

# **Security Analysis: A Critical-Thinking Approach**

**by**

**Michael W. Collier**

**Eastern Kentucky University Libraries**

**Richmond, Kentucky**

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# About the Author

**Dr. Michael W. Collier** is a retired Associate Professor of Homeland Security at Eastern Kentucky University (EKU), Richmond, Kentucky. In his decade at EKU, he taught undergraduate and graduate courses in critical thinking, intelligence studies, terrorism, policy and legal analysis, ethics, strategic planning, leadership, and management. He was also the EKU Homeland Security Program Coordinator and the Co-Director and Principal Investigator for the Bluegrass State Intelligence Community Center of Academic Excellence, where EKU was the lead university of a federally funded, multi-school consortium with a goal of preparing the next generation of national security and intelligence professionals. At EKU, he won multiple University Critical-Thinking Teacher-of-the-Year Awards, in addition to the 2017 Distinguished Faculty Award in the EKU College of Justice & Safety.

Before arriving at EKU, Dr. Collier spent a decade at Florida International University (FIU), Miami, Florida, first as a graduate student and later as the Director of Research and Academic Programs at FIU's renowned Latin American and Caribbean Center, a Title VI federally funded language and area studies center. At FIU, he taught undergraduate and graduate courses in research methods and Latin American and Caribbean security and politics.

In a two-decade first career as a U.S. Coast Guard officer, Dr. Collier was a specialist in deep-water cutter operations and training and a sub-specialist in law enforcement and military intelligence. He served senior officer tours as Coast Guard and Police Attaché at the U.S. Embassy in Bogotá, Colombia; Commanding Officer, *USCGC Thetis* (WMEC 910) in Key West, Florida; and Deputy Director of Intelligence, Joint Interagency Task Force East in Key West, Florida. Earlier in his career, he was a program analyst and action officer in the Defense Operations Division, U.S. Coast Guard Headquarters in Washington D.C. He retired from the U.S. Coast Guard as a Commander in 1996.

Dr. Collier holds a Ph.D. in International Relations from FIU (2000), with a major in Foreign Policy and Security Studies and a minor in Research Methodology; an M.S. of Strategic Intelligence from the U.S. Defense Intelligence College (1986) (now National Intelligence University), Washington D.C., with concentrations in Soviet Studies and Latin American Studies; and a B.S. from the U.S. Coast Guard Academy (1974), New London, Connecticut, with concentrations in Management and Economics. His previous books include: *Political Corruption in the Caribbean Basin, Constructing a Theory to Combat Corruption* (Routledge, 2005) and *Terrorism Preparedness in Florida, Improved Since 9/11, But Far From Ready* (FIU, 2005). He also published numerous professional and scholarly articles and made scores of professional and scholarly presentations. Originally from Higginsville, Missouri, he now lives in Williamsburg, Virginia.

# Preface

This book has been decades in the making. After over two decades as a U.S Coast Guard security practitioner, in the mid-1990s I began a second career in academic teaching and research in the security field. In my academic career, I strove to learn the methods of advanced security analysis, as what I had seen while on active military duty was little more than very basic intuitive analysis. In 2008, I became the Homeland Security Program Coordinator at Eastern Kentucky University (EKU). Here, I was introduced to the use of systematic critical thinking through the ECU Teaching and Learning Center. I immediately introduced critical thinking into my undergraduate and graduate courses. I wish I had known systematic critical thinking when I was a security practitioner as it would have made me more effective in my career as a U.S. Coast Guard officer.

## Audience

In the larger sense, this book is for anyone who wants to learn foundational techniques for generating the best answers to complex questions and best solutions to complex problems. The security community often refers to this complexity as **wicked problems**. Examples used in this book come from the broader security field, which includes national security, homeland security, law enforcement, and corporate security. However, the critical-thinking framework and techniques presented in this book are also applicable to any discipline in the social sciences. The book attempts to synthesize material from academic research methods with professional practitioner analytic techniques. Recognizing most students will never become academics, the bias of this book is toward the practitioner approach to analysis, but it also includes significant material on academic research methods such that a robust academic social science research course may be designed around the material.

