

Introducing the Kinetic Predictive Analytic Technique

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The purpose of this article is to provide an analytic framework that will facilitate strong predictive judgments and their corollary, the detection of strategic surprise, sometimes referred to as discontinuous change or the idea that present-day capabilities or dynamics will change abruptly and unexpectedly.

No intelligence analyst wants to be a part of an intelligence failure or see their analysis described in an Intelligence Community post-mortem as “quite simply, obviously, and starkly—wrong,” as was the case after the 1973 Arab-Israeli War.^a Nowhere in intelligence analysis is the risk of this outcome higher than with predictive analysis, yet despite the difficulty in detecting strategic surprise, the bane of predictive analysis, there is no escaping the inevitable policymaker or agency-generated request to provide a predictive judgment or strategic warning on some issue of great national importance.

Policymakers might thank analysts for alternative analyses such as a What If, Alternate Futures, or Devil’s Advocacy, which are all useful in expanding the horizon of what *might* happen and can be appended to strategic warning analysis. There will be times, however, when analysts are called to forecast the likelihood that an event *will* happen. Will Russia invade Ukraine? Will Afghan forces collapse after the US withdrawal? Will Iraq invade Kuwait? Will a foreign terrorist organization attack the United States?

While acknowledging the complexity, high degree of difficulty, and potential impact on US national

security of such questions, the purpose of this article is to provide an analytic framework that will facilitate strong predictive judgments and their corollary, the detection of strategic surprise, sometimes referred to as discontinuous change or the idea that present-day capabilities or dynamics will change abruptly and unexpectedly.

In the first section of this article, I will discuss a proposed Structured Analytic Technique (SAT) that I have dubbed the Kinetic Predictive Analytic Technique (KPAT) because of its emphasis on behavior, action, and the requirement to develop a pathway of antecedent steps or conditions leading to a future event. It is based on declassified documentation of intelligence successes, post-mortems of intelligence failures, and my experience working in the Intelligence Community.

KPAT uses the concept of dynamic capabilities, or capabilities in action, to better gauge strategic intent. An armored brigade parked in garrison represents a static capability, but the same brigade moving toward a border represents a dynamic capability. In the second section, I will show examples of intelligence successes that successfully applied the essential components of this technique and two

a. Director, Central Intelligence Agency, *The Performance of the Intelligence Community Before the Arab-Israeli War of 1 October 1973: A Preliminary Post-Mortem Report* (December 1973), 4, at <https://www.cia.gov/readingroom/docs/1973-12-20-CM.pdf>.

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intelligence failures that might have benefited from applying KPAT to avert a strategic surprise.

Assumptions

The goal of KPAT is to detect changes in fundamental conditions that in turn change the likelihood of an event's occurrence. It is not to determine the exact time and place of an event, barring a rare windfall of direct evidence reporting that conclusively answers an intelligence question, e.g., the U-2 imagery of Soviet offensive missiles in Cuba.

Analytic humility is required for sound predictive judgments. This includes an alertness to the impact of new information on the reliability and validity of an analytic framework and its conclusions, an awareness that IC and policymaker consensus on an issue may signal the existence of a strategic assumption that has been the source of past intelligence failures, and that sound arguments can often be made for both sides of most issues.

All analysis—whether current intelligence products such as talking points or briefings, or longer forms like a National Intelligence Estimate (NIE)—reflects an analytic framework comprising key assumptions and an understanding about how a phenomenon works, usually derived from a personal experience or from external sources.

Time pressures caused by a firehose of urgent taskings often lead analysts and managers to assume that the underlying framework of an argument is correct if the analysis follows the prevailing analytic

line, contains strong argumentation, and receives managerial and senior analyst approval. The realities of policy and operational support should be balanced with a sober awareness that this approach is unlikely to detect strategic surprise.

KPAT differentiates between a theory that provides an explanation of a phenomenon that is based on a study of many examples and a model that is a representation created to explain a theory. It also distinguishes between personal mental models that analysts use as filters to interpret or process information and a scientific model that is used to explain or predict behavior of a phenomenon, e.g., climate, military buildup, or voting behavior.

Developing the Framework

A doctor diagnoses symptoms in a patient through a variety of tests, each revealing evidence of disease in the form of images, markers, or activities in the body. In the same way, the intelligence analyst has a variety of frameworks such as Structured Analytic Techniques (SATs) to aid in diagnosing and interpreting evidence in response to an intelligence question. Frameworks are used in KPAT to structure an analyst's thinking and explain how a certain type of analysis will be conducted to include the selection and organization of key factors and evidence. The analyst might adapt frameworks from academic literature, subject matter experts (SMEs), or internal agency holdings. In some cases, the analyst may create a new framework to deal with an intelligence problem.

