goals do you need to consider?

### 2. Questioning questions.

What is the thought that gives rise to this question? Questions that focus on questions in thinking include:

- I am not entirely sure what question you are raising. Could you explain it?
- Is this question the best one to focus on, or is there a more pressing question to address?
- That might be the question from a conservative viewpoint, but what about a liberal viewpoint?
- What questions are you not asking that should be asked?

### 3. Questioning information and experience.

If you don't understand the background information, such as facts and experiences that inform and support the question, focus your questions on the information you need:

- On what information do you base that comment?
- What experience convinced you of this? Could bias distort your experience?
- How do you know this information is accurate? How can you verify it?

#### 4. Questioning inferences and conclusions.

It is common to create meaning from inferences and then to draw conclusions from inferences. If you do not fully understand the thought behind the inferences then question them. Questions that focus on inferences include:

- How did you reach that conclusion?
- Could you explain your reasoning?
- Is there a plausible alternative conclusion?

#### 5. Questioning concepts and ideas.

You cannot fully understand a line of thinking until you understand the concepts that shape it. Questions that focus on concepts in thinking include:

- Could you explain the main idea that you use in this line of reasoning?
- Do you have all the facts, or do you need to rethink how you label the facts?
- Is the question a legal, a theological, or an ethical one?

#### 6. Questioning assumptions.

You cannot fully understand a thought until you understand what it takes for granted. Questions that focus on assumptions include:

- What are you taking for granted here?
- Why do you assume that?
- What other assumptions underlie your point of view?



## 7. Questioning implications and consequences.

All thought begins somewhere, sometimes based on assumptions, and that thought has implications and consequences. If you do not fully understand the implications and consequences, you should question the thought. Implications and consequences to consider include:

- What do you imply when you say ?
- If you do this, what is the likely result?
- Have you considered the consequences of this?

## 8. Questioning viewpoints and perspectives.

All thinking has a point of view or frame of reference. You cannot fully understand the thinking until you can see the point of view or grasp the frame of reference. Questions that you should consider here include:

- From what point of view are you seeing this?
- Is there another point of view to consider?
- What frame of reference makes the most sense given the situation?

The typical question many people ask is the question that is asked to get a specific answer. What differentiates this type of question from Socratic questioning is that the Socratic method is not simply about getting an answer. It is about getting you or your partner to think more deeply about an issue. By creating a series of questions that build up a line of reasoning, or build up your arguments, your dialogue will either help you reach a reasonable conclusion or bring you or your interlocutor to a state of puzzlement or perplexity, what the Greeks called *aporia*.

In the hands of a practiced questioner, it does not matter what answer is given as Socratic questioning will take any answer and form a new line of questioning. In all of these cases, keep the implications of subtext in

mind. For example, when your life partner says, "Let's go out for a meal tonight," what is really being said?

It could mean "I am tired of eating what you cook, and don't want to cook myself."

Or it could mean, "I don't want to eat from a tray on my lap while watching tired reruns on TV."

Or perhaps it means "I want to change the dynamic of our relationship."

Be aware, and be alive to the possibilities. It will also help to know that clear-headed thinking is difficult in the 21st century—more difficult than it has been in the past. The problem is the sheer volume of information we consume every hour of every day. Between work and family, and the climate crisis, and the coronavirus pandemic, we face volume overload. Psychologist and critical-thinking expert Daniel Levitin says the amount of information coming in puts a strain on our ability to evaluate it. "We've become less critical in the face of information overload. We throw up our hands and say, 'It's too much to think about.'" <sup>2</sup>

Warren Berger clarifies that if we want to improve our abilities to make considered decisions, we need to hone our critical thinking skills. He suggests a set of questions and a willingness to ask them consistently. Not simply ask them, but to consider the answers thoughtfully before passing judgment.

### Five all-purpose questions for better thinking

- How can I see this with fresh eyes?
- What might I be assuming?
- Am I rushing to judgment?
- What am I missing?
- What matters most? <sup>10</sup>

What are the decisions in your life that you make with little thought? What are the choices you make based on little more than a gut instinct? Of course, many of our daily decisions, such as what to have for dinner or what time to leave for work, do not need critical thinking. But with

the advent of “fake news” and disinformation, you need to start assessing things more critically. And in doing so, watch for the distorting influence from your cognitive biases.

A few short months before his death in 1996, in what was probably his last interview, astronomer Carl Sagan said to his interviewer: “If we are not able to ask skeptical questions, to interrogate those who tell us that something is true, to be skeptical of those in authority, then we are up for grabs for the next charlatan, political or religious, who comes rambling along.” <sup>11</sup>

## Exercises And Tasks

Fake news has become a buzzword in recent years. The spectrum of fake news ranges from seemingly benign misinformation to outright disinformation that is blatantly dishonest and intended to manipulate and/or confuse people.

Members of the public made the comments below at a recent webinar to discuss ways to combat the scourge of disinformation. After reading the comments, consider whether you have any opinion about misinformation and disinformation. Then answer the question at the end of the comments.

### Comments from a webinar on misinformation <sup>12</sup>

*Frank P:* How does one realistically challenge and hold politicians accountable for divisive and patently irresponsible rhetoric? In South Africa, this problem is rampant.

*Richard V:* @Frank P - by teaching our children from an early age that they have a right to question. By teaching critical thinking at secondary school.

*Kamo M:* What do you think can be done to educate consumers of mis/disinformation on how to be discerning? They are the biggest victims, especially with local govt elections coming up.

*Pam T:* Yes, I couldn't agree more. We need to keep our political leaders to account. This is long overdue

*Michael C:* @Richard V. Fully agree. Teaching critical independent thinking should be the essence of education. It's the best defense against an increasingly sophisticated disinformation industry.

*Theuns O:* On the principle of censorship, there have been cases where a social media platform has exercised bias by 'cherry picking' narratives that suit the people that run it. If these platforms also 'shadow ban' opposing opinions, how can a citizen inform themselves by finding the truth between different positions?

*Kim B:* The problem is that we are not critical thinkers. When we receive news, whether on social media, mainstream media or from the government, we do not interrogate it. I believe we need to encourage more critical thinking and it starts in the classroom and at home. Parents should nurture critical thinking in their children, but how do you do it when we don't want to be critical thinkers ourselves? Social media is, by its nature, manipulative in what is in circulation. We should both challenge, and be open to challenge, some of the things circulated on social media.

*Frank P:* Critical thinking is an absolute given, but in a country where so many have little or no education, the problem of fake news and populist rhetoric (which is mostly opinion based), is widely accepted at face value. This is a real problem and political rhetoric plays into this vacuum with undue influence. Somehow there needs to be some legal recourse available too.

*Aniedi O:* New York Supreme Court suspended Rudi Giuliani's law license for misinformation. How do we hold people to account who intentionally misinform Africans?

### Questions on taking a stance on disinformation

1. Would you be prepared to take a public stand against misinformation and/or disinformation?
2. Do you think there should be legislation and an international court where matters of deliberate misinformation and/or disinformation can be challenged?
3. If yes, would you write a letter to a newspaper or phone into a talk radio show and state your case?

4. If not, how would you justify your thinking or stance to not go public with your thoughts? Write a letter to yourself setting out your reasoning, and mail it to yourself.

5. If you said you would write a letter or phone in to a talk show, draft your letter or speech setting out your reasoning and mail it to yourself.

## Chapter Summary

Knowing what questions to ask is a matter of practice. Do not underestimate your depth of knowledge about the problems and issues that concern you and trouble you.

To break through your standard thought patterns and access a questioning mindset, have a close look at what you have been conditioned to think and believe. Question what you have been taught. This is not to say that what you already know is wrong, but accept the possibility that it might be wrong.

Socratic questioning is a process that may or may not end with a satisfactory conclusion. This is because you engage in questioning to deepen your understanding instead of trying to prove a point.

Clear-headed thinking is difficult in the 21st century. Warren Berger suggests a set of questions you should ask consistently and consider the answers thoughtfully before passing judgment.

