

The Little Blue Reasoning Book: 50 Powerful Principles for Clear and Effective Thinking

by Brandon Royal

About this Book

This book focuses on developing thinking skills, which are not emphasized in school subjects. This book focuses on thinking methods. The goal of this book is to guide us "how to think" instead of "what to think" while we are facing problems and are required to make decisions. To achieve this goal, the authors discusses methods of collecting and sorting information efficiently and identifying key problems. These methods include "reframing problems". The authors also provides fifty tips for getting to know our perceptions and mindsets, creative thinking, using tools such as trees and boxes for decision making, and analyzing arguments.



About the Author

Brandon Royal is an award-winning writer whose educational authorship includes The Little Blue Reasoning Book, The Little Red Writing Book, The Little Gold Grammar Book, The Little Red Writing Book Deluxe Edition, The Little Green Math Book, and The Little Purple Probability Book. During his tenure working in Hong Kong for US-based Kaplan Educational Centers -- a Washington Post subsidiary and the largest test-preparation organization in the world -- Brandon honed his theories of teaching and education and

developed a set of key learning "principles" to help define the basics of writing, grammar, math, and reasoning. (Amazon.com)

Contents

- Chapter 1: Perception & Mindset...Page 2
- Chapter 2: Creative Thinking.....Page 3
- Chapter 3: Decision Making.....Page 6
- Chapter 4: Analyzing Arguments...Page 8
- Critical Evaluation.....Page 10

Chapter 1: Perception & Mindset

Selective Perception and Coincidence

"Selective perception is the tendency to see the world the way we would like it to be rather than how it really is. The sound thinker suspends judgment and is not unduly influenced by stereotypes, prejudices, isolated experiences, or preconceived notions." (Page 15)

Training critical thinking helps us become all-rounded thinkers--who see both sides of an issue or a topic. (Page 15)

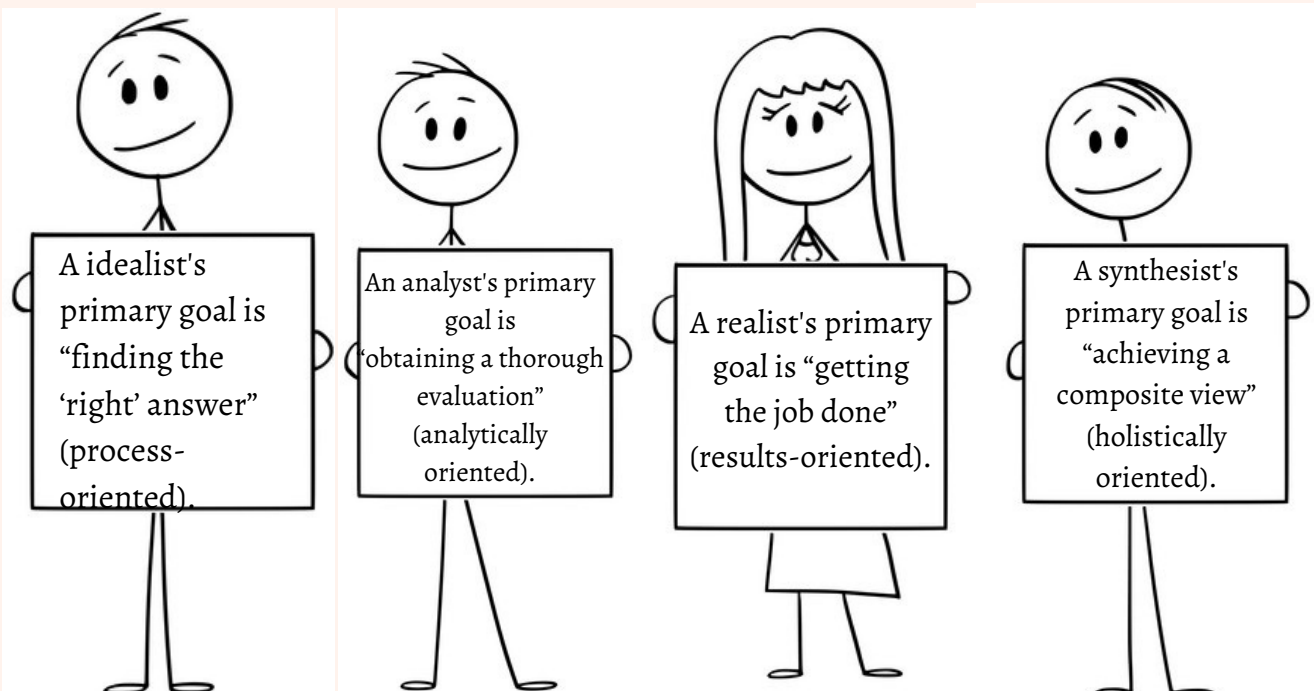
When it comes to coincidence, we must keep in mind that there are likely just as many differences as there are similarities between these two events. "If a billion chimpanzees were to sit down in front of a billion computers with a billion hours to spare, eventually one of them would type Tolstoy's *War and Peace*." This saying reminds us that almost anything is possible. (Page 18)