This book is designed as an initial textbook for teaching research and analysis in upper-level undergraduate programs in national security, homeland security, intelligence studies, law enforcement, and corporate security. The book also can be retained as a reference on security analysis throughout a student's academic and professional careers. At the graduate student level, this book also may be used as a supplementary text and reference in analysis courses, especially for students who have not been instructed previously in critical thinking. The book also is useful as a textbook and reference in professional training courses for instructing intelligence analysts and security-related policy analysts. Another audience for this book is experienced security analysts who want to learn the foundations of critical thinking. This is not a book about how security-related research and analysis is necessarily conducted by either practitioners or academics. Instead, it provides an alternative approach for systematic research and analysis using a critical-thinking framework.

Security analysis exists to support decision making. One definition of such analysis states its purpose is to "...provide an edge to the decision maker."<sup>1</sup> The decision makers may be in the U.S. National Security Council, U.S. Defense or Homeland Security departments, military services or field commanders, government agencies, or others working in the security community. This book focuses more on strategic analysis, although the techniques covered are equally applicable to operational and tactical analyses. Qualitative analysis techniques are emphasized, but the material also is useable in comparative or quantitative studies. While the book focuses more on security analysis support for decision makers, it also provides techniques leading to rigorous analysis useful in developing academic papers or journal articles.

A major challenge of this book was synthesizing the practitioner and academic approaches to research and analysis, communities that do not often "mesh." I find practitioners and academics do not always understand each other and often "talk past each other"—even when discussing the same subject. This is because they have differing vocabularies, assumptions, goals, techniques, and

customers for their analyses. For example, the term **validity** related to an analytic report in practitioner terms usually means trying to reduce analytic bias and attempting to find the truth (a very slippery concept in itself). Academics on the other hand have a more precise and nuanced use for the term **validity** in their published research, but still with a goal of reducing bias. Academic validity checks employ specific techniques for assessing biases in existing literature, data collection methods, conceptual modeling, hypotheses testing, and in determining overall analytic rigor. This is because academic research is meant to add to the larger knowledge base on a subject and therefore should be as unbiased as possible. Practitioners, on the other hand, are focused on timely support to their customers' decision making, which can make it susceptible to significant bias if the analyst is not careful. Hopefully, this book will reveal how practitioner and academic security analysis techniques may converge and actually complement each other.

## **Plan of the Book**

Chapters 1 through 3 provide background and context on the field of security analysis. Chapter 1 summarizes the progression of security analysis through history and presents a model to help conceptualize current U.S. security fields and their relationships. Chapter 2 argues why critical thinking is vital to security analysis and presents a Security Analysis Critical-Thinking Framework, which is the basis for this book. Chapter 3 surveys foundational concepts in social science research and analysis and relates them to security analysis.

Chapters 4 through 10 provide detailed analytic guidance on addressing specific elements in the Security Analysis Critical-Thinking Framework (purpose, questions, information, context, points of view, assumptions, conceptualization, alternatives, interpretation/inference, and implications/consequences). These elements apply to both intelligence analysis and security policy analysis. In each chapter, analytic techniques supporting the elements are introduced and

examples of their use provided. Chapter 11 provides guidance for both preparing written and verbal reports and how to quality check the overall results of the analytic effort.

Three appendixes provide detailed information that is either applicable to multiple chapters or too lengthy for inclusion within chapters. Appendix I compiles a list of the most common informal logic fallacies that degrade good thinking. Appendix II summarizes the many heuristics and cognitive biases that also can degrade good thinking. Appendix III provides a process for analyzing political cultures, which is important for understanding and assessing points of views and key assumptions in any analysis.