An analyst's interpretation of Russia's military buildup near Ukraine in January 2022 depended on the framework used to evaluate Russian offensive operations and Russian intent. For example, an analyst who used a framework that stressed Russia's use of military demonstrations to intimidate opponents might have played down its significance as a predictor of a Russian military offensive. In another example, one analyst applies a framework that stresses a government's control over the instruments of coercion to forecast stability; another uses a framework focusing on disaffected elites who leverage mass discontent and paralyzing protests to overwhelm security forces and forecasts instability.

Tradecraft can be impeccable with compelling evidence and analysis and yet come to the *wrong* conclusion by misapplying or using the wrong framework. Framework is crucial with predictive judgments because the discovery of a strategic surprise is dependent on using the correct framework. For this reason, it is important to make the underlying framework of an argument transparent and subject to debate, and to update it with the introduction of new information.^a

In his post-mortem of intelligence failures related to assessments of Iraq's weapons of mass destruction, Robert Jervis observed that asking an if-then question—such as “If Iraq has reconstituted its nuclear program, what would it have to do?”—could have pointed analysts to areas for further examination.^b The KPAT would have built on Jervis's question by asking analysts to use or create

a. Richards J. Heuer, *Psychology of Intelligence Analysis* (CIA, Center for the Study of Intelligence, 1999), 55–56.

b. Robert Jervis, “Reports, Politics, and Intelligence Failures: The Case of Iraq,” *The Journal of Strategic Studies* 29:1. (February 2006).

a model, derived from a general or specific theory of the IQ event, which described the precipitating steps or conditions for Iraq to reconstitute its nuclear program. The KPAT requires that the analyst build a plausible pathway with key indicators to the IQ event and then assess where the IQ actor is currently on the pathway. It gauges the intent of an IQ actor to pursue an action based on dynamic capabilities.

KPAT Process

KPAT provides analysts with a framework for developing sound predictive judgments in support of policy decisions concerning critical US national interests. It is similar to the “What If?” SAT in that it constructs a pathway to the IQ event consisting of key antecedent steps or conditions, but differs because it also seeks to assess the likelihood of the event in contrast to What If, which suspends judgment about the outcome and focuses on the process. KPAT is most effectively employed when there is sufficient time to apply a fully developed conceptual framework. Time constraints governing current intelligence production may preclude a full application of KPAT, although a shortened form could be adopted.

KPAT is an SAT designed to generate a predictive judgment about the likelihood of an event in response to a policymaker or internal tasking. It meets the definition of an SAT through a transparent analytic process that reduces cognitive biases. Its focus on predictive judgments contrasts

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with other SATs that strengthen argumentation or expand the scope of analytic outcomes, but do not seek to root out strategic surprises. KPAT is diagnostic in its exposure not only of the underlying assumptions, but the framework or theory that underpins the assumptions, making it subject to debate and review—a key criteria for an SAT.^a It is a contrarian vehicle for challenging strategic assumptions, and imaginative in its ability to develop alternate outcomes and can incorporate other SATs such as scenarios analysis.

KPAT is also unique among SATs because it uses the concept of dynamic capabilities as the most accurate measure of strategic intent. Employing this integrated view of capabilities and intent helps analysts to avoid a primary cause of past intelligence failures, making “overly strong conclusions about the intentions of political actors.”^b KPAT cautions analysts against overweighting statements made by government officials or actors who may be engaging in denial and deception, are undecided on an issue, or lack sufficient information to make an informed judgment.

The Method

KPAT requires the analyst to build and apply a predictive model of the event identified in the intelligence question. It includes a pathway of precipitating steps or conditions that are extracted from a broadly

applicable general theory that describes what would have to happen for the IQ event to occur. The analyst then determines the likelihood of the IQ event based on the assessed location of the country’s current situation on the pathway. This process distinguishes KPAT from other SATs because it requires not only that the drivers of an argument be identified, but also the underlying theory that produces the drivers.

KPAT consists of six key steps:

- Refine the IQ to include the consideration of a worst-case scenario.
- Build a general theory based on antecedent steps or conditions necessary for the event to occur that is applicable across countries or scenarios.
- Adapt and apply the general theory in the form of a pathway to the specific IQ event.
- Interpret strategic intent by assessing dynamic capabilities.
- Assess IQ event probability based on the location of the IQ actor on the event pathway.
- Revise the framework in accordance with new information.