### Five all-purpose questions for better thinking

- How can I see this with fresh eyes?
- What might I be assuming?
- Am I rushing to judgment?
- What am I missing?
- What matters most?

What are the decisions in your life that you make with little thought? With the advent of “fake news” and disinformation, you need to start assessing things more critically. And in doing so, watch for the distorting influence from your cognitive biases.

## THE SKILLFUL ART OF ASKING THE RIGHT QUESTIONS

“**T**he only thing I know, is that I know nothing.” This is often quoted as an indication of Socrates’ humility. Not many people have the courage to say it about themselves and truly mean it. The question is, did Socrates really know nothing, or was it a persona that he used as a mask to question the nobility, the priests, the soldiers, the random people he spoke to in the marketplace?

Whatever the answer is to that question, the one thing we can say with certainty is that Socrates knew how to ask the right questions. What we don’t know is how he came to know which questions to ask. Did he, for example, lie in bed preparing lists of questions for different people? Or did he just get better and better as he asked more and more questions, becoming more proficient through constant practice?

In all probability, it was a combination of preparation and practice, driven by an inquisitive intellect and a search for meaning and knowledge. Something else we cannot know is what Socrates was like as a child. Can we assume he asked as many questions as any three or four-year-old child from the 20th and 21st century?

There is little doubt that knowing what questions to ask is both an art and a skill. As a child, asking questions is a way of filling in the vast gaps between the world experienced and the world understood. The cup bumped off the table falls to the floor. The ball thrown up in the air falls to the ground. So why do birds and airplanes stay up in the air? Why don’t they fall?

“Studies have shown that the four-year-old child may ask anywhere from one hundred to three hundred questions a day.” <sup>1</sup> Asking questions

at this age requires two things. First the child needs “enough awareness to know that one does not know,” and second, they need the initiative to start to remedy the state of unknowing.

Which begs the question—are you still asking questions? Not the “did you finish this,” or “where did you leave that,” type of questions, rather the “why do I think that,” or “why do I react in that way,” type of questions. If you’re not still questioning your life, your choices, your motives, then when did you stop, and why did you stop?

These are not idle questions. If you want to practice Socratic questioning, you need all the questioning practice you can get. But if you have stopped asking questions, you need to establish why, and deal with that blockage.

## The Enemies Of Questioning

In *The Book of Beautiful Questions*, Warren Berger discusses the “five enemies of questioning.”<sup>2</sup> He lists these as: Fear, Knowledge, Bias, Hubris, and Time.

### Fear

Children begin as fearless questioners; then they learn that asking questions carries risks. These risks come from both adults and other children. As children grow, the risks of asking questions include being embarrassed for what they should know but perhaps don’t know, and ridiculed for asking a question that is off-topic or has an obvious answer.

### Knowledge

Knowledge is a potential enemy in two ways. First, because you believe you know so much, you stop learning and stop updating your knowledge. Second, and this is perhaps even more damaging, we as a society, and you as an individual, don’t know as much as we think we do. This is particularly dangerous when society on a global scale is in a time of rapid change. This is something Socrates discovered in ancient Athens by questioning those citizens recognized as being wise and



knowledgeable. They didn't know as much as they claimed to know or were thought to know.

### Bias

Berger says the next two enemies of questioning, bias and hubris, are related to each other. And they may be, but we will discuss them separately. Bias is a recurring theme in this book and has already come up as an issue in every chapter, particularly in the discussion on universal intellectual standards. Berger makes the interesting statement that "some of them are hardwired in us; others may be based on our own limited experiences." The result of a bias, whatever its source, is that you are not as open to questions that challenge that view. Biases and assumptions go hand in hand, so question all your assumptions and check them for bias.

### Hubris

This is an unusual word, one which means *excessive pride* or *arrogance*, with the emphasis on excessive being the important factor. It is excessive pride in your ability or your knowledge that leads you to believe that your views are correct and that they are not biases. Berger makes the important point that if you lack humility, you'll probably do less questioning, that you will say things like: "If I don't know it already, it can't be that important," or "I don't have to sit through intelligence briefings because I'm a really smart guy."

### Time

Time, or the lack of it, is often used as an excuse for not questioning. And it starts in school, or perhaps even earlier. The parent who does not answer a question because they are too busy, or the teacher who does not have time to fully answer questions in class, all play into the statement that time is money.

Four-year-old children are not aware of the five enemies of questioning. And they have an insatiable curiosity. According to child psychologist Paul Harris, children discover that they can easily get the information they want from parents or older family members in their first few years.<sup>3</sup> They learn that using certain combinations of words and vocal inflection often results in curiosity being satisfied.

So the four-year-old child flows with their curiosity and constantly asks questions, always based on "why?" No matter what your response, the child will ask "why" again and again. Why? Why? Why? Until, in desperation, or frustration, you say ? What do you say? "Because I say so!" Or is it "because pigs can't fly in the middle of July"? To which a child, who still has no concept of sarcasm, says, "Don't be silly. Of course pigs can't fly!"

The parental response to the constant questioning, or the response of any adult to the questioning, should be to answer the questions, gently and patiently. Of course, it is too much to expect that an older child will respond with an answer—they are more likely to respond in mocking tones and humiliate the questioning child. Sometimes the adult responds rudely, abruptly, or angrily—more like a child than an adult. Perhaps answers like that play a role in discouraging questions when that child is an adult.

Curiosity is an act of wondering, a speculative look at the environment. Before inhibitions, biases, received wisdom, and their own acquired knowledge about how the world works become a burden for children, they have minds that are open and expansive. The answers to their questions help them to come to terms with their place in the world. If they can formulate the question, they deserve the answer.

In her 1928 book, *Coming of Age in Samoa*, Margaret Mead wrote "Children must be taught how to think, not what to think."<sup>4</sup> This makes absolute sense, so much so, that we would be justified in expecting every school to teach children how to think. Of course, there is also the vital counterpart of thinking, which is questioning.

Richard Feynman, the physicist and Nobel prize laureate, is reputed to have said, "Don't just teach your students to read. Teach them to question what they read, what they study. Teach them to doubt. Teach them to think." However, this is a disputed quote, and nobody has cited a specific source for where or when he said it. Another disputed Feynman quote is this: "I would rather have questions that can't be answered than answers that can't be questioned."<sup>5</sup> This quote is also

attributed to George Carlin. So take your pick, Carlin or Feynman. Both are worthy people to quote, and both quotes are relevant in any discussion about children, questions, and thinking.

Key in any discussion about questioning, especially about children asking questions, are when and why we stop asking questions. This applies whether we are children or adults.

Sir John Abbott, the 3rd Prime Minister of Canada, is reputed to have told a story about a very wise man who was asked, 'How do you know so much about everything?' The wise man replied, 'By never being afraid or ashamed to ask questions about anything of which I was ignorant.' This story brings us closer to the real reasons for not asking questions—it is fear and perhaps shame at being seen to be ignorant.

Pop psychology articles talk about inhibitions and fear of being embarrassed as reasons for not asking questions. But that is not the complete picture, and the underlying reasons go beyond that. The reasons for avoiding asking questions may be seated in our education system. Not all education systems worldwide are run in the same way, so what applies in, for example, France, may not apply in the USA, which in turn is different from South Africa.

Teachers expect you to accept whatever information they pass on at secondary schools in colonial Africa, complete with biases and prejudices. It is rare for a student to question anything. This is unfortunate because to arrive at a true understanding, you need to ask questions. An ability to think means asking questions, as you cannot arrive at true understanding by answers alone. An opinion piece by author Joe David in the Observer in 2018 says, "It is very rare to find a student with a fresh point of view, derived from clear thinking, secured in place by sound knowledge." <sup>6</sup> And that is a damning indictment of our schooling systems.

Questions challenge authority, and authority, as with bureaucracy and the Official Mind, do not like being challenged. At some point we learn that any questioning of authority can get us into trouble. And another door closes on the curious and questioning mind.

