On the Outside, Looking In: Three Simple, Accessible Tools to Enhance Your Assessments

by Lieutenant Colonel Matthew Fontaine

Introduction

Predicting the future is not easy. Most people, including expert forecasters, are downright lousy at it.[1] Many people cannot admit to, or are blind to, the "systematic flaws in their judgment" that undermine their predictive powers.[2] Intelligence professionals are no different. The world is also becoming more complex at an accelerated pace.[3] Despite these challenges, principals rely on analysts to provide "timely, accurate, relevant, and predictive intelligence" to support decision making in what can be life-or-death situations.[4] It is a tremendous responsibility.

My aim is to provide three simple, accessible tools to increase the richness and predictive accuracy of your assessments. This article is primarily for intelligence professionals, but any staff member or commander will find value in it. Staff should employ the tools in design, in planning, and during the reverse intelligence preparation of the battlefield process. Commanders will find the tools personally valuable when visualizing and will gain improved analytic products simply by encouraging their intelligence sections to use these tools.[5]

This article will not turn you into an advanced analyst or a "superforecaster."[6] That would be a tall order given the experience level of the typical analyst and the high personnel turnover rates common to any unit. I also understand that doctrinal prescriptions for improving analytic rigor appear daunting to busy intelligence personnel. Fortunately, the three tools are easy to use and improve your predictions by increasing the richness of your threat models and courses of action (COAs). They are—

- Theory.
- The "outside view."[7]
- Historical examples.

These tools work because they shift an analyst's initial focus from the details of the examined case to the broader patterns influencing the situation (Figure 1). Great analysts are gung ho; however, analytic enthusiasm ungoverned by theory, uninformed by the outside view, and ignorant of history leads to incomplete (or worse) analytical products. This article demonstrates how each of the three tools improves finished intelligence. It also offers two simple methods for incorporating the tools into your analytical production process. Use the tools together and in the presented sequence for the best results. By the end of this article, I think you will agree that it pays to be on the outside, looking in, when using the analytic process.

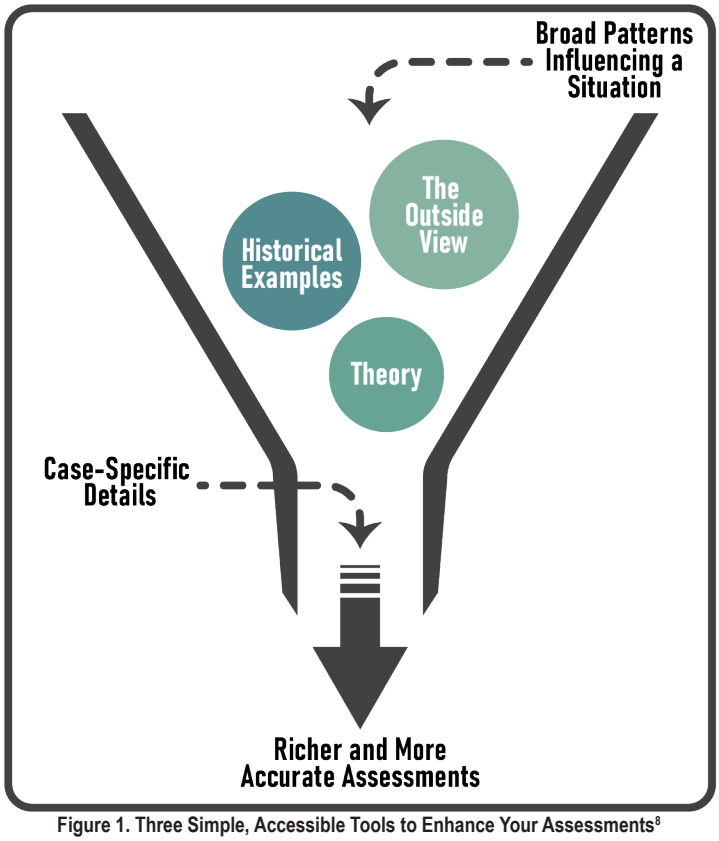

Figure 1. Three Simple, Accessible Tools to Enhance Your Assessments[8]

The Threat Model Defined

Before we go further with the three tools, what is a *threat model*? ATP 2-01.3, *Intelligence Preparation of the Battlefield*, defines a threat model as an "analytic tool" that an analyst uses to "accurately portray how threat forces normally execute operations and how they have reacted to similar situations in the past."[9] Analysts leverage threat models to predict enemy COAs and to illuminate potential friendly counteractions.[10]

Simply put, a threat model predicts the decision that a rational actor will take in a particular situation.[11] It stands to reason that the greater the analyst's understanding of the threat's characteristics, the better the threat model will be. Doctrine indeed urges analysts to "use all available sources to update and refine threat models."[12] Step 3 of the intelligence preparation of the battlefield process identifies *11* threat characteristic research categories. Moreover, ATP 2-33.4, *Intelligence Analysis*, lists dozens of additional unique analytic considerations across the strategic roles to ensure no stone is left unturned.[13]

That's a lot of information to analyze. How are analysts supposed to approach this complex task and make sense of what they uncover? That's where the first tool—theory—comes in.