Step 1: Refine the intelligence question

Refine the policymaker’s or internally generated IQ by adding the clause, *what is the most likely*

a. Heuer, “Taxonomy of Structured Analytic Techniques,” *International Studies Association* (March 26–29, 2008), 4, at http://www.pherson.org/wp-content/uploads/2013/06/03.-Taxonomy-of-Structured-Analytic-Techniques_FINAL.pdf.

b. Douglas J. MacEachin, *Predicting the Soviet Invasion of Afghanistan: The Intelligence Community’s Record* (CIA Center for the Study of Intelligence, April 15, 2007), 46. See <https://cia.gov/resources/csi/books-monographs/predicting-the-soviet-invasion-of-afghanistan/>

A general theory must be tested and applicable across multiple countries and scenarios, providing a larger body of supporting evidence and greater confidence in its utility.

path—consisting of concrete steps or conditions that must precede the worst-case IQ event or greatest strategic surprise for US national interests—and where is the IQ actor (country, terrorist group, etc.) assessed to be on that continuum? For example, a US policymaker might ask for an assessment of the al-Qa'ida in the Arabian Peninsula (AQAP) terrorist threat to the United States. In coordination with the policymaker, an analyst might determine that an AQAP bioterror attack to be the worst-case scenario and add the following clause to the initial IQ, *what is the most likely path for AQAP to conduct a successful bioterror attack on the United States, and where is AQAP now assessed to be on that continuum?*^a Identifying a worst-case scenario/greatest strategic surprise will require analytical judgment and should include feedback from SMEs throughout the IC and the policymaking and academic communities.

Adding this clause to the IQ is crucial for several reasons. It will expose the underlying framework or theory of how the event will unfold, making it subject to debate, discussion, and coordination. This is critical because framework drives conclusions and can be the Achilles heel of an otherwise well-constructed argument.

Analysts must assume the IQ event is possible no matter how out-of-step it may seem with the prevailing wisdom among policymakers, managers, or the IC. It challenges the fallacy of the strategic assumption

which tends to dismiss worst-case scenarios based on overly confident assessments of strategic intent: North Korea in 1950 will not invade South Korea, Egypt in 1973 will not attack Israel, and Iraq in 1990 will not attack Kuwait.

This approach strengthens judgments of a continuous future with no strategic surprises because an analyst who understands a likely pathway to instability will have a much stronger basis for assessing that a country will remain stable in the future: how can you be confident of an assessment of future stability without a rigorous understanding of a likely path to instability? The 1979 Iranian Revolution, addressed later in this article, highlights the perils of neglecting or underweighting this step.

Similarly, it moves the analysis away from an overreliance on “smoking gun” direct evidence of the IQ event, such as imagery of a weapons system, to the consideration of indirect evidence of the event’s precipitating steps or conditions. Direct evidence of a weapon system or bioterror delivery capability is the ideal, but in predictive judgments it may not be available in time to impact policy decisions, if it is available at all.

Step 2: Develop a general or specific theory

The analyst adopts an existing theory of the IQ event or creates one where none exists from academic research, SMEs working in the government and outside of it, and internal agency holdings. The analyst

will need to develop a specific theory, a theory that only applies to the IQ event, when time constraints, limited academic research, or a breakthrough development unique to the IQ actor negate the use of a broader general theory that is applicable beyond the IQ event.

The analyst conducts research and meets with SMEs, including data scientists, from think tanks, academia, and the policymaking community to vet, identify, or build a theory of what would have to happen for the IQ event to occur. Ideally, a reliable and relevant theory already exists such as a theory of how a military conducts offensive operations or how an insurgency evolves, and the analytic challenge is to adapt it to the specifics of the IQ. There may be cases where the analyst will have to create a new theory or combine elements of two or more existing theories. A strong general theory or framework is important because it identifies the assumptions and key factors used in the argument and provides a clear pathway to the IQ event.

A general theory must be tested and applicable across multiple countries and scenarios, providing a larger body of supporting evidence and greater confidence in its utility. The exception to this is when a specific theory is the only option because there is no general theory.

It must be evidence based, even if it is historical evidence, because it will allow others to examine the evidence and verify that it is consistent with the conclusions. For example, Jack A. Goldstone developed a plausible theory of revolution drawing on the English and French

a. The worst-case analysis might be included in a response that includes a broader treatment of threats.

revolutions of the 17th and 18th centuries, respectively.^a The theory must include a pathway consisting of the precipitating steps or conditions that the analyst will use to assess the likelihood of the IQ event.

Analysts should integrate data scientists to ensure Artificial Intelligence/Machine Learning (AI/ML) is effectively leveraged into a collection plan that covers information gaps and key warnings and indicators, enabling analysts to focus on other essential tasks. A full treatment of AI/ML for intelligence collection and analysis is beyond the scope of this article, but efforts under way in government and industry highlight its promise.^b AI/ML can facilitate geospatial intelligence modelling of indications and warning scenarios; process large data streams from multi-platform intelligence, surveillance, and reconnaissance platforms to monitor battlefield threats; track demonstrations and violent incidents through textual mining and video monitoring; and evaluate foreign-language materials.