If nobody was allowed or encouraged to ask questions we would not have the scientific or technological advances we have seen in the last half a century. This is neatly summed up by a statement in the *Critical Thinking Handbook*: "Had no questions been asked by those who laid the foundation for a field – for example, Physics or Biology – the field

would never have been developed in the first place.”<sup>7</sup> Claim your right to question, but be careful you do not cause offence through insensitive comment or abrupt or brusque techniques.

## How to Ask Questions

How questions should be asked, or the way that you ask questions, will define what sort of results you get. Keep in mind that you want cooperation from your interlocutor, and you want them to consider the implications of the questions, not the manner of delivery or tone of voice you use. In other words, avoid being condescending, judgmental, or aggressive in tone or delivery. Frame your questions in a way that comes from a place of humility, not superiority.

Skilled questioning requires patience and practice. Don't be surprised if your first attempts fall short of the mark. It should not make a difference what your line of questioning is, what the subject matter is, or the avenue of approach, as long as the questions are framed and asked with respect for your interlocutor. The avenues of thought and the type of questions you ask should not be limited in any way. Examples of questioning and lines of questioning can be any one or more of these issues:

- Investigate the truth of a theory or opinion.
- Elicit and develop an idea or thought that is not yet developed or actualized.
- Lead the interlocutor to a conclusion that is either logical or valid, foreseen or unforeseen by the questioner.
- Elicit a statement or conclusion that can be further examined for truth or falsity.

For every line of inquiry, there are a number of questions you should first ask yourself. See if any of the following seven examples apply to you:

1. To analyze your goals and purposes.

- What am I really after in this situation?
- Are my goals reasonable?
- Am I acting in good faith?
- Do I have an agenda, whether hidden or obvious?

## 2. To question definitions relating to problems and issues.

- Is this a reasonable way to put the question at issue?
- Am I loading the question by the way I put it? Am I biasing it?
- Am I framing the question in a self-serving way?
- Am I asking a question to pursue a selfish interest?

## 3. To assess the information base of your thinking.

- On what information do I base my thinking?
- Is this a legitimate source of information?
- Is there another source of information to consider?
- Am I considering all the relevant information or only the ones that support my view?
- Am I distorting the value of the relevant information in a self-serving way?
- Am I refusing to check the accuracy of some information to avoid changing my view?

## 4. To rethink a conclusion or interpretation.

Am I coming to an illogical conclusion because it is in my interest?

- Am I refusing to look at this situation more logically?
- If I do look at the situation more logically, will I have to behave differently?

5. To identify and check my assumptions.

- What am I assuming or taking for granted?
- Are those assumptions reasonable?
- Are they in any way self-serving or one-sided?
- Do I make egocentric assumptions in my thinking, such as, "Everyone always blames me?"
- Are my expectations of others reasonable or am I using double standards?

6. To analyze your own point of view.

- Am I refusing to consider another point of view to maintain my self-serving view?
- Am I taking into account the viewpoint of others, or am I just going through the motions of listening without actually paying attention?
- Am I honestly trying to understand the situation from another perspective, or am I merely trying to win an argument?

7. To follow through on the implications of your thinking.

- Do I genuinely think through the implications or possible consequences, or would I rather not consider them?
- Do I avoid thinking through implications because I don't want to know what they are?
- Do I avoid thinking through implications because if I know them, I will have to change my thinking?

## Listening

Listening is one of the most important aspects of questioning and is often overlooked. It is easy to overlook because it has nothing to do with analysis or the framing of questions. But without solid listening skills, any analysis is likely to be limited to what you want to hear, as opposed to what is being said.

The art of listening is a crucial skill for effective communication. "To listen properly means paying careful attention to what the other person is saying, absorbing the information, judging it and acting on it." <sup>8</sup> However, the art of listening is not a natural skill, so it must be learned and this requires effort and practice. During a conversation the receiver needs to listen attentively, critically and appreciatively.

*Attentive listening* requires you to listen for the speaker's central idea. You want to know the purpose or goal of the conversation as soon as possible. Once you know what the conversation is about you will know if the subject matter is relevant and important to you personally. In this way you resist distractions and concentrate on the message.

*Critical listening* means you listen to analyze, evaluate, and judge the speaker's intention. Is it to motivate, to persuade, to confess? Is the tone used to convey the message polite, insincere, rational, impatient, frustrated? Check your understanding of what the speaker said by asking for additional information or asking the speaker to rephrase what they said.

*Appreciative listening* means you listen first and then react. This is the key to effective listening. Try to see the idea or concept from the speaker's point of view. Do not get excited about any point made before you are sure that you fully understand it. Avoid impatience and allow the speaker to complete the message. Watch out for biases relating to differences of perception, personality, status or culture.

Good and careful listening skills go a long way to making sure that you hear what is being said, and what is not being said.

## **The Power of Questions**

To practice Socratic questioning you will need at least one person who is willing to work with you. Ideally, a small group is better, as you can all learn from each other's mistakes. There are very few rules for framing

and asking questions, but following them will help create a meaningful discussion. First, remember that Socratic questioning is a discussion, not an argument or debate. Paul and Elder, in the *Thinker's guide to the art of Socratic Questioning*,<sup>9</sup> list a few short rules for the questioning process.

- It is led by one person who only asks questions.
- The questioner steers or guides the discussion based on the questions asked.
- The questions should be systematic and disciplined.
- The purpose of the discussion is to help everyone examine the complexities of the topic and dig beyond surface issues.

The power of questioning comes from encouraging us to think more deeply about the things we think we know and to discover what we don't know. Questioning has the power to:

- Direct your train of thought and maybe even derail it.
- Drive you to learn, to create, to experiment, and to improve.
- Discover something new or rediscover a long-forgotten passion.
- Put things together in new or different ways.
- Remember things.
- Resolve issues.
- Understand people better.

The keys to good questions, and perhaps to asking the “right” questions, lie partly in listening, which has already been discussed, and in following a logical sequence to frame the question. Good questions are also tied up in how you think about what you know, and realizing that the gap between what you know and what you understand is where you find the right questions.

Each of us is different and has individual needs, desires, and dreams. By using Socratic thinking and questioning, each individual acquires the logic and critical thinking skills that are the keys to unlock their own truth.



If you work through the exercises and tasks as you read this book, two things may happen. First, you will discover the power of Socratic questioning. Second, you now scratch beneath the surface more regularly, and you dig a bit deeper into some of your treasured beliefs.

Knowing how to ask the right questions and asking those questions can help you make significant changes in your life. For example:

- Questions lead to discoveries about yourself, about the functions of science, and about the good and bad aspects of society.
- Questions can alert you to your assumptions and prejudices, not just the received prejudices, but also those acquired through experience.
- Questions foster creativity in that they have a way of helping you see the world through new eyes.
- Questions can help you to solve problems through specific and logically constructed approaches to areas of difficulty in your life.

Some of the benefits of questions are that they can help you:

- Connect with others.
- Deepen existing relationships.
- Become better in your work or business.
- Strengthen your leadership skills.

In the realm of critical thinking, three types of simple questions are often overlooked in favor of more complex questions. Consider how often you ask the wh- questions, namely, who, what, where, when, and why. How is not a wh- word, but it forms an important suffix to the five wh-questions.

- Who is questioning, who is affected?
- What you ask, and include “what if” questions.

- Where do the ideas come from, are they reliable, can they be verified?
- When will this happen? Just do it.
- Why? Just step back, pause, and stop knowing it all.
- How will you ask the question, will it work?

These types of questions can help you better execute your plans, focus your actions, and improve your results.

It is important to remember that knowing how to ask the right questions is deeply rooted in the Socratic way. It involves all the aspects you have been reading about since Chapter 1. For example, critical thinking is vital, as is applying logic to your thinking, observing the universal intellectual standards, and questioning your mindset to arrive at the truth.

In its pure form, and executed with the right intent, the Socratic method has specific positive outcomes. It will help you discover things about yourself and others that will benefit you and them.

