

Chapter 3

Exploring Cognitive Biases, Groupthink, and Polythink Syndrome in Security Decisions and Business Outcomes

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ABSTRACT

Cognitive bias among workers can undermine security work and lead to critical misinterpretations of data. Understanding cognitive biases can improve understanding of how employees make decisions. This work analyzes key factors to better understand, predict, and obviate the detrimental bias symptoms, focusing on groupthink and polythink phenomena occurring in security and business decisions. It intends to provide support for the strategic versus tactical hypothesis in a strategic group decision-making, confirming how even in a clear-cut decision, following a groupthink or polythink dynamic, implementation becomes difficult due to a group dynamics at the other end of the decision-making continuum.

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INTRODUCTION

Cognitive Biases

The human brain is capable of 10¹⁶ processes per second, which makes it far more powerful than any computer currently in existence.

But that doesn't mean our brains don't have major limitations. Some decisions are made after careful calculation whereas others are more intuitive. Cognitive limitations can often distort information processing.

When evidence is lacking or ambiguous, analysts evaluate hypotheses by applying their general background knowledge concerning the nature of systems and behavior.

Firstly, it's important to distinguish between cognitive biases and logical fallacies. A logical fallacy is an error in logical argumentation.

A cognitive bias, on the other hand, is a genuine deficiency or limitation in our thinking. It is a flaw in judgment that arises from (i.e.) errors of memory, social attribution, and miscalculations (such as statistical errors or a false sense of probability).

Paradoxically, some social psychologists believe our cognitive biases can help us process information more efficiently, especially in dangerous situations. But they lead us to make grave mistakes, more of the times. We may be prone to such errors in judgment, but at least we can be aware of them.

Cognitive biases are mental errors caused by our simplified information processing strategies.

- Cultural, emotional or intellectual predisposition toward a certain judgment
- Distinction: cultural bias, organizational bias, and bias that results from one's own self-interest

Cognitive biases are similar to optical illusions in that the error remains compelling even when one is fully aware of its nature, but the awareness of the bias, by itself, does not produce a more accurate perception.

In short, these tendencies usually arise from:

- Information processing shortcuts
- The limited processing ability of the brain
- Emotional and moral motivations
- Distortions in storing and retrieving memories
- Social influence
- Preferences and beliefs regardless of contrary information

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