AI/ML could also check the validity of KPAT assessments and alert analysts and managers to imbalances between new evidence and current assessments. It could quickly mine historical evidence of an IQ event that would assist analysts in forming a specific theory. For example, algorithms could find examples of military deployments that occurred with the purpose of deception or intimidation, but not to conduct combat operations. This could assist analysts responsible for assessing the intent of a military buildup on a border.

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Step 3: Develop pathway to the IQ event

Analysts next need to adapt the general theory to the specifics of the IQ event by building a pathway consisting of antecedent steps or conditions. For example, an analyst evaluating the likelihood of an underground nuclear test in a given country would apply the general requirements for a suitable underground test site applicable to any country to determine the most likely locations in the target country.

Analysts would then identify relevant historical cases that approximate the IQ event to observe how the key actors and antecedent steps or conditions interact to gain greater insight. A recent history of rebellions or violent regime change might offer clues to elite behaviors or the interaction of key social and economic factors, for example.

In coordination with data scientists, apply advances in AI/ML to identify intelligence gaps and indicators that warn of shifts in underlying fundamentals of an IQ event. It is likely that collection gaps will become clearer as the event pathway is developed. Identifying information gaps on the event pathway will assist the analyst in assessing how near or far the IQ actor is to operationalizing the IQ event.

Step 4: Interpret strategic intent through dynamic capabilities

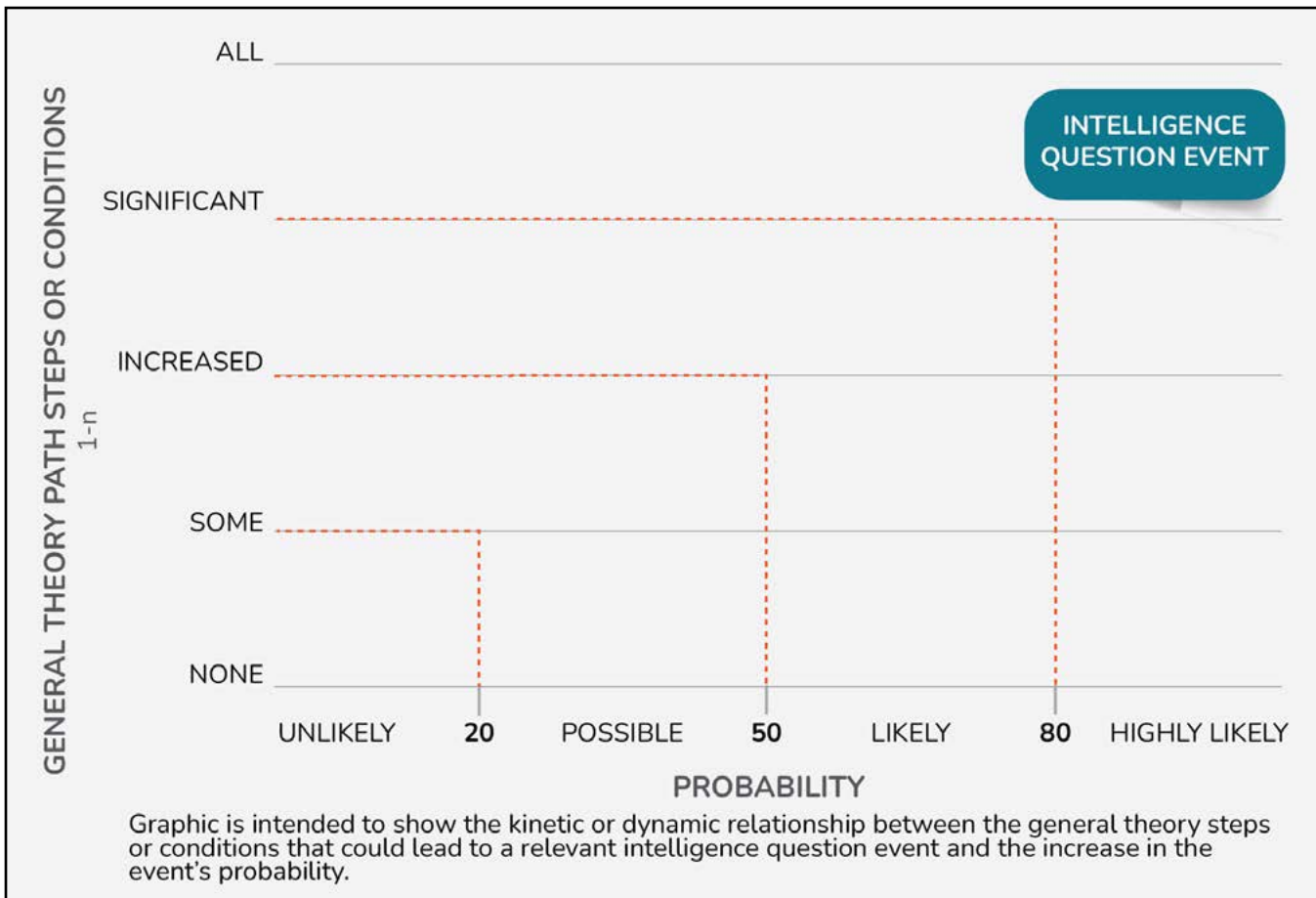
Analysts should overweight dynamic capabilities when judging intent. Avoid overly confident conclusions about strategic intent based on public or private statements or dominant strategic assumptions in the IC and/or the policymaking community. Carl von Clausewitz, who applied an integrated concept of intent and capability, stated in his book *On War* that “war is not an independent phenomenon, but only the continuation of state policy by other means.” In other words, the conduct of war (including preparations for war), which we describe in this article as dynamic capabilities, are a reflection of political intent that we ignore at our peril.