Chapters begin with a statement of the **Bottom Line Up Front (BLUF)**, which is a summary of the highlights of the chapter. BLUF is also used in preparing security analysis written and verbal reports as detailed in Chapter 11. Chapters conclude with a list of the bolded **Key Concepts** presented in chapter texts, which allow readers to check their comprehension of this important material. Chapters also end with **Discussion Points** to facilitate individual and group thinking and energize class discussions. Finally, chapters and appendixes end with a **Notes** (endnotes) section. **Figures** and **Boxes** support the text throughout the book. Figures include tables, lists, and graphics. Boxes contain textual narratives.

## **Acknowledgements**

I owe an intellectual debt to hundreds of professors, colleagues, and students over the 40-plus years of my two careers—too many to mention here. I specifically wish to thank Nicholas Onuf, my Florida International University (FIU) doctoral program academic advisor and dissertation committee chair. A renowned social theorist, Nick helped me overcome my practitioner blinders and introduced me to the exciting world of social theory. I also want to thank Alex Stepick, an anthropologist and renowned research methodologist, who taught me the need for good researchers to master the entire range of qualitative,



comparative, and quantitative methods. I was Alex's FIU research assistant the first two years of my doctoral program, where we worked on a project to explain levels of violence inside Miami-Dade County, Florida, public high schools. I particularly want to thank Eduardo Gamarra, Ivelaw Griffith, and Anthony Maingot, members of my dissertation committee and trusted mentors, who helped me better understand the security complexities of the Latin American and Caribbean region. As Executive Director of the FIU Latin American and Caribbean Center, Eduardo was also my boss in the early-2000s when I worked as his Director of Research and Academic Programs and where we offered rigorous teaching, research, and outreach programs in regional security. I also owe a debt of gratitude to all the FIU professors in the International Relations, Political Science, and Comparative Sociology departments who helped guide my doctoral studies.

My interests in teaching critical thinking was cultivated by several colleagues at ECU. I want to thank Hal Blythe and Charlie Sweet, Co-Directors of the ECU Teaching and Learning Center, for first introducing me to The Foundation for Critical Thinking framework<sup>2</sup> and preparing me to teach it to both other faculty and students. I also wish to thank Rusty Carpenter, Director of the ECU Noel Studio for Academic Creativity, who further advanced my critical-thinking engagement with both faculty and students through the many outreach programs he coordinated for the entire campus. I want to acknowledge the superb cooperation of Fred May and Ryan Baggett, faculty colleagues in the ECU Homeland Security Program, where we initially instituted a comprehensive critical-thinking structure across the entire Homeland Security curriculum. Pilot research on the impact of our critical-thinking instruction revealed a significant improvement in the critical-thinking skills of students graduating with our undergraduate degree in Homeland Security. Finally, I am deeply indebted to my many FIU and ECU students, who acted as my laboratory subjects as I tested and refined the many analytic techniques presented in this book. These students often challenged me, helping consolidate my ideas on security analysis.

I also wish to thank the authors of the hundreds of books, articles, and presentations, which over the years taught me the diverse world of research methods and analytic techniques. I owe a large debt to Randy Pherson and Bob Clark as friends, mentors, and colleagues. Randy and his wife Katherine, both former Central Intelligence Agency (CIA) analysts, authored *Critical Thinking for Strategic Intelligence*,<sup>3</sup> which for the first time synthesized the use of critical-thinking and structured analytic techniques. Randy and Katherine were two of the pioneers in the development of structured analytic techniques—many included in this book. Randy and renowned CIA analyst Richards Heuer compiled over 50 useful structured analytic techniques in their book *Structured Analytic Techniques for Intelligence Analysis*.<sup>4</sup> Randy became a trusted colleague as we worked together in the International Association for Intelligence Education (IAFE). Bob, who I also met through IAFE, is a former U.S. Air Force and CIA analyst, and took my analytic thinking to a higher level with his book *Intelligence Analysis, A Target Centric Approach*.<sup>5</sup> I used editions of this book for years in graduate intelligence courses. In it, he introduces the importance of modeling, including systems and network modeling, which are integral to conceptualizing security studies. Bob also authored *Intelligence Collection*,<sup>6</sup> which I used in a number of undergraduate and graduate courses. I also want to acknowledge Eugene Bardach's book *A Practical Guide for Policy Analysis, The Eightfold Path to More Effective Problem Solving*.<sup>7</sup> I have never met Eugene but have used his text, the latest edition co-authored with Eric Patashnick, plus Bardach's book *Getting Agencies to Work Together, The Practice and Theory of Managerial Craftsmanship*,<sup>8</sup> in both my undergraduate and graduate courses in security policy analysis. While I refer to Pherson & Pherson, Heuer & Pherson, Clark, and Bardach & Patashnick's works throughout this book, I try not to just repeat their ideas but instead, hopefully, add to them as I create a new Security Analysis Critical-Thinking Framework for both beginning and experienced security analysts.