<https://blogs.ubc.ca/michaelaquinn/2017/04/02/82/>

The Four Classic Mindsets

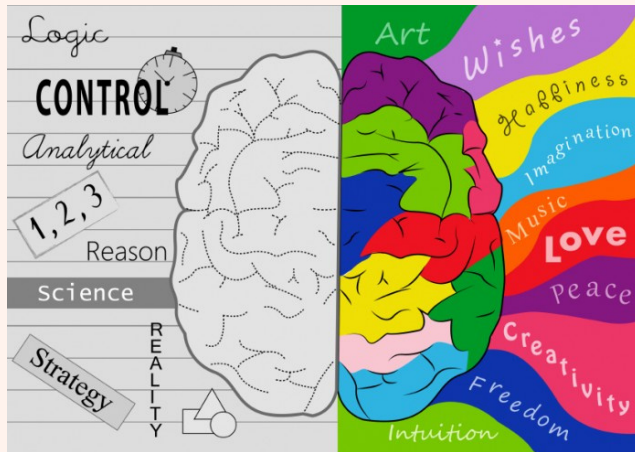
Think of mindsets as divided into four basic types: Analysts, Idealists, Realists, and Synthesists. These mindsets can be further contrasted based on levels of practicality and emotional attachment. (Page 21-22)



Chapter 2: Creative Thinking

Lateral Thinking and Left-Brain vs. Right-Brain Thinking

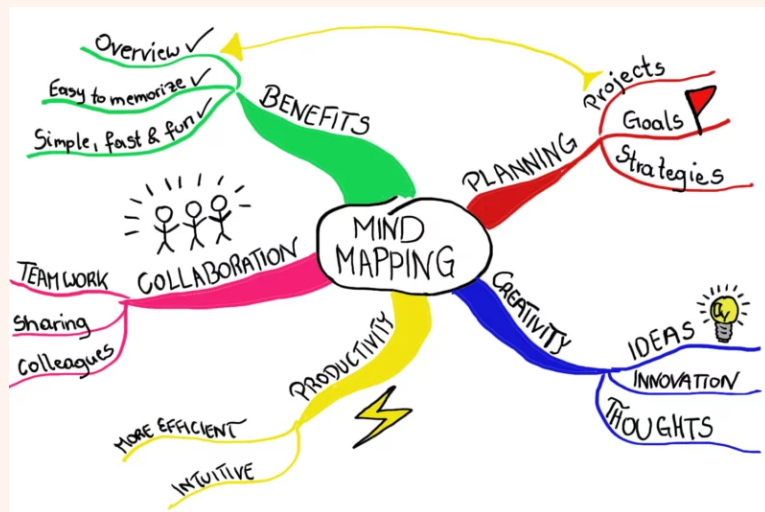
Creative thinking is “backdoor” thinking



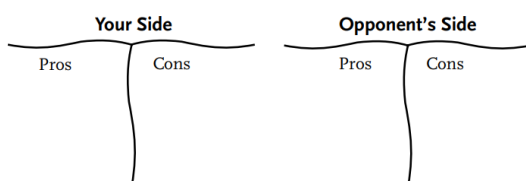
<https://www.stelizabeth.com/healthyheadlines/right-left-brained/>

Left-brain thinking might be described as “spotlight” thinking, while right-brain thinking might be described as “floodlight” thinking (They can be also described as convergent thinking and divergent thinking. **Convergent thinking focuses the mind; divergent thinking opens the mind.**) Creative thinking is mostly right-brain thinking. Lateral thinking is an offshoot of creative thinking. Creative thinkers think about low probability, think sideways and “outside the box”. (Page 27-36)