Capabilities in action such as a convoy of tanks moving toward a border, the evacuation of civilians from a potential conflict zone, or the stockpiling of military supplies reveal strategic intent. The distribution of campaign literature or the mobilization of supporters to raise money, protest, or contact voters, the ability to deliver goods and services, and resolve grievances are examples of dynamic political capabilities.

Identify dominant themes within the IC and policymaking communities and avoid projecting them into the analysis. KPAT defines a

a. Jack Goldstone, *Revolution and Rebellion in the Early Modern World*, (University of California Press, 1991).

b. See inter alia Vincent Dennis, “The future of intelligence analysis,” *Deloitte Insights*, December 11, 2019, and Joseph Gartin, “The Future of Analysis,” *Studies in Intelligence* 63, no. 2 (June 2019).



dominant theme as an overly confident assessment of the intentions of political actors that generally promotes a continuous future and is a common thread in many intelligence failures.

Analysts should identify private and public statements of key political actors and technical experts for awareness, but avoid overweighting statements of intent at the expense of demonstrated capabilities. Be aware of the possibility of deception for internal domestic or external foreign policy reasons or misinformation stemming from indecision, shifting priorities, and impulsive actions. The actor's ability to follow through on their statements of intent will be dependent on their capabilities. When in

doubt, overweight what the IQ actor is doing, not what it is saying.

Analysts should ask, does the country or actor have a history of feigning action such as a military attack or developing dynamic capabilities to intimidate or pressure without following through?

Step 5: Assess probability of occurrence

The analyst will identify evidence of key antecedent steps or conditions in the current situation to assess the IQ actor's location along the pathway identified in Step 3. The probability of the IQ event occurrence is a function of the IQ actor's position on the event pathway.

Research indirect evidence of the precipitating steps and conditions in the current situation. Be open to the possibility of finding direct evidence of a strategic surprise and remember that its absence does not equate to the absence of an impending surprise and may be due to a collection shortfall or an effective denial and deception campaign.

KPAT recommends that probabilistic language be linked to the IQ event pathway. Event probability should include a percentage rating, a descriptive word or phrase, and an estimated location on the IQ pathway. The analyst will assess the position of the current situation on the event pathway based on evidence of the requisite steps or conditions

and estimate the probability of the IQ event using the following suggested terms or their equivalents. Percentages are assigned to probabilistic language to provide greater clarity for the consumer.

The most important justification for the terms and percentages is their linkage to the event pathway. Consider the case of a potential gas leak in a house. What is the likelihood of explosion?¹

- Unlikely (1–20 percent). There is minimal evidence of any precursors, e.g., we detect no traces or only faint traces of a gas leak in the house. An explosion is unlikely.
- Possible (20–50 percent). The event has crossed the threshold of improbability to the realm of the possible—there is some evidence of event precursors. A one in five chance of a terrorist attack makes it a “possibility” that should not be ruled out. There is definitely a gas leak in the basement. An explosion is possible.
- Likely, probable (50–80 percent). The gas leak has filled the basement, making an explosion likely.
- Highly likely, almost certainly, and/or imminent (80–99 percent). The event could occur at any time, e.g., the gas leak has spread throughout the house and it is only a matter of time before a spark causes an explosion.

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Step 6: Monitor and revise framework with new information.

Be alert to new information that requires revisions of the framework and probability estimates. Analysts maintain a flexible mindset that is focused on discovery. There is high risk and uncertainty in predictive judgments. Welcoming new information that brings analysis closer to the truth helps avoid surprise.

Applying the KPAT to Historical Intelligence Successes and Failures

To explore how KPAT could be applied to future intelligence problems, I applied my framework to some well-known intelligence successes and failures. In retrospect, we can see when IC analysts applied elements of KPAT, as in the case of warning of an Iraqi invasion of Kuwait, they were able to come to correct judgments. In contrast, when analysts failed to use elements of the KPAT approach, as in the case of anticipating the Iranian Revolution, they were likely to come to incorrect judgments. For space, I have limited the discussion to these two well-documented examples, but in the course of my research I found the model holds true for other famous intelligence successes, including the IC’s anticipation of the Soviet Sputnik program and the collapse of Yugoslavia, and conversely failures like the Cuban Missile Crisis.