The Value of Theory

A *theory* is a set of "ideas intended to explain something, especially one based on general principles independent of the thing to be explained."[14] Theorists believe a discoverable and underlying order to social activities exists.[15] Authors and political theorists James N. Rosenau and Mary Durfee describe the underlying order using the activity's "*central tendencies*."[16] The term *tendencies* is a deliberate choice. Theoretical constructs on human happenings are probabilistic, and no ironclad law exists that can predict human behavior with 100 percent accuracy.[17] Instead, theory outlines something's "inclination toward a particular characteristic or type of behavior."[18]

Analysts need theoretical frameworks to make sense of complex operational environments.[19] In my experience, when analysts need to provide an assessment on a given topic, many of them jump into the mass of classified intelligence reports without first adopting a theory to guide their thinking and a research plan. As a result, the analyst develops ineffective search queries that pull too many or too few reports because they are unsure of what to examine, or they enter a sort of "analysis paralysis"—unable to draw conclusions from what looks like a hopelessly complicated situation.[20]

Analysts engaged in haphazard research or plagued by analysis paralysis often produce assessments without a strong central argument—assessments that are more like report summaries than intelligence. Noncontextualized observations do not provide the insight to support an organization's decision-making process effectively. Without theory, an analyst is "destined for endless confusion, for seeing everything as relevant and thus being unable to tease meaning out of the welter of events, situations, trends, and circumstances" of a particular affair.[21] In contrast, analytic output governed by theory is more likely to provide the "insight into future conditions or situations"[22] that principals need to gain an advantage in an operational environment.

The "Of-What-Is-This-An-Instance" Question

So, how do analysts leverage theory in intelligence production? At every opportunity, analysts must get into the habit of asking what Rosenau and Durfee call the "of-what-is-this-an-instance" question.[23] The of-what-is-this-an-instance question effectively shifts the analyst's mindset from viewing everything as a unique event to something linked to a broader pattern.[24]

The analyst begins by asking "Of what is this an instance?" to contextualize the examined phenomena within a greater category of social activity (Figure 2).[25] The analyst then casts a wide net to find theoretical construct(s) related to the examined situation's reference category. Once found, the analyst extracts the central tendencies (premises) of a given situation according to the theoretical framework.[26] These tendencies act as a "sorting mechanism" to determine the most and least valuable sources of information to examine.[27] With theory as a guide, the analyst can now tackle the mass and complexity of the available information to overcome analysis paralysis. The goal of the process is to transform "raw observations into refined hypotheses and meaningful understandings" (think, predictive COAs tied to a detailed collection plan).[28]

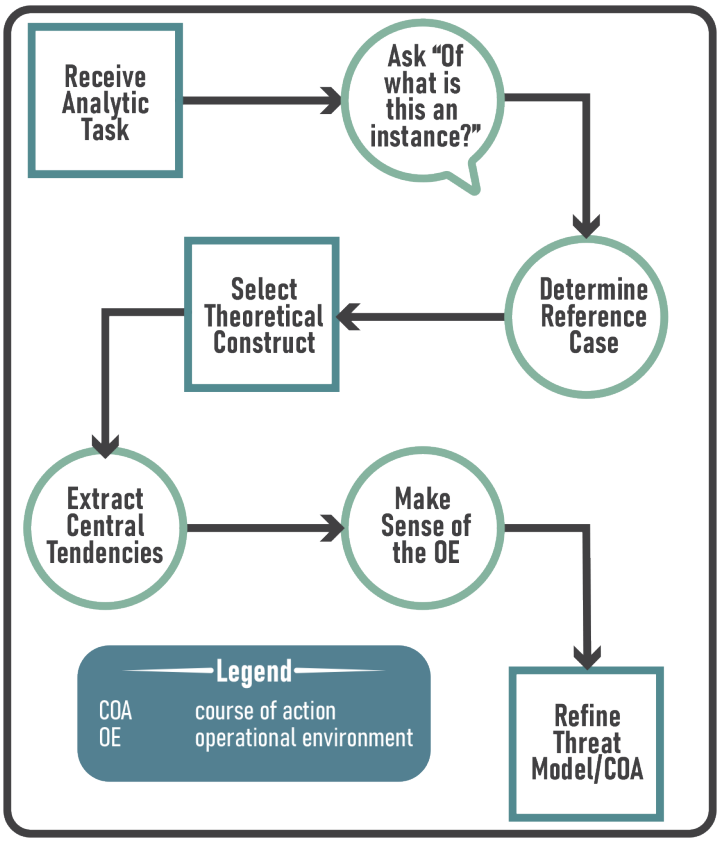

Figure 2. Theory as a Tool Process[29]

Let me illustrate the of-what-is-this-an-instance question process. Imagine an analyst needs to develop threat COAs for the initial ground phase of an anticipated invasion of Country A by Country B. The analyst asks what the **threat** is an instance of, and the analyst defines Country B as a peer threat. The analyst then asks what kind of **activity** Country B may use in the invasion. The analyst determines this to be an instance of a deliberate offensive operation in **multiple domains**. Next, the analyst references peer threat, offensive tactics, and multidomain theory to extract the central tendencies of these frameworks. The analyst incorporates the central tendencies into the Country B threat model. The threat model serves as the base for COA development.

The Threat Force Paradigm

When theorizing, my primary recommendation is simple: use the analytic frameworks already in doctrine or in classified repositories (country studies) to build your threat model. Doctrine is, after all, a kind of *prescriptive* theory because it advocates "fundamental principles that guide the employment" of "*rational*" forces.[30] Threat, activity, and multidomain theory form what I call the threat force paradigm (Figure 3). The threat force paradigm is the U.S. Army's model of how a threat rationally behaves in the modern operational environment. Analysts who leverage the threat force paradigm build richer and more accurate threat models than someone who goes it alone without the aid of an explanatory framework. Unfortunately, many analysts do just that!