Mind maps are a note-taking technique that involves both left and right brain while the traditional linear note-taking only engages one side of our brain. Mind maps increase retention and comprehension by appealing to both sides of our brain, making learning more effective. Mind maps benefit visual learners in particular by making it easier to see the “big picture”. (Page 38-39)



<https://www.mindmeister.com/blog/why-mind-mapping/#>



Page 39

The devil’s advocate technique imposes objectivity and compels divergent thinking. Devil’s advocate is “a person who advocates an opposing or unpopular cause for the sake of argument or to expose it to a thorough examination.” (Page 39) This decision-making technique force you to consider pros and cons of yourself and your opponents, thereby reducing groupthink and achieving more objectivity. (Page 42)

Idea Growers and Brainstorming

"Not challenging the obvious, evaluating ideas too quickly, and fear of looking the fool—these are the three greatest creativity inhibitors." (Page 42)

Fresh ideas are key to creative thinking. However, "history abounds with instances of people who haven't been proactive enough in evaluating new ideas or who have been overly dismissive of new inventions or artistic or literary styles. This is particularly true where individuals are deemed authorities in their fields and err on the side of protecting their reputations." (Page 44)



"Idea growers" and brainstorming are important for generating new ideas !



idea killers

(Page 47)

We tried it before.
That's not my/your job.
That's not how we do it.
Maybe next time.
My mind is definitely made up.
It's good enough.
I don't need any more information.
You can't do that here.
.....



idea growers

(Page 48)

How could we improve....?
What would happen if...?
Is this what you meant?
What have we missed?
Why do we always do it like that?
Wouldn't it be fun if...?
Let me ask you for some ideas on...
Thank you!
.....



tips for brainstorming

(Page 49)

1. Brainstorming sessions are usually conducted in a group of between six and fifteen people.
2. Make sure you write down your ideas.
3. More ideas the better!
4. Truly novel ideas are needed--"wackier is better".
5. Evaluation of the ideas needs to be delayed.
6. "Hitchhiking on ideas": one person is able to use another person's idea to go further and supply another idea.

Other Tips for Creative Thinking

Reframing problems:

An agricultural importer's association was attempting to seek a way to reduce the number of bruised pears which occurred when these fruits were transported. The solutions include using smaller boxes and adding more padding inside the boxes. By reframing the problem, someone came up with "develop a new kind of pears that are less easily to get bruised". That is how "apple pear" was born. This new breed has the taste of pears yet the hardness of apples. (Page 55)

"It is rare for people to step back and try to define alternative goals. Instead, most people read or hear of a problem and almost immediately begin generating strategies. One way to become more creative is by explicitly defining a minimum of two or three different goals for each problem situation." (Page 55)

Selling Creative Ideas:

"To turn any creative idea into an innovative reality, an individual must obtain the support of key persons in an organization", so "think hard about your ultimate decision makers—your real audience—and do some research. The better you know who your audience is, the better you can tailor your presentation"; "Get initial



Reflective Questions 1

During this COVID-19, how would you reframe the problem that you feel uneasy and unmotivated when you have to work from home?

Reflective Question 2

What would you do if you come across quite a few colleague who won't accept your fresh ideas that you think is very promising for the organization? Will you take a lot of time to explain more about your ideas to them, or ignore them?

feedback from people lower in the organizational structure and use it as a trial session to see what questions people have and what weaknesses and strengths are attributed to your idea. Never think you can please everyone; there will always be objectors." (Page 56)



Chapter 3: Decision Making

Tools for Decision Making



Trees:

- order and hierarchy
- diagram information
- visualize outcomes
- eg. decision-event tree & probability tree

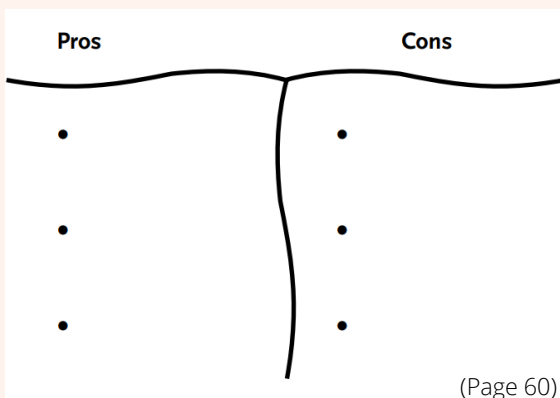


Boxes:

- sorting and summarizing data or information
- often matrixes (A matrix is a useful tool to summarize data that can be contrasted across two variables and sorted into four distinct outcomes.) (Page 66-70)



Pros and cons analysis (T-account)



Utility Analysis

Utility is “desirability.” Utility analysis is useful in those situations in which we seek to match utility with probability. Utility is “what we want”; probability is “what we get.” (Page 88) Utility analysis provide us with options that have the greatest Expected Value (EV).



weighted ranking

"Weighted ranking is a tool for finding solutions using a weighted average. To calculate weighted average, we multiply each event by its associated weight and total the results. In the case of probabilities, we multiply each event by its respective probability and total the results." (Page 81)



Questions for Consideration

How are matrixes different from regular tables? What are their advantages and disadvantages? Which do you prefer and why?

Sunk Costs

According to economic theory, any past costs, also known as sunk costs, have no affect on future decision making. The only thing that affects future decisions are the cost and benefits of the two (or more) alternative courses of action. (Page 91) From a rational perspective, it makes perfect sense to ignore sunk costs. But from a emotional standpoint, it may be very difficult to do so. There are three things worth considering when you need to ignore sunk consts:

- 1 Recognize that cutting your losses does not necessarily mean you've made a mistake because your decision to pursue the original course of action may have been the smartest course of action at that time. (Page 92)
- 2 Enlist a few people you trust and ask them for their opinion. A person viewing our situation as an outsider may have a much more objective view of our situation. (Page 92)
- 3 Realize that most situations carry with them the seeds of greater benefit. Knowledge, skill, and insights gained from previous experiences can be applied to new situations moving forward. (Page 92)



How do sunk costs and prisoner's dilemma affect desicion making ?

Sunk costs are costs which have already been incurred and cannot be replaced.



<https://turbo.intuit.com/blog/cost/relationships-sunk-cost-fallacy-5179/>

Prisoner's Dilemma

The Prisoner's Dilemma provides an example of how cooperation is superior to competition. (Page 98) The Prisoner's Dilemma is an example of a mixed-motive game: Both parties can do well if they work together by cooperating or they can try to gain an advantage over each other by competing. The fact that elements of both cooperation and competition are simultaneously present makes for mixed motives and contributes to the inherent complexity in these and similar games. (Page 100)

Chapter 4: Analyzing Arguments

• What is an argument?

An argument, as referred to in logic, is “**a claim or statement made which is supported by some evidence.**” A claim is part of a larger concept called “argument.” (Page 105)

the relationship between the three elements of classic argument structure:

Evidence + Assumption = Conclusion. *The assumption is the glue that holds the evidence to the conclusion.* (Page 106)

Words that always signal “evidence”	Words that always signal “conclusion”
<ul style="list-style-type: none">• As• As indicated by• As shown by• Because• For• Given that• Since• The reason is that	<ul style="list-style-type: none">• As a result• Clearly• Consequently• Hence• In conclusion• So• Therefore• Thus

(Page 107)



Question for Consideration

In a debate, what can you do with the three elements in order to refute the arguments from the other side?

• How to analyze arguments?

In seeking to evaluate arguments, we must aggressively analyze each component. How strong is the evidence? How strong is the key assumption? Evidence and conclusion are often stated, i.e., written down or spoken out loud, while assumptions are often **not stated** (written down or spoken out loud), but remains in the mind of the person presenting the argument. (Page 108) For example:

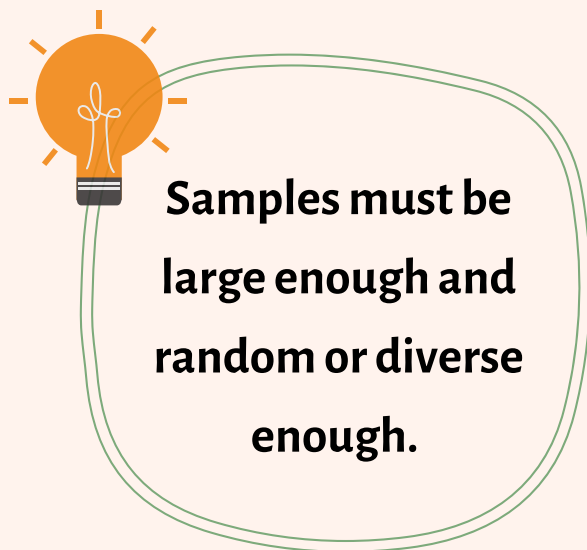
Argument: Finland is the most technologically advanced country in the world. More people per capita own mobile phones in Finland than anywhere else on earth.