## The Truth About Happiness

In his book, *The Philosopher and the Wolf*, Mark Rowlands has a chapter called The Pursuit of Happiness and Rabbits. We are not concerned with the pursuit of rabbits here, and they are included in the chapter title because Rowlands speculates whether the wolf is happy when he is chasing rabbits, even though he seldom catches any.

In the chapter, Rowlands claims that “According to many philosophers, happiness is intrinsically valuable.” <sup>10</sup> In other words, we value happiness for itself, not for any other reason. This differs from the value we put on things such as money or medicine, which we value for what they can do for us, like providing food and shelter, or pain relief.

Rowlands says that since the late 20th-century, happiness has gained a much higher profile than a purely philosophical question, that in western culture, it has become big business. Studies tell us that we are, materially, far richer than our forebears, but we are no happier than they were. Studies also tell us, according to Rowlands, that we are happiest when having sex and unhappiest when talking to the boss. All

this gives rise to the question: Is the whole world obsessed with happiness, or is it only the western world?

In this section, you are going to be challenged to use critical thinking and Socratic questioning to reach your own conclusions about happiness. Based on the information provided below, analyze the arguments, apply your logic, challenge the assumptions, and check for bias and prejudices—yours and in the arguments presented. Decide on what questions you would ask, and how you would go about interrogating the concept of happiness.

The World Happiness Report, first published in April 2012, and published annually since then, is more than a way for people to see how their country compares against other nations. It also, according to the original United Nations resolution, provides information to help guide policymakers to “pursue the elaboration of additional measures that better capture the importance of the pursuit of happiness and wellbeing in development with a view to guiding their public policies.” <sup>11</sup>

You may already have a question or two, such as:

- What do you mean by obsessed?
- How do you define happiness?

Before we get to those questions, if there is an obsession with happiness, when did it start? According to historian Peter N Sterns, writing in the Harvard Business Review in 2012, the drive to happiness is relatively modern in Western culture. He says there is general agreement among the historians working on the subject that, at the level of rhetoric, at least, “a significant shift occurred in Western culture around 250 years ago.” <sup>12</sup> Or, to put it in perspective, during the Age of Enlightenment and shortly before the American Declaration of Independence.

The Age of Enlightenment brought with it the idea that happiness was the attainment of a worthy life. This does not deny or exclude any influence or teaching of a religious nature, but neatly supplements it in some ways. In itself, the attainment of a worthy life is not that different to the Aristotelian belief that happiness is a by-product of a life of virtue. This ideal is also captured in the American Declaration of Independence,

where the three unalienable human rights are summed up in the phrase, "Life, Liberty, and the pursuit of Happiness."

However, you may ask what was the happiness the founding fathers of American independence had in mind? And how does it differ from the concept of 21st-century happiness?

In 2005, Anthony Kennedy, a Justice of the US Supreme Court, said in a lecture that for the framers of the Declaration of Independence, "happiness meant that feeling of self-worth and dignity you acquire by contributing to your community and to its civic life." <sup>13</sup> This supports the social responsibility aspect of a different, and perhaps more meaningful, definition of happiness.

To dig a bit deeper, let's look at what was happening during the Age of Enlightenment. First, there was a general growth in science. Isaac Newton's *Philosophiae Naturalis Principia Mathematica* came out and was an example of how to synthesize different theories and laws into a coherent view of a mechanical universe. Then, philosophers such as Thomas Hobbes, Rene Descartes, John Locke, and Voltaire, were wrestling with determinism, rationalism, religion, and ethics. Groups of thinkers and writers across what is now western civilization were exchanging knowledge and ideas. The resulting processes of industrialization and urbanization, and the advances in education, saw a period in which society had the leisure and knowledge to consider seeking happiness in this life, rather than waiting for union with God in the next.

So, at the end of the 18th-century, happiness was to be found in the self-worth and dignity arising from your contribution to societal wellbeing. At the end of the 20th century, happiness has become an egotistical pursuit of self-gratification. The early days of the 21st-century show no signs of anything changing soon.

In examining this short discourse on happiness and the role it plays in society, several questions are raised. Here are a few questions and reminders to get you started on your interrogation and analysis. And some words of encouragement from Immanuel Kant:

"Dare to know! Have courage to use your own reason!"

Five questions to help get you started:

1. Is happiness an inherent feature of the human condition? If so, does this open new opportunities to understand important aspects of our social experience?
2. What challenges emerge for you as you reexamine your relationship with happiness?
3. If there is an obsession with happiness, when, in your opinion, did it start?
4. Is happiness an inalienable human right?
5. Was there an awareness of happiness before the 18th century, and is there evidence of it existing as a concept?

As you draw up your own list of possible questions, be aware of any blind spots you may have to a particular line of thinking. Be vigilant for bias and prejudice creeping in.

Look for assumptions, and look for the weaknesses that those assumptions present. For example, are the arguments presented supported by facts, and can the facts be verified?

## Exercises And Tasks

In June 2021, a newsletter from the Nelson Mandela Foundation said the focus of Nelson Mandela International Day for 2021 will be on two critical challenges being faced by many countries around the world, including South Africa.\* These challenges are:

1. Food insecurity;
2. What can only be described as cultures of lawlessness.

The facts that inform these challenges are:

- Covid-19 has deepened patterns of poverty and inequality.
- The number of people going hungry is growing.
- Social cohesion is under severe strain.

- Evidence of diminishing respect for 'the rule of law' is apparent everywhere.

Jakkie Cilliers of the Institute for Security Studies (ISS), writing for ISS Today, says: “Citizens don’t obey the rules because the governing African National Congress sets a poor example.” <sup>14</sup> Several questions present themselves, and press for attention. In addition, new lines of inquiry present themselves for examination. Using your critical thinking skills, analyze and interrogate the extract from the newsletter, and answer the questions below.

1. What does 'the rule of law' mean for those who are starving?
2. What does 'the rule of law' mean to someone unable to put food on the family table due to the failures of societal systems and structures?
3. What is the basis for social bonding in contexts where constitutions and laws do not match the lived reality of the great majority?
4. Is the achievement of food security for all imaginable without the rule of law?

Interesting to note how prescient this call to action is. Put out in June 2021, by 11 July, a week before International Mandela Day, South Africa was deep in the grip of riots and looting—the twin outcomes of poverty and lawlessness.

## Chapter Summary

Part of the art and skill is knowing the enemies of questioning, which are:

Fear: Children begin as fearless questioners, then learn that asking questions carries risks, so they stop questioning.

Knowledge: Knowledge is an enemy in that you believe you know so much, you stop learning, but you don't know as much as you think you do.

Bias: Biases go hand in hand with assumptions, so question all your assumptions.

Hubris: Excessive pride in your ability or your knowledge leads you to believe that your views are correct. If you lack humility, you'll do less questioning.

Time: The lack of time is often used as an excuse for not questioning.

Skilled questioning requires patience and practice.

1. Analyze your goals and purposes.
2. Question definitions relating to problems and issues.
3. Assess the information base of your thinking.
4. Rethink a conclusion or interpretation.
5. Identify and check my assumptions.
6. Analyze your own point of view.
7. Follow through on the implications of your thinking.

The power of questioning comes from encouraging you to think more deeply about things. By using Socratic thinking and questioning, each individual acquires the logic and critical thinking skills that are the keys to unlock their own truth.

## GETTING IT RIGHT: POINTS TO REMEMBER AND APPLY

“**T** rue wisdom comes to each of us when we realize how little we understand about life, ourselves, and the world around us.” This is credited to Socrates, and it does echo the sentiments expressed by him in the opening quote from Chapter 5, “The only thing I know, is that I know nothing.” The relevance of the quote is a reminder to us of how limited we are by thinking we know much, when we know not. Our confidence in our understanding and knowledge is limiting our growth as it introduces a subtle bias in our thinking.

To master the art and skill of Socratic questioning, you first need to master critical thinking – the foundation that supports penetrating and incisive questioning. Your ultimate goal with Socratic questioning is to find a framework to generate sound arguments, valid conclusions, and, consequently, the answers you are looking for.

