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Randolph H. Pherson • Ole Donner • Oliver Gnad

# **Clear Thinking**

Structured Analytic Techniques and Strategic Foresight Analysis for Decisionmakers



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Shortly after completing this book, our co-author Randolph Pherson passed away. Until a few days before his unexpected death, he had completed the final improvements to this publication. Randy was a thought leader in the field of Structured Analytic Techniques, a mentor to generations of analysts, and his legacy will shape the work of many intelligence communities around the world for decades to come.

We owe Randy so much and will miss him terribly. Without him, this book would not exist. Thank you Randy and rest in peace, friend.

Bardowick, Frankfurt am Main, in January 2024

Ole Donner, Oliver Gnad

## **Preface**

#### Dear Readers.

What the German-Swiss comedian Curt Goetz once so smugly put in a nutshell has become a structural problem of information-saturated societies: "Everyone is allowed to think, many are spared it."

Every day we are inundated by a flood of information, bits, and bytes. Clarity of thought thus becomes an almost impossible undertaking. How do we distinguish "true" from "false" information? How do we distinguish perception from truth? What is a strong signal, what is just background noise? Can we trust what has been generated by ChatGPT? Can we even make decisions in the face of uncertainty about what information is relevant, hidden, or just plain wrong? And then we also have to deal with the paradox of the "Unknown Unknowns" – the things we do not even know exist.

But thinking clearly is also an art because we cannot rely only on our intuition or our experience. This is because our brain constantly misleads us: it leads us to select information that fits our assumptions, to perceptions that reinforce patterns we already know, and it pushes us to make judgments that match our preconceptions. All of these cognitive biases happen unconsciously and yet shape most of our every-day decisions.

As if all this did not create enough uncertainty, we also have to deal with constant change – and it is too often disruptive. Whether it is the attack on New York's World Trade Center (2001), the global financial crisis (2008), the Arab Spring (2010/2011), the refugee drama in the Mediterranean (2015/2016), the Corona pandemic (2020/2022), Russia's war of aggression against Ukraine (2022–2024), or Hamas' invasion of Israel (2023). These disruptive path changes shape our lives much more than we like or realize. And they make us painfully aware of the limitations of our analytical and prognostic abilities.

So, what can we do? The answer is provided by cognitive scientist Daniel Kahneman: We must learn to think slowly again. This is the only way we can escape the vicious circle of rash judgments, confirmation cultures, and echo chambers that prevent us from arriving at fully informed decisions and considered judgments in times of accelerated change.

With our volume, *Clear Thinking: Structured Analytic Techniques and Strategic Foresight Analysis for Decisionmakers*, we want to contribute to the establishment of a new culture of clear thinking. In doing so, we draw, among other things, on a

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toolkit that the Central Intelligence Agency (CIA) had developed before 9/11 and that has been continuously refined since then. Such toolkits are used in intelligence and military analysis, by law enforcement agencies, and in the context of strategic policy formulation.

This toolkit is filled with "Structured Analytic Techniques" (SATs), which we divide into five families according to their performance cores: (1) Exploration Techniques, (2) Diagnostic Techniques, (3) Reframing Techniques, (4) Foresight Techniques, and (5) Decision Support Techniques. And because even the best analysis will miss its target audience if it is not presented in a pointed way, you will also find a chapter on effective writing in this compendium.

The authors thought for a long time about whether analysts needed another methods manual. It is like cookbooks: They inspire you and whet your appetite. But you learn to cook by doing it, not by reading books about it. It is the same with good analysis.

That is why this book is a hybrid – half method manual and half simulation cockpit. Using case studies taken from three disciplines – law enforcement, cyber, and national security, we demonstrate the interplay of the method families and their performance. We use the assassination of Swedish Prime Minister Olof Palme as a criminological case to expose analytical pitfalls and fallacies. The case study "Blackout in Berlin" explores a (supposed) cyberattack on critical infrastructure What the future of the Arctic might look like in the face of rapidly advancing climate change and geopolitical rivalry is the subject of a simulated exercise in strategic foresight and scenario planning – a method that is increasingly being used by companies and the public sector alike to manage risk and develop options for action.

In a world characterized by fragmentation, smoldering conflicts of interests and goals, and increasing uncertainty, clear thinking not only provides a competitive advantage, but becomes an existential necessity.

Reston, VA, USA Bardowick, Germany Frankfurt am Main, Germany Randolph H. Pherson Ole Donner Oliver Gnad

## **Acknowledgments**

This book owes its creation to the support of many. In particular, we would like to thank co-authors Anne Vargas (Blackout in Berlin), Christoph Rosa (Olof Palme and Arctic Case Studies), and Dr. Volker Raddatz (translation). The authors also are indebted to Mary O'Sullivan who reviewed the manuscript, making many excellent suggestions for organizational and editorial revisions as well as proofreading the English version of the book. We also are pleased to acknowledge the thoughtful work done by Friederike Bauer who proofread the German version. In addition, Adriana Gonzalez demonstrated great creativity as well as patience in generating over 120 graphics for both the German and English versions.