Iraqi Invasion of Kuwait

As the National Intelligence Officer (NIO) for Warning (1988–94), Charles Allen and his staff applied the essential features of the KPAT when they provided accurate warning of the 1990 Iraqi invasion of Kuwait. The warning staff built and applied a general and specific theory of an Iraqi invasion and demonstrated the utility of using dynamic capabilities as an indicator of strategic intent.^a Despite their successful predictive analysis, they faced significant headwinds in their efforts to warn the policymaking and intelligence communities because of the widely accepted strategic assumption that Saddam Hussein would not attack Kuwait while he was focused on rebuilding from the effects of the Iran-Iraq War (1980–88). This view was further reinforced in the minds of senior US officials by regional leaders who confidently predicted that Iraq would not attack Kuwait.

Refine the intelligence question

Refine the IQ by adding the clause, *what is the most likely path—concrete steps or conditions that must precede an Iraqi attack on Kuwait, the worst-case scenario or greatest strategic surprise—and where is Iraq now assessed to be on that continuum?* The NIO warning staff almost certainly worked with an internally driven intelligence question to assess the likelihood of an Iraqi invasion of Kuwait, judging from Allen’s retrospective account.

a. This section relies on Allen’s own account in “Warning and Iraq’s Invasion of Kuwait: A Retrospective Look,” *Defense Intelligence Journal* 7-2 (1998), 33–44, and Zachary Karabell and Phillip Zelikow, “Prelude to war: US policy toward Iraq 1988–1990,” *Kennedy School of Government Case Program* (1999), at <https://case.hks.harvard.edu/prelude-to-war-us-policy-toward-iraq-1988-1990/>.

Saddam Hussein's public criticism of Kuwait on 17 July and reporting received on 19 July that Hussein ordered two Republican Guard divisions to the Kuwaiti border alerted the warning staff to a possible Iraqi threat.

Develop a general theory of an Iraqi attack

Before 1990, the warning staff developed a general theory of military attack that focused on the underlying structure of various threats to understand the total process by which countries prepare for war, or political systems become unstable. Focusing on the underlying structure of a phenomenon is a key feature of KPAT. The staff differentiated between national war preparations that affected social and economic activities and military attack preparations.

They also categorized military attack preparations as general attack preparations such as logistic activities and military mobilization and final attack preparations that include the movement of combat units to attack positions. They learned “that countries with centrally planned economic systems such as the Soviet Union, North Korea, Syria, Iraq, and even India prepare for war by first initiating measures across the spectrum of social, economic, political, and military life that divert resources away from civilian life and into the armed forces” and that, “without large logistic buildups, combat force movements will always remain important but ambiguous indicators of intentions.”

Develop a pathway to an Iraqi attack

The warning staff built and applied a specific theory with a pathway containing steps to an Iraqi invasion that included a deployment timeline, and indicators such as large logistic buildups as a decisive sign of final attack preparations. They assessed

that an attack would be preceded by several months of preparation and that it would take roughly 12 days to mobilize and position an Iraqi corps-size force for such an attack. They developed a series of indicators and scenario events corresponding to an attack.

Allen recalled that “On 21 July, we confirmed by national technical means, the first movements of Republican Guards elements and, on 23 July, we detected the start of a large logistic buildup just north of the Kuwaiti border. Reporting of large truck movements stretching southward from Baghdad to Basrah indicated that civilian resources were being diverted to support large-scale military movement, a powerful indicator that the military preparations were not a bluff or an exercise.”

Allen further observed that as of 31 July “the indicators of a large-scale military movement were obvious and were continuing to build.” The staff assessed that Iraq initiated war preparations as expected, “virtually mirroring the scenario events and indicators that my Staff had provided to Central Command and the J-5.” In January 1990, CENTCOM requested help in reviewing indicators of a potential Iraqi attack against Kuwait and Saudi Arabia.

Interpret strategic intent through dynamic capabilities

Allen and his staff understood and successfully interpreted Iraqi dynamic capabilities as an expression of political intent. Allen commented, “critical to our judgments was the

large logistic buildup which indicated that disruption of civil life was occurring inside Iraq to accomplish the large military buildup north of Kuwait.”

Saddam Hussein's public criticism of Kuwait on 17 July and reporting received on 19 July that Hussein ordered two Republican Guard divisions to the Kuwaiti border alerted the warning staff to a possible Iraqi threat. In this case, Saddam's public rhetoric was consistent with the dynamic capabilities of two divisions moving to a border.