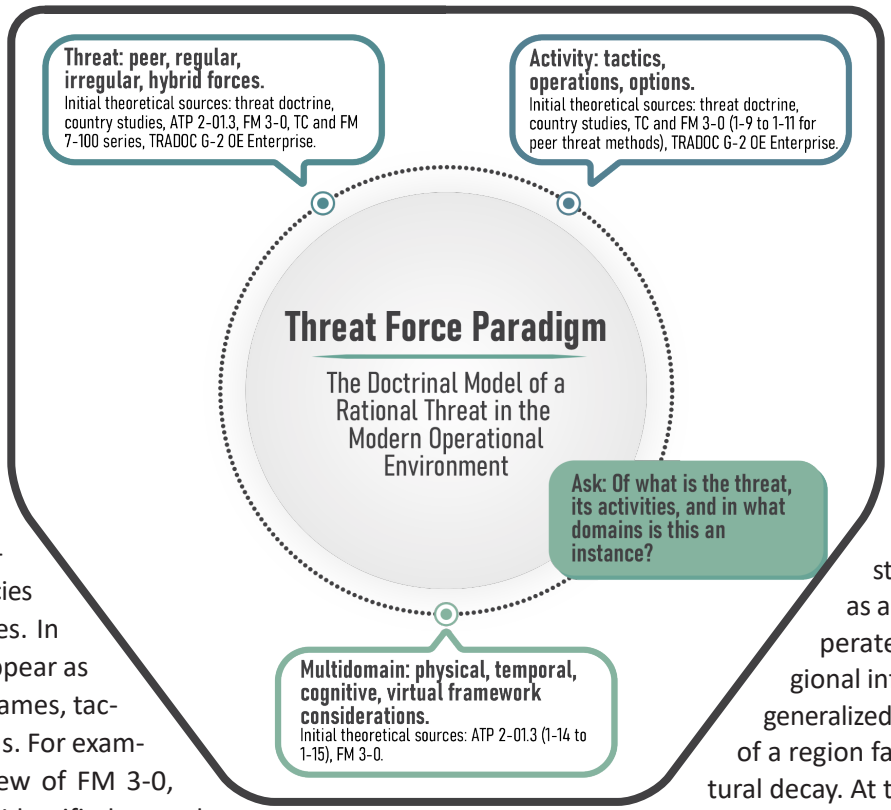

Figure 3. The Threat Force Paradigm[31]

It is up to the intelligence section to extract the central tendencies from theoretical sources. In doctrine, tendencies appear as analytic frameworks, frames, tactics, or lists of assertions. For example, the analyst's review of FM 3-0, *Operations*, could have identified several central tendencies of peer threats such as—

- **Tendency One.** "Peer threats prefer to achieve their goals without directly engaging U.S. forces in combat" but "possess roughly equal combat power" in a given region in comparison to the United States.[32]
- **Tendency Two.** Peer threats may leverage their benefit of cultural kinship in a specific region to gain a "relative advantage" over the United States.[33]
- **Tendency Three.** Peer threats "often employ information warfare in combination with conventional and irregular military capabilities to achieve their goals."[34]

Armed with these tendencies, the analyst gains insight into Country B's current behavior and possible actions. Tendency One supports the possibility of a Country B invasion. Still, it causes the analyst to consider other COAs the threat may take to achieve its ends without directly engaging U.S. forces. Tendency Two compels the analyst to consider the human terrain to determine areas more likely to be supportive or resistant to Country B's aggression. Tendency Three alerts the analyst that no peer threat COA is complete without discussing information warfare and irregular forces. All this insight from just a few tendencies!

A Climb up the Ladder of Abstraction

The threat force paradigm is a great framework, but the analyst does not have to stop there. The analyst can continue to ask "Of what is this an instance?" to develop more and more incorporating simplifications. Each explanation offers fresh insights and raises new questions to guide future research or collection.[35] Rosenau and Durfee visualize this theorizing process as "moving up a ladder of abstraction"[36] (Figure 4, on the next page).

To demonstrate further theorizing, the analyst views the invasion of Country A as a grab for critical resources. At the next rung of the abstraction ladder, it is seen as a corrupt oligarchy's desperate attempt to retain regional influence. Higher still, it is generalized as the political outcome of a region facing economic and cultural decay. At the top, it is the act of a state in the final stages of utter ruin.[37] As before, the analyst leverages theory relevant to each rung to refine the threat model and COAs.

It gets trickier, but not impossible, to find relevant theories as you move up the ladder. Unclassified and classified government repositories remain an excellent source, and some offer