Many others also contributed to this book. I wish to thank my ECU faculty colleague Brian Simpkins who tested several of this book's early draft chapters in

his ECU courses. I also thank Joe Rogers, Barnet “Barney” Feingold, and Len Kelly for their assistance. Joe was one of the doctoral students in my FIU cohort and later worked as an analyst in the U.S. Intelligence Community. Over the years, Joe and I discussed intelligence analysis methods at length, and he reviewed some of this book’s early chapters. Barney, a retired Veteran’s Administration clinical psychologist, authored the material on Critical Belief Analysis in Chapter 6. He worked closely with me to present Critical Belief Analysis to the security community. Len, one of my U.S. Coast Guard Academy classmates, was the academy’s Associate Dean of Academics and long-time head of the Department of Mathematics that offered a B.S. in Operations Research and Computer Analysis. Len provided insightful comments on the Chapter 7 modeling material. I also want to thank my wife, Gloria, who helped proofread several of the early chapters. Finally, I want to thank Karen T. Pratzner-McDuffie who conducted a professional edit of the entire book.

## **Disclaimer**

Attempting to synthesize decades of learning about security analysis is a daunting task. It is often hard to remember where I learned a certain concept or analytic technique. I have done my best to provide attribution to the ideas and works of others used in this book. In the end, all mistakes in facts, analytic techniques, examples, and sourcing are mine alone. Nothing in this book should be used to assert or imply U.S. government authentication or endorsement of any of the material presented. None of the contents of this book intentionally touch on classified material.

Michael W. Collier, Ph.D  
Williamsburg, Virginia

## Notes

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<sup>1</sup> Carl J. Jensen III, David H. McElreath, and Melissa Graves, *Introduction to Intelligence Studies* (Boca Raton, FL: CRC Press, 2013), 2.

<sup>2</sup>The Foundation for Critical Thinking, <https://www.criticalthinking.org/> (accessed June 29, 2018).

<sup>3</sup> Katherine Hibbs Pherson and Randolph H. Pherson, *Critical Thinking for Strategic Intelligence*, 2<sup>nd</sup> ed. (Thousand Oaks, CA: Sage/CQ Press, 2017).

<sup>4</sup> Richards J. Heuer Jr. and Randolph H. Pherson, *Structured Analytic Techniques for Intelligence Analysis*, 2<sup>nd</sup> ed. (Thousand Oaks, CA: Sage/CQ Press, 2015).

<sup>5</sup> Robert M. Clark, *Intelligence Analysis, A Target Centric Approach*, 5<sup>th</sup> ed. (Thousand Oaks, CA: SAGE/CQ Press, 2017).

<sup>6</sup> Robert M. Clark, *Intelligence Collection* (Los Angeles, CA: SAGE/CQ Press, 2014).

<sup>7</sup> Eugene Bardach and Eric M. Patashnick, *A Practical Guide for Policy Analysis, The Eightfold Path to More Effective Problem Solving*, 5<sup>th</sup> ed. (Thousand Oaks, CA: SAGE/CQ Press, 2016).

<sup>8</sup> Eugene Bardach, *Getting Agencies to Work Together, The Practice and Theory of Managerial Craftsmanship* (Washington, DC: Brookings Institution Press, 1998).