In contrast, the IC and policymakers with few exceptions did not correctly extrapolate Iraqi intent from the buildup of military force on the border with Kuwait. In general, they viewed intent and capabilities as separate entities and adopted an overly confident view of Iraqi intent. The IC assessed that “no major military attack was likely,” during a 31 July teleconference. Senior Pentagon officials did not consider an invasion likely based on conversations with “a number of leaders in the Middle East as well as the Soviet Union, all of whom were of the opinion that Saddam did not intend to attack.” President George H.W. Bush spoke with the leaders of Egypt, Saudi Arabia, and Jordan who “assured him that they knew Saddam Hussein, and no attack was imminent.”

Assess probability of attack

The warning staff analyzed evidence of the antecedent steps or conditions leading to an Iraqi attack and assessed that an Iraqi invasion of Kuwait was likely. They began drafting a “warning of war” memorandum on 23 July, the same day an Iraqi logistics buildup was detected north

of the Kuwaiti border and two days after first detecting Republican Guard movements. Allen issued a warning of war memorandum on 25 July to senior political and military policymakers that assessed the chances of a military incursion were better than “60 percent.” On 1 August, he called senior members of the National Security Council, Department of State and Defense to warn them of an imminent attack. The Iraqi army invaded Kuwait on 2 August.

Monitor and revise framework in accordance with new information

Allen and his staff did not need to revise their assessment because the attack immediately followed their efforts to warn.

In retrospect, the warning staff successfully predicted the attack because they developed and applied a framework for a worst-case scenario that included a pathway of key antecedent steps for an Iraqi military attack and linked capabilities and intent when interpreting evidence. Unfortunately, “both warning of war and warning of attack were not heeded, either by senior intelligence officials or policymakers,” who prioritized statements of intent by regional leaders over changes in dynamic military capabilities.

Iranian Revolution

The KPAT’s utility can be further highlighted by applying it retrospectively to the 1979 Iranian Revolution. Analysts in CIA’s National Foreign Assessment Center (NFAC) responsible for assessing Iranian stability in 1978 interpreted events through

The IC tracked the growing size and intensity of opposition demonstrations in 1978, but did not adjust its assumption that the opposition would fracture in finished intelligence until November 1978, when the shah’s hold on power was rapidly diminishing.

the lens of a strategic assumption that strongly influenced their analytic conclusions. Application of the KPAT would have created an alternate framework for interpreting the evolving situation in Iran that *might* have improved their odds of anticipating strategic surprise and allowed them to more quickly adjust to new information that challenged their strategic assumption.

Analysts held the view that the shah’s “proven record of survival, loyalty of armed forces, weakness of political (secular) forces, the belief that the shah was ready and willing to use the force necessary to suppress opposition” would enable him to remain in power.

Refine the intelligence question

NFAC analysts were employing a variation of the IQ, *assess the prospects for Iranian regime stability*, based on the title of the unpublished NIE dated August 23, 1978, *Iran: Continuity Through 1985*.^a Analysts applying the KPAT would have added a clause to the IQ such as, *what is the most likely path—concrete steps or conditions that would have to occur—for a revolution led by Ayatollah Khomeini and where is Iran now on that continuum?* Analysts were aware of Khomeini’s intent to overthrow the shah and would have likely considered his ascension to power to be among their worst-case scenarios. Applying this clause would have

opened the scope of their research and identified a pathway to regime change, although the prevailing strategic assumption quoted above would have likely constituted a major obstacle to the wide-spread acceptance of any alternative analysis. Even so, analysis based on the revised intelligence question would likely have gained adherents as the internal situation deteriorated through the summer and fall of 1978 and enabled analysts to more quickly interpret new information that challenged the strategic assumption.

Develop theory of Iranian stability

Before the revolution, NFAC analysts were using a theory of Iranian stability based on three pillars: past evidence of the shah’s willingness to use force against the opposition, Iranian security force capabilities to successfully suppress demonstrations, and opposition disunity. A senior political analyst argued in a February 1976 paper that the shah had been in power for 34 years and “outlasted the many official and unofficial observers, who two decades ago, were confidently predicting his imminent downfall.” The shah restored order during mass demonstrations in 1963 that developed after the arrest of Ayatollah Khomeini, who criticized parts of the shah’s efforts to initiate reforms and his overreliance on foreign support, through “brutal, but short and effective repression.” Analysts prior to 1979 observed the

a. National Intelligence Council, NIC 9079-83/2, *Intelligence Estimates on Iran in Senior Review Panel Report on Intelligence Judgments Preceding Significant Historical Failures: The Hazards of Single Outcome Forecasting* (January 6, 1984), 1. Approved for release on January 30, 2009, CIA-RD-P86B00269R001100100006-2.

The purpose of the KPAT is to give analysts and managers a structured analytic technique to use for predictive judgments that draws on lessons learned from past intelligence successes and failures.

opposition's inability to unify during the decades of the shah's rule, and pose a significant threat to his regime.