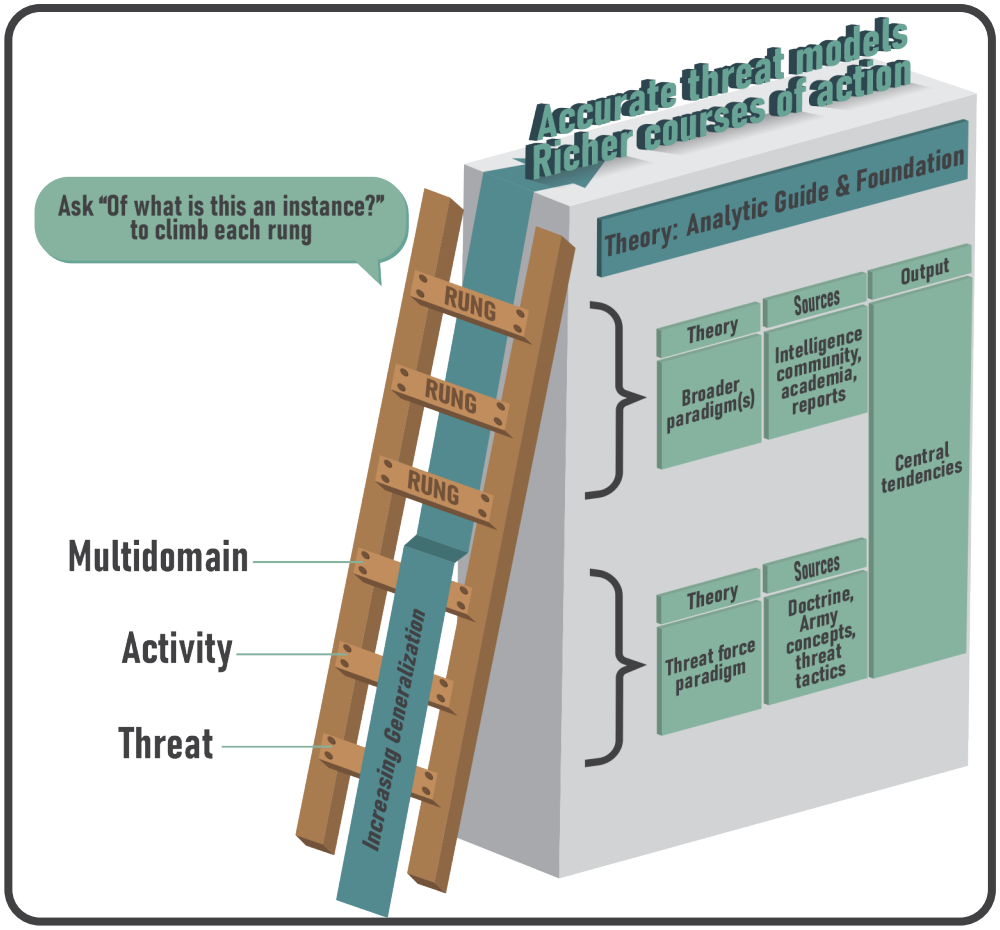

Figure 4. The Ladder of Abstraction[38]

specific models for how a threat or political leader is likely to behave in a given situation.[39] Your higher headquarters is another resource. Outside military channels, news, academic articles, and books are an outstanding theory source.

To illustrate, global political theories provide an excellent explanatory and predictive framework to enhance the Country B threat model. Doctrine suggests regular threats apply the *realpolitik* approach in their political thinking.[40] Let us start there. A quick unclassified search on realpolitik reveals its central tendencies:

- **Tendency One.** "Politics based on practical objectives rather than on ideals."[41]
- **Tendency Two.** "In diplomacy it is often associated with relentless, though realistic, pursuit of the national interest."[42]

The analyst leverages the realpolitik framework to gain insight beyond the threat force paradigm into Country B's possible behavior. For example, the analyst may increase the assessed likeliness of invasion because Country B will pursue its objectives without regard for international norms. Interestingly, the realpolitik lens may also cause the analyst to consider COAs where Country B pursues only limited objectives (perhaps the partial seizure of Country A's territory). This thinking is linked to Tendency Two because, though "relentless," Country B must be "realistic" with its objectives. The analyst may then examine reports or recommend collection to determine the feasibility of Country B's long-term occupation of Country A.

Theory's value is it predicts how a rational adversary is likely to act in a typical situation. The of-what-is-this-an-instance question is your ticket to leveraging theory in your analysis. It guides the research and collection plan and prompts the consideration of newer, richer COAs. However, how is a value assigned to a prediction, and how typical is typical in probabilistic or likeliness terms? Next, I will discuss the outside view and the way it simplifies establishing a forecast's base value.

Outside View

Authors Daniel Kahneman and Amos Tversky have identified "two profoundly different approaches to forecasting" that they dubbed the "inside view" and "outside view."[43] The inside view is the approach many of us take when predicting—we emphasize "our specific circumstances" and hunt "for evidence in our own experiences."[44] This approach often leads to inaccurate forecasts. We overweight the importance of information available to us and do not fully appreciate how the gaps in our knowledge or unanticipated future events could cause our forecast to be wrong.[45] The outside view takes a different approach. It is "the prediction you make about a case if you know nothing except the category to which it belongs."[46] The analyst determines the broader category for the examined case using the of-what-is-this-an-instance question. The analyst researches this "reference case" to develop an "anchor" value to base all future predictions.[47] The analyst then applies the "case-specific information" to adjust the baseline prediction appropriately and continuously.[48]

Suppose an analyst must predict how long a conflict will last in Country C—a state on the brink of civil war. The analyst asks the of-what-is-this-an-instance question to determine a suitable reference case. The analyst determines that the average length of modern intrastate conflict is the reference category. An unclassified search reveals that "since 1945, civil wars tend to last an average of about seven to 12 years."[49] The 7-to-12-year range is the anchor. The analyst is then free to research case-specific information—for example, Country C is increasingly unable to curb terrorist activity inside its borders—to adjust the estimate range and the assessed expression of likelihood. Easy.

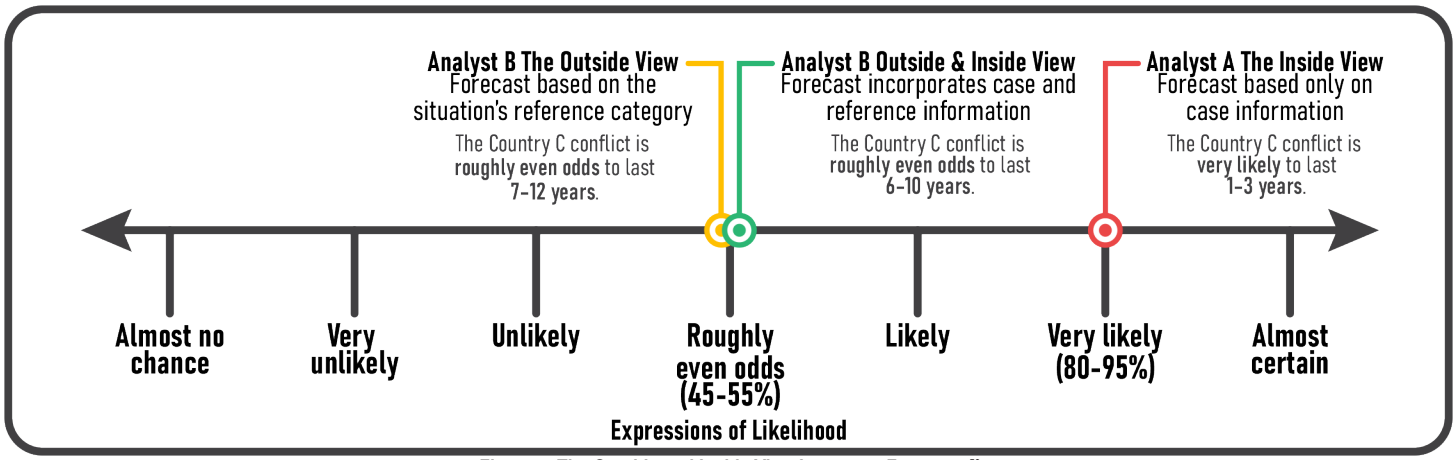

Figure 5. The Outside and Inside View Impact on Forecasts[50]