Before you can frame any question, you need to gather all the information presented. To do this, you must hear what is being said and what is being presented as facts. You also need to truly listen and hear what is not being said. Sometimes, you may find that the question you need to ask lies in the subtext. Besides, it is not possible to formulate any question without first hearing the argument.

The next step is to understand all the terms used and all the concepts presented. These are the ideas around which the argument is built. If anything is unclear or vague, ask probing yet respectful questions. The goal is not to win the argument but to find answers that benefit everybody involved.



In your quest for deeper understanding, start with questions about the origin of the information presented. In other words, from where are the facts derived? Is it from personal experience, or is it received wisdom? Received wisdom, in the words of Kurt Vonnegut, is "The things other people have put into my head are out of proportion with one another, are out of proportion with life as it really is " <sup>1</sup> However the information is derived, or wherever it is from, question the source of it. If it cannot be independently verified, it must remain suspect.

Of course, you should also question any conclusions that are drawn. Are assumptions or inferences involved in arriving at the conclusion? Does the logic hold true?

Expect the unexpected. This is a maxim you can apply to other aspects of your life. And it certainly applies to critical thinking. As soon as you start breaking arguments into their component parts, and analyzing them separately, all sorts of unexpected results may pop up. Part of this is as a result of trying to see the premises from all the different points of view.

To help you see different viewpoints, imagine that you are doing some scenario planning. The most unlikely of possible views must be considered even if it is such a remote possibility as to seem ridiculous. For example, how many corporate and government organizations factored a pandemic into their planning 10 years ago? Or five years ago? Perhaps the resulting turmoil of the Covid-19 years could have been lessened if a pandemic was on the radar. With this in mind, when you do your scenario planning, you need to turn yourself into a futurist, or a futuristic thinker. Consider the worst case scenario, and the best case scenario, and make contingency plans for the unexpected. Then consider all the possibilities in between and plan for them as well. In all cases, you have to plan for uncertainty, or at least tolerate it when it crops up.

Be a good listener. Hear all angles, spoken and unspoken, some of which you can only pick up from non-verbal communication. You need to hear it all if you are to actively participate in the dialogue.

Remember the Universal Intellectual Standards from Chapter 2 of this book? Apply them because they highlight areas that are open to questioning in your search for truth.

<b>Clarity</b>	Could you elaborate on what you mean? Could you give me an example?
<b>Accuracy</b>	How could we check on this? How can we find out if it is true?
<b>Precision</b>	Could you give me more details? Could you be more precise?
<b>Relevance</b>	How does that relate to the problem? How does that help us with this issue?
<b>Depth</b>	What makes this difficult? What are the complexities of this issue?
<b>Breadth</b>	Do we need to look at this from another perspective? How can we look at this in other ways?
<b>Logic</b>	Does it all make sense together? Does the evidence support what you say?
<b>Significance</b>	Is this the central idea to focus on? Which facts are the most important?
<b>Fairness</b>	Is my thinking justifiable and is my purpose fair in the given situation? Am I distorting concepts to get what I want?

## Knowing What To Ignore

To get the best from the Socratic method, start the dialogue by defining the terms under discussion. Unless both parties agree on the terms, you will find yourselves talking at cross-purposes.

It helps to have an idea of what the other person does or doesn't know. For example, an animal trainer might know a bit about quantum mechanics, but you cannot expect them to have an in-depth

understanding of Heisenberg's uncertainty principle. A quote from Rumi, the 13th-century Persian poet, scholar, and mystic, put this quite well when he said, "The art of knowing is knowing what to ignore."

Fallacies are one of those things that you need to ignore when working with the Socratic method. However, you need to recognize them before you can ignore them. When you examine an argument, or put together your own arguments, watch out for fallacies.

A common use of "fallacy" is as a synonym for "false," "untrue," or "incorrect." However, it is also used to describe faulty reasoning in an argument, in which case it is then a "logical fallacy."

The Collins English Dictionary defines a fallacy as "an incorrect or misleading notion or opinion based on inaccurate facts or invalid reasoning." <sup>2</sup> In logic, it has a different meaning: "an error in reasoning that renders an argument logically invalid." <sup>3</sup>

In a deductive argument, a fallacy makes the entire argument invalid. In an inductive argument, a fallacy does not invalidate the argument, but it weakens it. Below are a few common fallacies. This is not a complete list of fallacies, and be aware that some fallacies have more than one name.

### Ad Hominem

*Ad hominem* means "against the man," and refers to the practice of using a personal attack instead of using sound reasoning and rational arguments to refute an argument.

### Strawman Argument

The term "man of straw" is an expression used to describe a person of no substance, someone you cannot rely on. In the strawman argument, the real issue or position is not addressed, but a side issue, without substance, is created and addressed, hoping that this will be seen as refuting the argument.

### Red Herring Fallacy

A “red herring” fallacy is creating a distraction from the argument, usually by inserting a topic that appears, at first glance, to be relevant but does not really address the issue. A red herring fallacy does not clarify anything, rather it distracts and confuses.

### Appeal to Ignorance

An appeal to ignorance is a situation where ignorance is used as a premise to support an argument. However, this is almost always going to be a fallacy. It relies on the ignorance of most people (we all have areas of which we are totally ignorant), but it is a manipulative tactic to highlight a knowledge gap.

### Slippery Slope Fallacy

You may have used this fallacy before or had it used on you, or both. It's a case of you saying, “But I can't cut the lawn today! If I can't go to that swimming party, I'll never get a real girlfriend and I'll end up single and spend the rest of my life living with you and Dad!” This fallacy starts from an innocuous premise and works through a list of gradually worsening scenarios, all of which are pure conjecture.

### Circular Argument

A circular argument is an argument that just repeats earlier assumptions or restates an earlier premise without arriving at any new conclusion. In effect, the premise is used as a conclusion, and the conclusion is used as a premise. For example, if red is red because blue is blue, then blue is blue because red is red.

### Equivocation

Equivocation is when a word, or a sentence is used to deliberately mislead, or confuse. It does this by sounding like it's saying one thing but it's actually saying something else. Equivocation is synonymous with ambiguity and with elusiveness.

### False Dilemma

The false dilemma fallacy, also called the either-or fallacy, only gives you an either-or choice. As with many situations in life, there are seldom only two choices. The either-or fallacy fails because it oversimplifies a range of possible options. Sometimes, the choice could be a “both and” situation.

### Appeal to Authority.

This fallacy usually claims some well known person as an expert in a field to support an argument. Rather than presenting concrete evidence, an appeal to authority claims what some media person says as fact, ignoring the possibility that this person is not necessarily an authority.

### Appeal to Pity.

This fallacy relies on factors such as pity or compassion, which means they are unlikely to be factual and are probably irrelevant. An appeal to pity is seen as manipulative and relies on a feel-good factor rather than logic and facts.

One possible way of diverting or deflecting fallacies is to learn how to answer a question with a question. For example:

Person A: “How did you get your hair to look like that?”

This could be the opening line of a straw man fallacy, or a personal attack (ad hominem) on you. In either case, you don’t want to respond with: “What does my hair look like?” That would simply encourage your interlocutor. A better response would be: “Could you please explain the relevance of that statement to me?” Or “Could you please rephrase that in the context of your original assumption?” The last thing you want is to get sucked into an exchange of insults. It’s a battle nobody wins.

Of course, the questions are unlikely to be about mundane issues such as hair. For the purposes of this chapter, we will look at scenarios that may concern you, or impact on you more directly – issues like how a viral pandemic, or climate change, might affect your decision-making.

## Two Frameworks To Guide Questioning

Critical thinking is easier when you have a framework that can guide your questioning processes. They help to remind you of sequences and relationships between questions.

### Bloom's Taxonomy

Bloom's taxonomy is usually depicted as a pyramid, and it offers a practical path through the critical thinking process. As with any logical process, whether technical or scientific, you need to work through the steps, one by one, and each one is potentially challenging. Skipping a step will mean an incomplete or inaccurate result.