Conclusion: Finland is the most technologically advanced country in the world. Evidence More people per capita own mobile phones in Finland than anywhere else on earth.

Assumption: Ownership of mobile phones is the best criterion for determining whether a country (or its people) is technologically advanced. (Page 111)

The Five Common Reasoning Flaws

- **Comparing “apples with oranges”:** In terms of evaluating or attacking comparisons, when two things are deemed similar, our goal will be to find dissimilarities in order to show that the two things are not alike; in terms of evaluating or attacking comparisons, when two things are deemed dissimilar, our goal will be to find similarities in order to show that the two things are alike. (Page 116)



Samples must be large enough and random or diverse enough.

- **Overgeneralizing on the basis of small samples:** For a sample to be representative, it must be both quantitatively and qualitatively representative. When evaluating situations involving representativeness, you show how a particular person, place, or thing is not representative of the larger “whole” and the argument is weakened or falls apart. On the other hand, show how a particular person, place, or thing is representative of the larger “whole” and the argument is strengthened. (page 118)
- **Ignoring relevant evidence:** Arguments should be based on evidence which itself is valid. It is only human nature to want to choose relevant evidence that supports our stance while ignoring relevant evidence which refutes it. We should invite all relevant evidence to bear on an issue or decision at hand.
- **Confusing cause and effect:** The first question we ask when a cause-and-effect assumption is on the horizon is whether any relationship exists between two items. There may not be any plausible relationship and it seems to be related because of. (Page 121)
- **Failing to anticipate bottlenecks:** There are essentially four major reasons that plans do not work: (1) an individual or organization’s lack of desire, motivation, or perseverance; (2) an individual or organization’s lack of prerequisite skill or technological capability to carry out the plan; (3) lack of required opportunity or wherewithal—e.g., economic resources—to commence or complete a given task; and (4) unanticipated bottlenecks or consequences (physical, financial, technological, or logistical) arising from the plan’s implementation. “Implementation assumptions” are grounded on the idea that a plan will work because of an absence of the kinds of deficiencies previously cited.

Critical Evaluation

The purpose of this book is to give readers an in-depth understanding of reasoning methods through 50 tips for reasoning, helping us thinking and solving problems. Personally, I think the most important chapters are Chapter 2, 3, and 4.

The author talks about "reframing problems" in a big part in Chapter 2: Critical Thinking. I think reframing problems is of importance because identifying topics and problems is fundamental for reasoning. After that, the author discusses methods of creative thinking/lateral thinking. Creative thinking needs us to step out of the "boxes" and analyze views or issues from different perspectives.

Now that we have learned critical thinking methods, we could start considering the merits of possible ways and what would be the best way to solve our problems. This is the topic in Chapter 3: Decision Making. I like the idea of sunk costs, for many times I cannot really make up my mind to ignore what I have already lost. This concept gives me a push when I am hesitating so I can truly focus on things that are waiting for me and looking forward to the future. Prisoner's dilemma is a difficult situation for decision-makers. I have learned this concept in a microeconomics course. As "social animals", we are connected to each other, thus our decision making can be largely affected by others.

Chapter 4 is about argument analysis. This is the most enlightening chapter for me. There are useful techniques for debating. It talks about how to analyze the rationality of discourse and how to find loopholes in arguments. He points out the three elements of arguments and proposes five common reasoning flaws.

In summary, the author makes readers clearer about the concepts of perception, logic, and arguments. This is a highly readable and practical book for people in different fields when they have to make decision. It gives many novel angles can be cut in when we are dealing with problems.

Reference

Royal, B. (2010). *The little blue reasoning book: 50 powerful principles for clear and effective thinking*. Maven Publishing.