Outside view "ballpark" assessments work because the real-world examples they take into account incorporate all the messy "contingencies" (more on this later) and friction that we either cannot predict or are prone to overlook.[51] In contrast, inside view assessments can be almost laughably (or tragically) at odds with historical precedent.[52] Analysts develop these historically incongruent forecasts because, like many people, they too tend to overweight accessible information and discount inaccessible or unexamined information in their judgments. The outside view mitigates these common biases. It makes sense to adjust a ballpark figure with inside view information, and it will also make sense to your commander.[53]

Consider the Country C example once more to see how the inside view and outside view affect a forecast (Figure 5). With no outside view information, Analyst A forecasts the conflict is very likely (80 to 95 percent in probabilistic terms) to last 1 to 3 years for whatever inside view reasons or biases. This is an assured (and common) forecast given the astounding complexity and unpredictability inherent to war. In contrast, Analyst B uses the outside view to develop an initial ballpark forecast of a 7-to-12-year conflict for roughly even odds (45 to 55 percent). Analyst B narrows the range to 6 to 10 years at roughly even odds given Country C's inability to curb terrorist activity. Analyst B continuously refines the estimate as new information is received. What estimate would you use if faced with an important decision related to this situation?

Maybe you still need convincing. Kahneman's work and the demonstrated success of the Good Judgment Project's "superforecastors" strongly suggest an analyst should take an outside view. Good Judgment's cofounder is Philip Tetlock, coauthor of *Superforecasting: The Art and Science of Prediction*.[54] An extensive Intelligence Advanced Research Projects Activity competition found that superforecastors were "30% more accurate than intelligence analysts with access to classified information."[55] The outside view is a simple, readily available tool the superforecastors employ when they first approach a situation.[56] We should follow their lead.

The outside view anchors our theoretical frameworks in reality. You may be feeling confident that theory and the outside view are all you need to produce better models. That is *partially* true. The problem is theory is inherently probabilistic—uncertainty can never be completely ousted from human activity. So, we now turn to history to appreciate the role that central tendencies and uncertainty play in real-world situations.

Take a Historical Perspective

Historical information is an important factor in the commander's understanding of an adversary and the often unpredictable dynamics of war.[57] Mark Twain is reputed to have said, "History doesn't repeat itself, but it often rhymes."[58] Knowing this intuitively, many analysts strive to incorporate history's lessons within their judgments, some with good effect. Unfortunately, not every analyst understands how to apply historical insight to their assessments. I will describe the best use of history to develop richer and more predictive COAs (Figure 6, on the next page), but before I do, I will outline the pitfalls to avoid when using historical examples.

Military theorist Carl von Clausewitz observed historical examples were "seldom used to such good effect."[59] Why? First, people tend to draw evidence or theoretical assertions from a historical event even though they lack a deep understanding of the situation. This can be because only limited information is available, or the analyst never put in the effort to deeply understand the historical example. Second, people often cherry-pick from many historical examples to provide supposedly non-subjective proof for a judgment. The analyst may do this because of biases or a desire to keep a pet theory or opinion. (Biases could result from the analyst being blind to counterexamples or ascribing greater weight to supporting examples.) Third, analysts may examine cases made inapt because of extreme geographic or technological dissimilarities.[60] All three pitfalls are severe and can lead to poor assessments.

Fortunately, the best use of history results in richer COAs and takes these pitfalls into account. The first step is to