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Randolph H. Pherson Co-founder and Managing Director of Pherson Associates, LLC and CEO of Globalytica, LLC, has taught advanced analytic techniques and critical thinking skills to analysts in most US Intelligence Community agencies, in ten Fortune 100 companies, and in many countries around the world including the UK, Italy, Norway, Denmark, Spain, Romania, Australia, Saudi Arabia, and Hong Kong. He authored the Handbook of Analytic Tools and Techniques, 5th ed. (2019) and How to Get the Right Diagnosis: 16 Tips for Navigating the Medical System (2020). He co-authored Structured Analytic Techniques for Intelligence Analysis, 3rd ed. (2021); Critical Thinking for Strategic Intelligence, 3rd ed. (2021); Cases in Intelligence Analysis: Structured Analytic Techniques in Action, 2nd ed. (2015); Analyst's Guide to Indicators (2018); Analytic Briefing Guide (2018); Analytic Production Guide (2016); and Intelligence Communication in the Digital Era: Transforming Security, Defence, and Business (2015).

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Mr. Donner is the author of the first German-language website on analysis and Structured Analytic Techniques (strukturierte-analyse.de) and initiator of the German Intelligence Community Conference (GICC). He is a Research Fellow at the Institute for Intelligence and Security Management (I2SM) at the NBS Northern Business School Hamburg. He received a Bachelor's degree in Political Science and a Master's degree in International Relations from the University of the Armed Forces in Hamburg. Mr. Donner was awarded the Böttcher Prize as best in his graduating class.

## **Abbreviations**

A5 (Arctic Five) Canada, Denmark (Greenland), Norway, Russia, United States A8 (Arctic Eight) Canada, Denmark (Greenland), Finland, Iceland, Norway,

Dussis Sweden United States

Russia, Sweden, United States

AC Arctic Council

ACH Analysis of Competing Hypotheses

AEP American Electric Power
AI Artificial Intelligence
ALCOM Alaska Command

ANC African National Congress
ATM Automated Teller Machine
BEAC Barents Euro-Arctic Council

Blaster Computer worm that spread on computers running operating

systems Windows XP and Windows 2000

BNetzA Federal Network Agency (German Bundesnetzagentur)
ChatGPT Natural language processing tool driven by AI technology

CIA Central Intelligence Agency

CLCS Commission on the Limits of the Continental Shelf

EAP European Workers Party
EEZ Exclusive Economic Zone
E. ON German Energy Company
ERC Electric Reliability Corporation

EU European Union

EVE Evaluation of the Evidence FBI Federal Bureau of Investigation

Five Eyes Australia, Canada, New Zealand, United States, and

United Kingdom

Five W's and H Who, What, When, Where, Why, and How

GIZ German Development Cooperation

IC Intelligence Community

IMOInternational Maritime OrganizationISISIslamic State in Iraq and SyriaISOsIndependent System Operators

IT Information Technology KAC Key Assumptions Check

xvi Abbreviations

KIQ Key Intelligence Question

MECE Mutually Exclusive and Comprehensively Exhaustive

MHG Multiple Hypothesis Generation

MISO Midwest Independent System Operator
MIT Massachusetts Institute of Technology
MOM Motive, Opportunity, and Means

MOSES Manipulability of Sources
MSG Multiple Scenarios Generation
NATO North Atlantic Treaty Organization
NIO National Intelligence Officer

NORAD North American Aerospace Defense Command NORTHCOM US Regional Command for North America

NSR Northern Sea Route NWP Northwest Passage

OFA Operative Case Analysis (Operative Fallanalyse)
OPEC Organization of the Petroleum Exporting Countries

PII Personally Identifiable Information

PKK Kurdistan Workers' Party
POP Past Opposition Practices
RAF Red Army Faction

SAPÖ Sweden's domestic intelligence service

SATs Structured Analytic Techniques

SCADA Supervisory Control and Data Acquisition

STEMPLES+ Social, Technical, Economic, Military, Political, Legal,

Environmental, Security PLUS Demographic, Psychological,

Reputational

SWOT Strengths, Weaknesses, Opportunities, and Threats

UK United Kingdom UN United Nations

UNCLOS United Nations Convention on the Law of the Sea

US United States

VOIP Voice Over Internet Protocol WMD Weapons of Mass Destruction WYSIATI What you see is all there is

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