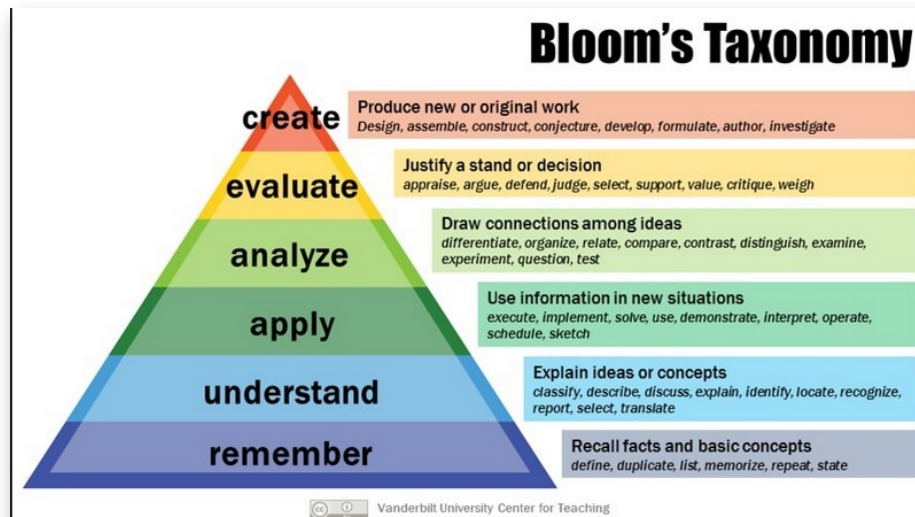


Figure 2: Bloom's Taxonomy

The steps below are based on *"Critical Thinking In a Nutshell,"* also published by Thinknetic. <sup>4</sup>

1. *Remember*: Step one is to remember relevant details, including facts, terms, and concepts you are familiar with, and sources of information,

such as books or websites.

2. *Understand*: Once you have the relevant materials, study them until you feel you have a full understanding of the issue at hand. Do not skip this step or skimp on engaging with it. This is a vital step for everybody, from expert to novice. Do not move on until you know you can explain all the facts and concepts to a stranger. You cannot apply the information if you don't understand it.

3. *Apply*: Once you understand the problem, ask yourself:

- How does all the information and knowledge apply to the question at hand?
- What is the most valuable information, and what is the least valuable for solving this problem?
- Do I have a complete set of information, and do I fully understand the problem? Is there anything I am missing that could help me understand the problem better?

4. *Analyze*: What are the major elements of the problem you face? Break the problem down into its component parts and define each part and the role it plays. Once you have done this, examine the links between components and establish how one influences another. If none of this makes much sense, you may not have all the information you need and may have to go back to Step 2 or Step 3.

5. *Evaluate*: At this point, you might think all you need to do is put the finishing touches to it and you'll be done. But, although you've worked hard to get here, you now need to look at it critically and subject it to rigorous criticism. The idea is to find any flaws in your analysis, even insignificant flaws.

Evaluate your analysis based on two criteria:

- Does it make sense internally? Are the definitions precise, and is the analysis based on verifiable information?
- Does it make sense externally? Are there sources of information outside of your analysis that could bring key claims into question? Is there information you examined but did not take into account?

If you find any flaws, this is the best time to fix them.

6. *Create*: This is the final stage where you take all of the elements you worked through and combine them into a cohesive plan. Make sure that your conclusions stand up to scrutiny and that they are valid and practical.

You may need to adjust some elements of the plans. This is not unusual and does not represent a failure on your part. All plans should be seen as “works in progress,” and adjustments are sometimes necessary as circumstances change.

### The Paul-Elder Framework

The second framework you will learn is the Paul-Elder framework. You are already familiar with aspects of this method, as it is covered in earlier chapters. Paul and Elder use three elements, or sections, in their framework. They are:

- Intellectual standards
- Reasoning, or the elements of thought
- Intellectual traits

#### *Intellectual standards*

These are the universal intellectual standards we discussed in Chapter 2 and that were repeated earlier in this Chapter. They inform, and are applied to, the elements of thought.

#### *Reasoning: the elements of thought*

When applying your reasoning powers, remember that all reasoning:

1. has a purpose;
2. is an attempt to work something out, to settle a question, or solve a problem;
3. is based on assumptions;

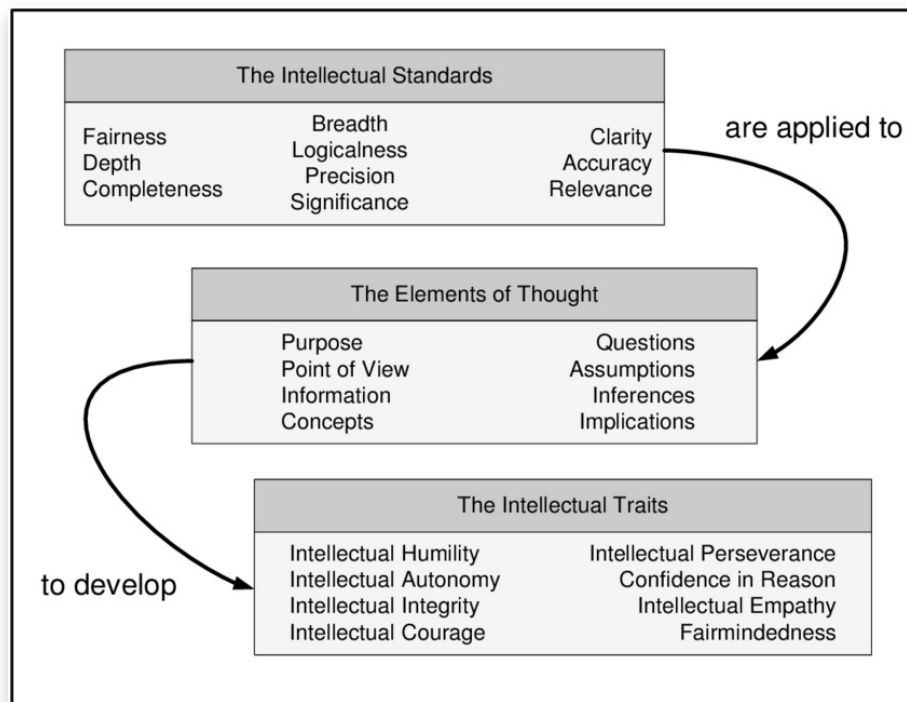


4. is done from some point of view;
5. is based on data, information, and evidence;
6. is expressed through and shaped by concepts and ideas;
7. contains inferences or interpretations by which we draw conclusions and give meaning to data;
8. leads somewhere or has implications and consequences.

### *Intellectual traits*

The ultimate aim of this model is to develop the intellectual traits so vital to critical thinking.

This framework is best summarized in the Paul-Elder framework graphic below.<sup>5</sup>



*Figure 3: The Paul-Elder framework*

### Questions To Ask

The Socratic method relies on various ‘question types’ to generate the most complete and correct information for exploring issues, ideas, emotions, and thoughts.

When the Intellectual Standards are applied to the Elements of Thought to develop the Intellectual Traits, you need a basket of questions you can ask. For some guidance on these questions, refer to Table 6.

Clarity	Could you give me an example? Could you illustrate what you mean?
Accuracy	How could we check on that? How could we verify or test that?
Precision	Could you be more specific? Could you give me more details?
Relevance	How does that relate to the problem? How does that help us with the issue?
Depth	What factors make this a difficult problem? What are some of the complexities of this question?
Breadth	Do we need to look at this from another perspective? Do we need to look at this in other ways?
Logic	Does all this make sense together? Does what you say follow from the evidence?
Significance	Is this an important problem to consider? Which of these facts are most important?
Fairness	Do I have any vested interest in this issue? Am I sympathetically representing the views of others?

*Table 5: Questions for the intellectual standards*

To get really good at Socratic questioning, you need to practice, practice, and then practice some more. Given that it is an art and a skill, you will only get better with more effort and practice.