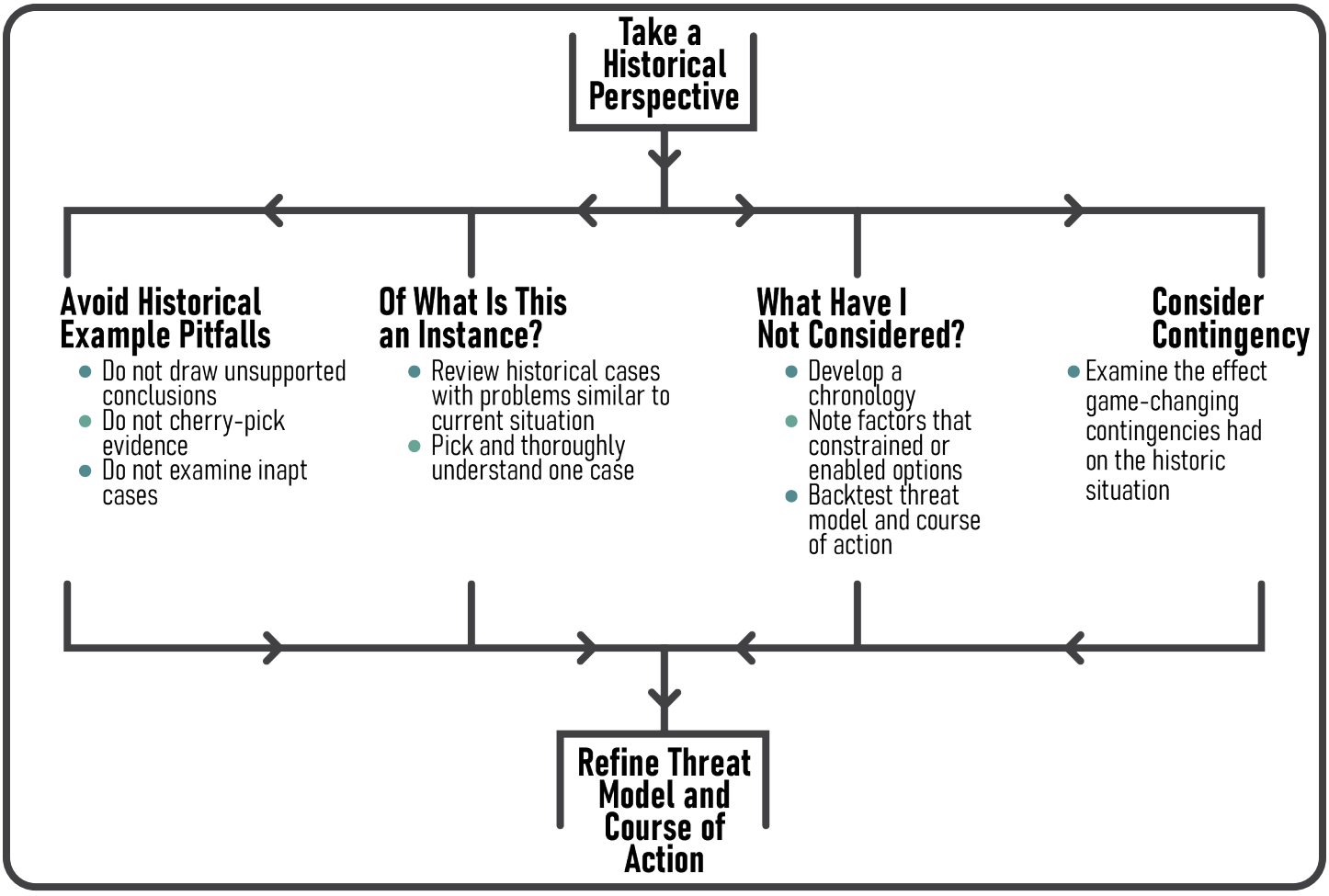

Figure 6. The Historical Perspective[61]

compare the situation to *one* similar and "*thoroughly*" understood single case.[62] As with theorizing, the analyst asks the of-what-is-this-an-instance question to determine a relevant historical category. This should be easy because the analyst has already generalized the situation with the theory and outside view tools. The analyst and section then make a judgment call to select one historical case to study. It is best to choose an example with a problem similar to the one the current adversary is attempting to solve.[63]

Next, the analyst compares the historical case to the current situation by asking "What have I not considered?" throughout the process.[64] The analyst reviews unclassified and classified sources to develop a chronology of the historical example that, according to authors Richard Neustadt and Ernest May, "plot[s] key trends while also entering key events, especially big changes."[65] The analyst carefully notes the factors that constrained or enabled the options available to the examined decision maker and the way these factors influenced their pursued goals.[66] The gleaned insights "*suggest*" how the modern-day decision maker might be similarly enabled or limited.[67] Additionally, the analyst uses the case to backtest their draft model to see how well (or poorly) it would explain the historical outcome. The objective of the historical comparison and test is to reveal unconsidered details, constraints, options, or central tendencies to refine the modern-day models and assessed probabilities. Most importantly, this process reveals the profound impact of "contingency."[68]

Enter Contingency

Humans at war are unpredictable. Clausewitz believed "no other human activity is so continuously or universally bound up with chance" as war, partly due to factors such as "courage, boldness, or even foolhardiness,"[69] so much it would seem for any model that assumes rational actors or claims "absolute" prescriptions.[70] Do not worry; theory remains invaluable so long as we remember it deals in tendencies, not absolutes.[71] With that in mind, we study historical contingency to appreciate the role of uncertainty in human affairs.

Author and historian John Lewis Gaddis defines *contingencies* as "phenomena that do not form patterns."[72] This aspect makes contingencies difficult or impossible to predict ahead of time.[73] In Neustadt and May's language, contingencies might be behind the "big changes" in a situation's chronology. Contingencies can occur because "of the actions individuals take for reasons known only to themselves"[74] or perhaps unknown even to the actor. These acts can be irrational and outright contrary to the behavior predicted by theory, or they can be the novel combination of previously separate, predictable tendencies can lead to unforeseeable

and volatile results.[75] Contingency's common factor is "we generally learn about them only after they've happened."[76] Especially frustrating for an analyst, contingencies are usually explicable only "*after*" they have occurred.[77] (An example of this is the September 11 attacks).

Contingencies make a mess of things and can completely change the central tendencies of a given situation. Analysts must account for this in their assessed COAs and collection plans. An analyst appreciates how a contingency may affect the current operational environment by thoroughly examining how unanticipated game-changing events altered a similar situation in the past. This analysis reveals indicators to watch for, or scenarios to be wary of, in the current operational environment (history rhymes). The aim is not to predict a specific event that is by definition unpredictable but to develop collection plans that continuously monitor the operational environment for subtle or radical changes from the predicted behaviors. When change occurs, analysts immediately update their threat models and COAs accordingly.

Imagine once more Country B's anticipated invasion. The analyst examines Country B's incursion into Country D to gain historical insight into the current situation. The analyst develops a detailed timeline of the invasion and uses the information to refine the current situation's event template. The analyst then examines Country B's information operations (a previously underappreciated aspect in the analyst's Country B threat model) in the invasion's lead-up to add new details to the present COA. Finally, the analyst notes the outsized consequences following the destruction of a border checkpoint in Country D at the start of the conflict. Unknown to Country B, a Country D soldier live-streamed the attack. The video generated an intense will to resist in Country D and dramatic worldwide condemnation (contingency). The analyst develops new social media collection requirements with this insight for the present-day situation.

