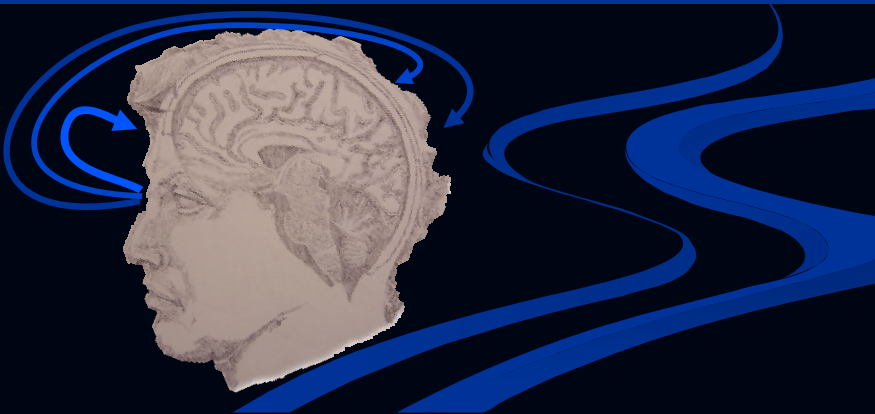


Part 1 – Our Mental Machinery

Chapter 1:

Thinking about Thinking



Intelligence Analysis

- **Intelligence Analysis** is a powerful, influential tool for improving the decision making processes.
- Formal methods of IA can be troubled by many problems, of which problems with human mental processing are among the most important and difficult to handle.
- Mental weaknesses and biases can be **alleviated** by an array of analytical tools and techniques described in this book.

Thinking about Thinking

- When seeking ways to improve intelligence analysis, little attention is usually devoted to improving how an analyst actually thinks.
- This book is intended to serve as **guidance tool** for modifying an analysts habits to achieve optimal analytics.
- It aims to improve judgments when facing **incompleteness & ambiguity** through the use of its mentioned tools and concepts.

Thinking about Thinking

- Four main areas are discussed:
- Part I
 - **Limitations** of the mental process.
- Part II
 - **Analytical Tradecraft**: simple tools and techniques for overcoming these limitations.
- Part III
 - **Cognitive Biases**: predictable mental errors due to simplification in mental processing, and whether or not they can be overcome.
- Part IV
 - **Conclusions**: a to-do list for analysts and recommendations for managers on achieving analytical excellence.

Thinking about Thinking

- **Herbert Simon**, an influential social scientist of the 20th century, characterized the limits of human mental capacity.
- He advanced the concept of “**bounded rationality**.”
- He argued that the mind, due to its limitations, creates **simple models** of the complex world, and we reason over these models. Though, they may misrepresent reality.

Thinking about Thinking

- Psychological research on perception, memory, attention span, and reasoning capacity has helped to characterize our cognitive limits.
- This book strives to use **experiments** from this research to describe the impact that mental processes play on analysis, from an intelligence analyst’s point of view.
- It seeks to shed light on the influence that an **observer** has on observations and interpretations.

Thinking about Thinking

Perceptual Influences

- **What** we perceive about information
 - **How readily** we perceive it
 - How we **process** it
- are all influenced by:
- **Past experience**
 - **Education**
 - **Cultural values**
 - **Role Requirements**
 - **Organizational norms**
- As well as
- *the information itself*

Thinking about Thinking

- The biases discussed in Part III are inherent to cognition, but the previous **influences on perception affect the mental models** that analysts form and reason over.
- Intelligence analysts must understand **their own** reasoning process and the factors that influence it. Not enough training is focused on this.

Thinking about Thinking

- **Training** can help to:
 - Increase **self-awareness** of generic perception & judgment problems of foreign events.
 - Give **guidance & practice** in overcoming these problems.
 - **Exercise** the mental act of thinking and analyzing.
- It is **not** a given that an analyst can already analyze well.

Thinking about Thinking

Mental Models:

They are **distillations** of all that we think we know about a subject.

Advantage

- They help analysts **produce results quickly**.

Disadvantage

- They map perception onto understood models, sometimes **ignoring or lessening** the importance of unexpected data.

They **must remain open to alternative interpretations** in a rapidly changing world in order to be successful.

Thinking about Thinking

- Mental models are important to analysis, and should be explored and documented.
- Good, **useful** information must be collected to analyze.
- **Optimal mental models & analytical tools** must be used to help sort through, make sense of, and get the most out of **ambiguous & conflicting** information.
- It is very difficult for an analyst to be self-conscious about the **problems inherent in his or her mental process**, and so that is the focus of this book.