Below are a few scenarios for you to work through as exercises. As with every aspect of critical thinking, you must apply your mind to these and work through them in a way that provides you with usable results. We will do the first two together, using the Paul-Elder method for the first one and Bloom’s taxonomy for the second one.

## Scenario 1

Jonathan runs a small business supplying and fitting aluminum and glass windows and doors. Business is slow, and he needs to find ways to increase sales or reduce costs. He is also considering supplying wrought-iron garden furniture to customers of the plant nursery run by his wife.

Perhaps it is time to close or sell his business and become more involved in the cottage industry his wife has built up. His worry for the aluminum and glass business is that it will not recover in the face of Covid-19 business closures and job losses. His other concern is that the plant nursery will not support them both, even with the garden furniture side of it. His big fear here is the impact of the climate crisis on the ability of his wife to protect seedlings from heat and/or drought and/or localized flooding.

Help Jonathan work out his issues.

First, what is his purpose? From what we know, he has two issues, and may be conflating them. We need to look at the future of his window and door business as a separate exercise to the nursery.

What assumptions does he make in his deliberations? Jonathan thinks the viral pandemic will have a negative effect on the economy, that economic recovery is years away if it ever happens. But what assumption does he make to arrive at this conclusion?

Perhaps he needs to look at this from a different perspective. A different point of view could be to see this as a call to increase his marketing, run specials, or run a competition in which the 100th order gets a 50% discount on materials.

On what data is his gloomy economic outlook based? If it is based on information and evidence, what are the sources, and are they credible? Are there opinions that believe the economic boom is around the next corner?

There must be a source that helps shape the concepts and ideas at the root of his worry. Is he a member of a business group or a group on social media where gloom is the default position? If so, he is in a self-

created echo chamber where all the information supports his view. It sounds like a change is due.

What are the inferences or interpretations used by Jonathan to draw the conclusions he came to? Having a negative view is not a bad thing in itself, as it lays out the worst case scenario. Then, if you cannot accept the consequences of the worst case scenario, you need to look for a way to avoid it.

Jonathan's other problem is related to the impact of the climate crisis on his wife's business. What assumptions does he make about the nursery? Are they valid? Are there any aspects that can be mitigated by a different approach, such as using drip irrigation and/or shade cloth?

In all these steps, apply universal intellectual standards. Ask the questions to establish aspects such as clarity, relevance, fairness, and depth.

Now, using the same process that you helped Jonathan work through for his business, ask questions about his assumptions and why his wife is not involved in making decisions about the nursery. After all, it is her business. What assumptions is Jonathan making about the potential impact of climate change? He should consider ways of mitigating climate change, such as rainwater tanks, drip irrigation, and mulching heavily to retain water in the soil and protect the soil from being baked.

## Scenario 2

For this exercise, we will use Bloom's taxonomy: Remember, Understand, Apply, Analyze, Evaluate, Create.

Belinda and Arthur have two young teenagers and intend sending both children to college. Except, Arthur has lost his job as a logistics manager as a result of a pandemic affected economy. Analyzing the family's projected income and projected household expenses, they realize that there will not be much left to put aside for college fees, or at least not the colleges they had in mind. If Arthur doesn't get another job fairly soon, they are going to have to revise their plans. Help Belinda and Arthur find possible solutions to their dilemma.

*Remember:* In this case, remember the original plan. Dig up old planning sheets, budget notes, records of decisions made, and how they were to

be implemented. If Belinda and Arthur do not have written records, they must start by making notes of what they can remember.

*Understand:* The next step is to study and discuss the notes until they have a full understanding of the issue. How big is the gap between what they have and what they still need? Are there other sources of income to bridge the gap? Engage with the children and tell them what the situation is. They have younger and fresher eyes, and they might see something Belinda and Arthur missed.

*Apply:* Now, take all the information and apply it to the problem. Do Belinda and Arthur have a complete set of information? Of that information, what is the most valuable and what is the least valuable for reaching a viable conclusion? Is there anything else to consider?

*Analyze:* Break the problem down into its component parts and define each part and the role it plays. Work with the feedback from the children and examine the links between the parts and how one influences another.

*Evaluate:* Collate and organize the various inputs and look at it critically. Subject it to a searching examination. Does it make sense internally? Are the definitions precise and is the information verifiable? Does it make sense externally? Is there information you did not take into account? Fix any flaws you find.

*Create:* combine all of the elements you worked with into a cohesive plan. Make sure that your conclusions are valid and practical.

Nobody said Socratic questioning and critical thinking would be easy. That's one of the reasons these skills are so rare. Under Exercises and Tasks at the end of this chapter there are a few more generic scenarios to help you polish your skills. Apply one of the two frameworks illustrated above to each scenario. Have fun with your creativity and curiosity.

## Templates And Question Guides

Work through these sample question guides and templates for practice in critical thinking. Use them for training and work settings, or to help you analyze and work through issues you are faced with. The first template is for an analysis of an article, film, or problem. The second template is specifically for problem-solving.

Template 1: Analysis of article/film/issue <sup>6</sup>

1. The main purpose of this article/film/issue is \_\_\_\_\_.

*State what you think the primary purpose is. Be as accurate as possible.*

2. The key question that the article/film/issue addresses is \_\_\_\_\_.

*Work out the key question/s presented.*

3. The most important information in this article/film/issue is \_\_\_\_\_.

*Work out the facts, experiences, and data used to support the conclusions.*

4. The main inferences/conclusions in this article/film/issue are \_\_\_\_\_.

*Identify the key conclusions presented.*

5. The key concepts we need to understand in this article/film/issue are \_\_\_\_\_.

By these concepts the author means \_\_\_\_\_.

*What are the important ideas you need to understand to follow the reasoning?*

6. The assumptions that underpin the thinking are \_\_\_\_\_.

*Is anything being taken for granted, and might it be questioned?*

7a. If we take this line of reasoning seriously, the implications are \_\_\_\_\_.

*What are the likely consequences if we take this line of reasoning seriously?*

7b. If we ignore this line of reasoning, the implications are \_\_\_\_\_.

*What are the likely consequences if we fail to take this line of reasoning seriously?*

8. The main point of view in this article/film/issue is \_\_\_\_\_.

*What are the creators looking at, and how are they seeing it?*

### Template 2: Problem-Solving<sup>7</sup>

Every problem is easier to solve if you have a structured approach to problem solving. This template provides a working guide, no matter what the problem is.

1. What is your purpose? Decide on your goals and needs and regularly review them. Recognize problems or obstacles to reaching your goals and satisfying your needs.
2. Specify each problem, being as precise and clear as you can.
3. Determine the kind of problem facing you. For example, is it internal or external, a physical obstacle or a mental block, and what do you have to do to solve it?
4. Differentiate between problems that are within your control and problems over which you have no control. Focus on the problems you can potentially solve.
5. Work out what information you need to overcome the problem. Then make an effort to find it.
6. Analyze the information you collect, interpret it, look at it from different angles, then draw reasonable inferences.
7. Decide what actions you can take and whether they are short term or long term options. Recognize your limitations in terms of resources, such as time and money.
8. Evaluate your options. Consider their advantages and disadvantages, for both the short term and long term.
9. Plan a strategy. This may involve direct action, or a carefully considered wait-and-see approach.
10. When you act, be aware of how your action could negatively affect the outcome of the problem. Be ready to revise your strategy if necessary.

Be prepared to restate the problem and to repeat your analysis as more information becomes available.

### Exercises and Tasks

1. Think of an important decision you had to make in the past, such as buying your first house, selling up to move to another part of the country, or changing career direction.

It doesn't matter what it was as long as you had options, and it wasn't easy to choose between them. Next:

- a. Write down all the alternatives you had to the decision ultimately made.
- b. Write down why you choose one over the other.
- c. Were these reasons based on facts you thoroughly researched or on assumptions?
- d. What assumptions informed that decision?
- e. How do you know these assumptions to be true? Have you examined their validity?
- f. Do you make many of your decisions based on unfounded assumptions? What are some examples?