One thoroughly understood historical example will go far in developing richer, more predictive COAs because history demonstrates how a theoretical model played out in the real world.[78] Keep in mind, historical studies include multiple domains (cyberspace, for example) and should be drawn from recent history if possible.[79]

Incorporating the Three Tools

An intelligence section can easily integrate the three tools into the analytic production process using two methods:

- **Brainstorming sessions—**The section incorporates brainstorming sessions in the section's standard operating procedure to collectively determine applicable theoretical construct(s), the outside view reference category, and the most relevant historical case.
- **Professional reading program—**The intelligence section leverages its professional reading program to set the conditions for the effective use of the tools. The program should include wide-ranging military case studies and theoretical examinations specific to the unit's threat or geographic area of interest.[80] This ensures the intelligence section has a catalog of relevant theory and ready historical examples at the start of any new situation requiring a major analytic assessment.

Conclusion

Theory (or the threat force paradigm), the outside view, and historical examples are your simple, accessible tools to improve the comprehensiveness and accuracy of your assessments. Analysts use the three tools to overcome analysis paralysis, make sense of complex situations, and mitigate the common biases that undermine analytic output.

Each tool is interrelated and works on the same principle. We should first discern the broader patterns influencing a particular situation (outside view) before diving into its specific details (inside view). Theorists average many historical cases to develop a theory's central tendencies (anchors). Theory is, therefore, like the outside view of a particular human activity. Likewise, forecasters (especially the *super* ones) average the impact of historical trends and contingencies of many related situations to arrive at a reasoned ballpark figure for a given theoretical prediction. History anchors theory in the real world and provides a vivid (inside view-level detail) warning about contingency's unpredictable impact. Analysts use all three tools to craft richer threat models and COAs. These assessments represent our theory of how an adversary will behave in a particular situation.

So, go ahead and give these ideas a try! If you do, you will not only become a better analyst but also a better *theorist*.

Endnotes

1. David Epstein, "The Peculiar Blindness of Experts," *The Atlantic*, June 2019, https://www.theatlantic.com/magazine/archive/2019/06/how-to-predict-the-future/588040/.

2. Ibid.

3. Department of the Army, Training and Doctrine Command (TRADOC) Pamphlet 525-3-1, *The U.S. Army in Multi-Domain Operations 2028* (Fort Eustis, VA: TRADOC, 6 December 2018).

4. Department of the Army, Field Manual (FM) 2-0, *Intelligence* (Washington, DC: U.S. Government Publishing Office [GPO], 6 July 2018), 1-1.

5. I gained an appreciation for the tools as a student at the Advanced Military Studies Program (AMSP) from 2016 to 2017. The program's curriculum contained several of the authors and works cited in this article, demonstrating the tools' broad applicability beyond the intelligence warfighting function. I credit AMSP for the general insights in this article and, in particular, Dr. G. Stephen Lauer, who was an associate professor of military history at AMSP. Dr. Lauer underscored the value of James N. Rosenau and Mary Durfee's "of-what-is-this-an-instance" question. It stuck. Of course, any errors are mine.

6. Philip E. Tetlock and Dan Gardner, *Superforecasting: The Art and Science of Prediction* (New York: Broadway Books, 2015), 3.

7. Daniel Kahneman, "Daniel Kahneman: Beware the 'inside view,' " *McKinsey Quarterly*, November 1, 2011, https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/daniel-kahneman-beware-the-inside-view.

8. Graphic by author, using information from Kahneman, "Beware the 'inside view.' "

9. Department of the Army, Army Techniques Publication (ATP) 2-01.3, *Intelligence Preparation of the Battlefield* (Washington, DC: U.S. GPO, 1 March 2019), 5-9. Change 1 was issued on 6 January 2021.

10. Ibid., 5-3, 5-5.

11. Ibid.

12. Ibid., 5-9.

13. Department of the Army, ATP 2-33.4, *Intelligence Analysis* (Washington, DC: U.S. GPO, 10 January 2020).

14. Lexico, s.v. "theory," accessed 8 July 2022, https://www.lexico.com/en/definition/theory.

15. James N. Rosenau and Mary Durfee, *Thinking Theory Thoroughly: Coherent Approaches to an Incoherent World* (Boulder, CO: Westview Press, 1999), 229.

16. Ibid., 6, 229.

17. Ibid.

18. Lexico, s.v. "tendency," accessed 8 July 2022, https://www.lexico.com/en/definition/tendency.

19. Rosenau and Durfee, *Thinking Theory Thoroughly*, 1–2.

20. Ibid., 2. In their book, *Thinking Theory Thoroughly*, Rosenau and Durfee use the term *intellectual paralysis*.

21. Ibid., 7.

22. Office of the Chairman of the Joint Chiefs of Staff, Joint Publication 2-0, *Joint Intelligence* (Washington, DC: The Joint Staff, 26 May 2022), I-2.

23. Rosenau and Durfee, *Thinking Theory Thoroughly*, 5.

24. Ibid., 230–231.

25. Ibid., 3.

26. Ibid., 4–7.

27. Ibid., 2. Theory is a "sorting mechanism"; therefore, the theory that the analyst selects can profoundly influence their interpretation of an examined subject. I recommend Rosenau and Durfee's work, *Thinking Theory Thoroughly*, for greater detail, as well as Epstein's "The Peculiar Blindness of Experts" for a primer on the value of incorporating many viewpoints when forecasting. Combining the three tools (as opposed to one or two) automatically brings multiple views into a forecast.

28. Ibid., 5.

29. Graphic by author, using information from Rosenau and Durfee, *Thinking Theory Thoroughly*, 1–7, 229.

30. Office of the Chairman of the Joint Chiefs of Staff, *DOD Dictionary of Military and Associated Terms* (Washington, DC: The Joint Staff, May 2022), 114; and IGI Global, s.v. "What is Prescriptive Theories," accessed 16 March 2022 (emphasis added), https://www.igi-global.com/dictionary/rational-decision-making-dual-processes/23280. The word *rational* is from IGI Global.