Develop a pathway to Khomeini-led takeover

Analysts using the KPAT would have likely developed a pathway to a Khomeini-led revolution based on the unwillingness of the shah to use force, eroding security force capabilities, and growing opposition unity of effort. It would have also likely led analysts to consider several examples in Iranian history such as the Tobacco Protest (1891–92) and the Constitutional Revolution (1905–11), that were led by a coalition of discontented citizens, including merchants and activists that forced the ruling shahs to abandon a tobacco concession granted to the United Kingdom and to institute a national consultative assembly. These historical examples along with the failed 1963 rebellion almost certainly would have provided additional detail in fleshing out the antecedent steps and conditions on a pathway to regime change.

Interpret strategic intent through dynamic capabilities

The IC in 1979 was invested in an overly confident assumption that the shah intended to use sufficient force against a fractured opposition to preserve his government. Applying the KPAT's integrated concept of dynamic capabilities as the best measure of strategic intent might have caused analysts to at least question the shah's resolve to use force and the assumption of continuing opposition weakness.

The KPAT's requirement to avoid overly strong conclusions about the intentions of political actors would have counseled analysts to use extreme caution when making the shah's intentions the centerpiece of their analysis.

In November 1977 and in the spring and summer of 1978, the IC was aware that the shah did not crack down on protests as expected. Analysts interpreted this development by comparing it to extensive historical evidence of the shah's past willingness to use force against the opposition. Not surprisingly, the prevailing view that the shah would eventually use security forces to suppress the opposition remained intact. The KPAT could have provided an alternative basis of comparison by requiring analysts to develop a pathway to the shah's unwillingness to use force against demonstrators. Hesitancy in deploying security forces against the opposition would likely have been considered a key indicator along that path, possibly leading to greater uncertainty over the shah's future intent to use force.

The IC tracked the growing size and intensity of opposition demonstrations in 1978, but did not adjust its assumption that the opposition would fracture in finished intelligence until November 1978, when the shah's hold on power was rapidly diminishing. The KPAT's unified concept of dynamic capabilities and intent might have led analysts to interpret the frequency, breadth, and intensity of demonstrations as evidence of the intent to achieve

greater opposition unity, regardless of their internal policy differences and disputes.

Assess probability of event occurrence

Following the aforementioned KPAT probability guidelines, the idea that the shah might not use decisive force against the opposition could have easily crossed from "unlikely" to "possible." The previously discussed evidence of the shah's hesitancy to use force in 1977, 1978 could have justified a probability rating of at least "possible, 20 percent" along an event pathway ending in his refusal to use decisive force to restore order. The same could be said of the opposition's intent to unify its efforts as evidenced by the growing impact of their demonstrations that represented capabilities in action. A probability rating of "possible, 20 percent" on the pathway to opposition unity would have been consistent with the pattern of demonstrations through the summer of 1978.

Monitor and revise framework in accordance with new information

Insights derived from the application of the KPAT would have likely created an awareness of an alternate interpretation of events that would only grow stronger with increasing evidence of the deteriorating domestic situation. A path to regime instability would have given analysts a vehicle to more quickly contextualize new information related to the shah's survivability.

Conclusion

The purpose of the KPAT is to give analysts and managers a structured analytic technique to use for predictive judgments that draws on lessons learned from past intelligence

successes and failures. It fills a need in the current menu of SATs because it is designed to answer a policy-maker question about what “will” happen, not what “might” happen.

The KPAT could reduce bias associated with mindset and personal mental models because it uses a framework derived from experts that is transparent, evidence based, and subject to coordination, comment, and revision based on new information. It uses the concept of dynamic capabilities as the most accurate measure of strategic intent in contrast to overweighting statements made by government officials who may

be engaged in denial and deception, misinformed, or undecided about a course of action. In doing so, the KPAT avoids one of the primary causes of past intelligence failures: the tendency to make “overly strong conclusions about the ‘intentions’ of political actors,” sometimes referred to as a dominant theme or strategic assumption.^a

The KPAT reduces the risk of the reliance on assumptions of future continuity. Rather, it assumes that a discontinuity in the form of a worst-case event or a strategic surprise could happen, which puts the analyst in a forward-leaning posture by

requiring them to identify the underlying antecedent steps or conditions that constitute a pathway to the event.

We must remember that despite the reality that strategic surprises are comparatively rare events, we cannot assume that past or present capabilities will translate into a future capability. If we are to uncover a future discontinuity which by definition is an unexpected change, we can only find it by identifying a pathway to the surprise. My hope is this SAT will be adopted, tested, and refined as it is applied to the challenging problem of detecting discontinuous change.



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a. MacEachin, *Predicting the Invasion of Afghanistan*, 53.