2. Apply what you have learnt in this chapter to these scenarios:

- a. You are trying to interpret an angry friend's needs, expressed through a rush of emotion and snide comments. You would like to give your friend some help and support. How would you go about doing this, without alienating your friend through asking probing questions?
- b. You are a manager and need to settle a dispute between members of your staff. What was a healthy competitive environment in the sales team has become an area of spiteful and bitter contention. One high-performing individual seems to be the target of the spitefulness of other staff. You need to summarize the facts, assess the alternatives and be fair to all sides of the dispute. How do you approach this while remaining as objective as possible?



c. You are the first to arrive at the scene of an accident. Describe how you will analyze the situation, evaluate priorities, and decide what actions to take and in what order you will take them.

### 3. Brain exercises

Reading is great for increasing your pleasure, but it is just as good for increasing your understanding and knowledge. Even better, reading is one of the best brain exercises, particularly if you read critically. Think about what you read, analyze it, question the sources of the information. Are they credible? Can the results of the reported experiment be replicated? Is it consistent with earlier results?

The following four brain exercises have been around for decades and first crossed the author's desk as an email about 25 years ago. They are all on the internet, in different formats, on different websites, so it is almost impossible to know where they originate.

a. A traveler arrives in a small town that he has never visited before. He knows nothing about the town or its inhabitants, but he needs a haircut and shave. There are only two barber shops in town, both on the main road. The man studies each of them with care. One shop is neat and tidy. The barber is sweeping the floor while waiting for his next customer. The other barber's shop is untidy. Everything looks a bit run down. The barber, reclining in a chair while waiting for his next customer, is scruffy, with untidy hair and beard. Both shops charge the same for a haircut and shave. After careful consideration, the traveler decides on the scruffy barber for his haircut. Why?

b. A convicted murderer is given a choice between three rooms. The first room is full of raging fires, the second room contains assassins with loaded guns, and the third is full of lions that haven't eaten in 3 years. Which room is the safest?

c. A woman shoots her husband. Then she holds him underwater for over 5 minutes. Finally, she hangs him. 30 minutes later, they both go out and enjoy a wonderful meal together. How can this be?

d. This is an unusual paragraph. I'm curious as to just how quickly you can find out what is so unusual about it. It looks so ordinary and plain that you would think nothing was wrong with it. In fact, nothing is wrong with it! It is highly unusual though. Study it and think about it,

but you still may not find anything odd. But if you work at it a bit, you might find out.

The answers to these four brain exercises are all available on the internet, but you can work them out for yourself with a little critical thinking and some careful analysis.

## Chapter Summary

To master the art and skill of Socratic questioning, you first need to master critical thinking. Your ultimate aim with Socratic questioning is to find a framework to use to generate sound arguments, valid conclusions and, consequently, the answers you are looking for.

Strong critical thinking requires having a command of the intellectual standards. They highlight areas that are open to questioning in your search for truth.

Critical thinking is easier when you have a framework to remind you of relationships between questions. The two that were discussed are Bloom's taxonomy and the Paul-Elder framework.

The Socratic method relies on various 'question types' to generate the most complete and correct information for exploring issues, ideas, emotions, and thoughts.

To get really good at Socratic questioning you need to practice, practice, and then practice some more. Given that it is an art and a skill, you will only get better the more effort and practice you put in.

## AFTERWORD

In *The Philosopher and the Wolf*, Mark Rowlands writes about what philosophers call an epistemic duty, “the duty to subject one’s beliefs to the appropriate amount of critical scrutiny.”<sup>1</sup> This is similar to a Socrates quote you may remember from chapter 2, “the unexamined life is not worth living.” The difference is that where Socrates made a statement to promote questioning, Rowlands calls it a duty. So, whether you are an ancient or a modern philosopher, or not a philosopher at all, you owe it to yourself to question your beliefs and examine their origins.

Knowledge of Socratic reasoning and questioning will help you understand and apply the critical thinking techniques. Once you understand the Socratic method and critical thinking, apply your logic to generate sound conclusions from well considered and carefully analyzed premises. The result will be decisions that stand up to scrutiny.

The role of critical thinking is to help you to think clearly and rationally, to understand the logical connection between ideas and concepts. Important in critical thinking is a well-developed ability to reason.

When you work with the elements of critical thinking, you need specific skills such as observation, reflection, interpretation, problem solving, analysis, and evaluation.

Critical thinking requires confidence in your thinking as you analyze and evaluate the arguments presented. It is the systematic application of logic supported by the courage to question deeply, and the humility to admit you may be wrong. Understanding the logic that informs a critical

mindset helps you to interrogate arguments presented to you and to build strong arguments of your own.

The Greek philosopher Socrates was known for his search to gain insights and get to the truth. Through the establishment of universal definitions and inductive arguments, the Socratic Method of thinking is credited with helping found the essence of the scientific method.

Socrates' search was focused on ethics and truth, and extended to what is good and right. To think and reason in a Socratic way you need to develop intellectual humility, open-mindedness, an inquiring mind, and a thirst for truth.

Socratic questioning is a process that may or may not end with a satisfactory conclusion. This is because you engage in questioning to deepen your understanding instead of trying to prove a point. Break through your standard thought patterns and access a questioning mindset. Have a close look at what you have been conditioned to think and believe.

Five questions you should ask consistently and consider thoughtfully before passing judgment, and they are:

- How can I see this with fresh eyes?
- What might I be assuming?
- Am I rushing to judgment?
- What am I missing?
- What matters most?

With the advent of “fake news” and disinformation, start assessing things more critically. And watch for the distorting influence from your cognitive biases.

Learning about the Socratic way of questioning is not enough. Asking the right questions is both an art and skill. The power of questioning comes from how it encourages you to think more deeply about things. By using Socratic thinking and questioning, you acquire the logic and critical thinking skills that are the keys to unlock your own truth.

You need to understand the enemies of questioning, and why people fail to ask questions. Common reasons are:

Fear: Children begin as fearless questioners, then learn that asking questions carries risks.

Knowledge: Knowledge is an enemy in that you believe you know so much, you stop learning.

Bias: Biases go hand in hand with assumptions, so question all your assumptions.

Hubris: Excessive pride in your ability or your knowledge leads you to believe that your views are correct.

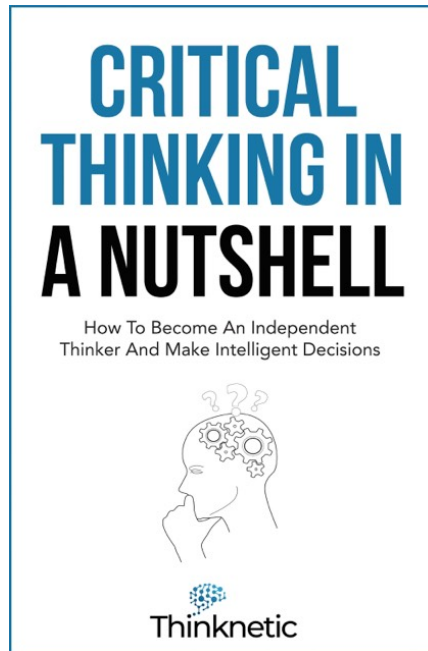
Time: The lack of time is often used as an excuse for not questioning.

Your ultimate aim with Socratic questioning is to find a framework to help you to generate sound arguments, valid conclusions and, consequently, the answers you are looking for. Strong critical thinking requires having a command of the intellectual standards. They highlight areas that are open to questioning in your search for truth.

In Socratic questioning and critical thinking you have two powerful tools. To get really good at using them, practice, practice, and then practice some more. And the best time to do it is now, while the knowledge is fresh. So what are you waiting for? Start using Socratic questioning and critical thinking



If you enjoyed this book, you may want to read *Critical Thinking In A Nutshell*.



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## CONTINUING YOUR JOURNEY



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## Afterword

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