31. Graphic by author, using information from Department of the Army, ATP 2-01.3, *Intelligence Preparation of the Battlefield*, 1-14–1-15, 5-1–5-3; Department of the Army, FM 3-0, *Operations* (Washington, DC: U.S. GPO, 6 October 2017), 1-9–1-11. Change 1 was issued on 6 December 2017; and Rosenau and Durfee, *Thinking Theory Thoroughly*, 1–7.

32. Department of the Army, FM 3-0, *Operations*, 1-9.

33. Ibid.

34. Ibid.

35. Rosenau and Durfee, *Thinking Theory Thoroughly*, 2–4.

36. Ibid., 2.

37. Rosenau and Durfee, *Thinking Theory Thoroughly*, 3–4. Example adapted from Rosenau and Durfee, *Thinking Theory Thoroughly*.

38. Graphic by author, using information from Rosenau and Durfee, *Thinking Theory Thoroughly*, 1–7.

39. Examples of unclassified government repositories are the Defense Intelligence Agency's Military Power Publications, https://www.dia.mil/Military-Power-Publications/, and the U.S. Army Training and Doctrine Command G-2's Operational Environment Enterprise, https://oe.tradoc.army.mil/.

40. Department of the Army, ATP 2-01.3, *Intelligence Preparation of the Battlefield*, 5-2.

41. *Encyclopedia Britannica Online*, s.v. "realpolitik," accessed 18 March 2022, https://www.britannica.com/topic/realpolitik.

42. Ibid.

43. Kahneman, "Beware the 'inside view.' "

44. Ibid.

45. Ibid.

46. Ibid.

47. Ibid.

48. Ibid.

49. Max Fisher, "Political science says Syria's civil war will probably last at least another decade," *Washington Post*, October 23, 2013, https://www.washingtonpost.com/news/worldviews/wp/2013/10/23/political-science-says-syrias-civil-war-will-probably-last-at-least-another-decade/. Max Fisher cites James Fearon's 2002 study for average civil war length. Max Fisher's entire article is an excellent real-world example demonstrating the value of outside view thinking (not a term he uses). It also reflects the application of central tendencies to support his prescient 2013 forecast—Syria's civil war was likely to last a long time.

50. Graphic by author, using information from Kahneman, "Beware the 'inside view' "; and Department of the Army, ATP 2-33.4, *Intelligence Analysis*, C-2.

51. Kahneman, "Beware the 'inside view.' " *Ballpark* is Kahneman's term; and John Lewis Gaddis, *The Landscape of History: How Historians Map the Past* (New York: Oxford University Press, 2002), 30. The term *Contingencies* is from Gaddis.

52. Epstein, "Peculiar Blindness of Experts."

53. Kahneman, "Beware the 'inside view' "; and Tom Koller and Dan Lovallo, "How to take the 'outside view,' " McKinsey & Company, March 5, 2019, https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/how-to-take-the-outside-view.

54. "Superforecasting will change the way you think about the future," Good Judgment, accessed 29 March 2022, https://goodjudgment.com/about/.

55. Ibid.

56. Tetlock and Gardner, *Superforecasting*, 117–124. I recommend a complete reading of this work. I believe the outside view to be one most powerful and easily applicable concepts to military affairs described in the book.

57. Department of the Army, ATP 2-01.3, *Intelligence Preparation of the Battlefield*, 5-4.

58. Quote Investigator, "History Does Not Repeat Itself, But It Rhymes," *Quote Investigator*, accessed 18 March 2022, https://quoteinvestigator.com/2014/01/12/history-rhymes/.

59. Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret (New Jersey: Princeton University Press, 1976), 170.

60. Ibid.; and Richard E. Neustadt and Ernest R. May, *Thinking in Time: The Uses of History for Decision-Makers* (New York: The Free Press, 1986), 237–238.

61. Graphic by author, using information from Rosenau and Durfee, *Thinking Theory Thoroughly*, 1–7; Clausewitz, *On War*, 85–86, 170–174; Neustadt and May, *Thinking in Time*, 235–238; and John Lewis Gaddis, *Landscape of History*, 30–31.

62. Clausewitz, *On War*, 173 (emphasis added).

63. Neustadt and May, *Thinking in Time*, 237–238.

64. Ibid., 235–236. The question in quotations is a simplification and adaption of Neustadt and May's "journalist questions," not a direct quote.

65. Ibid., 235.

66. Ibid., 235–237. This is a simplification. I recommend a thorough reading of Neustadt and May's *Thinking in Time* to gain the full utility of their model.

67. Ibid., 236 (emphasis added).

68. Gaddis, *Landscape of History*, 30.

69. Clausewitz, *On War*, 85–86.

70. Ibid., 86.

71. Rosenau and Durfee, *Thinking Theory Thoroughly*, 229.

72. Gaddis, *Landscape of History*, 30.

73. Ibid.

74. Ibid., 31.

75. Ibid. Gaddis attributes this insight to Scott D. Sagan.

76. Ibid.

77. Ibid., 66. Gaddis attributes this insight to Jay Gould.

78. Clausewitz, *On War*, 172–173 (emphasis added).

79. Department of the Army, ATP 2-01.3, *Intelligence Preparation of the Battlefield*, D-1; and Clausewitz, *On War*, 173–174.

80. Department of the Army, ATP 2-01.3, *Intelligence Preparation of the Battlefield*, 5-8.

LTC Matthew Fontaine is the G-2 for the U.S. Army Joint Modernization Command. He has deployed twice to Iraq and twice to Afghanistan, serving as an executive officer, platoon leader, battalion S-2, military intelligence company commander, and analysis and control element chief. He holds two master of military art and science degrees, one in general studies and the other in operational art and science, from the U.S. Army Command and General Staff College.