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Wirtz, James J. "The art of the intelligence autopsy." *Intelligence and National Security* 29.1 (2014): 1-18.

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ARTICLE

The Art of the Intelligence Autopsy

JAMES J. WIRTZ*

ABSTRACT Although intelligence postmortems are a common practice in the aftermath of intelligence failure, little is known about how they are conducted. This article explores the methodology employed by Robert Jervis in intelligence postmortems that followed the fall of the Shah of Iran in 1979 and the formulation of the 2002 Iraq national intelligence estimate that warned of the possibility that Iraq had restarted its nuclear program. The analysis reveals the challenges faced by scholars as they attempt to assess why analysts failed to offer accurate estimates and the way contemporary international relations theory can be applied to the realm of policy. The findings of the postmortems also shed light on areas where additional collaboration among scholars and analysts can advance the art of intelligence analysis.

Investigations often occur into the performance of the intelligence community; postmortems are common following intelligence failures and successes. For instance, there were 10 official investigations into the intelligence failure surrounding the 7 December 1941 Japanese attack on Pearl Harbor, the last of which concluded on 15 December 1995.¹ Four postmortems even occurred following the US intelligence community's successful effort at detecting Soviet missile deployments in Cuba.² For the most part, however, these investigations leave a meager trail related to the theoretical assumptions and techniques used to assess the available record, which raises several questions. Do assessment teams rely on scholarly works to evaluate analytic performance, looking to the available literature as a guide to their judgments? Or are their assessments more narrowly focused on organizational issues and priorities? Is there a common methodology when it comes to conducting intelligence postmortems? Does this methodology have anything to do when it comes to the scholarly literature on

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¹James J. Wirtz, 'Responding to Surprise' in Nelson W. Polsby (ed.) *Annual Review of Political Science* (Palo Alto: Annual Reviews 2006) p.46.

²Max M. Holland, 'The Politics of Intelligence Post-mortems' in Loch K. Johnson (ed.) *Strategic Intelligence*, Vol. 2 (Westport, CN: Praeger Security International 2007) pp.199–231.

intelligence? Exactly what is the interaction between theory and practice when it comes to developing useful metrics for intelligence analysts?

Two postmortems that have recently entered the scholarly debate can help answer these questions. These assessments were undertaken by Robert Jervis, who is best known for his scholarship on international relations, especially the way human cognition shapes foreign and defense policies. Jervis conducted his first intelligence autopsy between November 1978 and June 1979. It dealt with the failure of the Central Intelligence Agency's National Foreign Assessment Center to warn of the Shah of Iran's inability or unwillingness to respond forcefully to the Islamic revolution led by the Ayatollah Khomeini.³ The second, launched in the late summer of 2004, addressed the 2002 national intelligence estimate (NIE) on Iraq's Weapons of Mass Destruction.⁴ Jervis's intelligence autopsies are unique, however, in the way they delve into the cognitive and methodological challenges facing analysts, and in terms of the insights they shed on the general phenomena of intelligence failure. By focusing on analytical flaws and the very process of intelligence analysis itself, they also stand in contrast to the emphasis on organizational shortcomings and reform that has emerged in the aftermath of the September 11, 2001 terror attacks.⁵ Both postmortems engage intelligence professionals in a theoretically sophisticated discussion of analytical tradecraft with an eye towards identifying flaws in logic and methodology.

The research strategy employed in both postmortems is derived from Jervis's scholarly work, especially his writings on the impact of human cognition on world politics.⁶ First, an effort is made to identify the roots, nature and scope of the dominant cognitive framework that shapes analysts' (and often) policy-makers' perceptions of unfolding events. Because postmortems by their nature select on the dependent variable, it is safe to assume (or with the aid of hindsight it already is obvious) that the dominant cognitive framework in question offered a poor analytical lens to interpret unfolding events.⁷ This leads

³'Analysis of NFAC's Performance on Iran's Domestic Crisis, Mid-1977–November 1978', declassified as CIA-RDP86B00269R001100110003-4. Hereafter referred to as the Iran Report.

⁴Robert Jervis, Richard Betts, Melvyn Leffler and James Wirtz, 'Report on CIA Tradecraft, Analysis, and the Iraq WMD NIE', unpublished report, 13 December 2004; several of the findings of this report are reflected in Robert Jervis, 'Reports, Politics and Intelligence Failures: The Case of Iraq', *The Journal of Strategic Studies* 29/1 (2006) pp.3–52.

⁵Amy B. Zegart, *Spying Blind: The CIA, FBI and the Origins of 9/11* (Princeton: Princeton University Press 2007).

⁶Robert Jervis, *Perception and Misperception in International Politics* (Princeton: Princeton University Press 1976); Robert Jervis, *The Logic of Images in International Relations* (Princeton: Princeton University Press 1970).

⁷By contrast, when individuals are equipped with cognitive schema that happen to approximate reality and are provided with information that accurately portrays unfolding events, they can appear to be downright prophetic. The estimates offered by John McCone, Director of the Central Intelligence Agency, in the weeks leading up to the Cuban Missile Crisis provides a good illustration of this phenomenon; see Peter S. Usowski, 'John McCone and the Cuban Missile Crisis: A Persistent Approach to the Intelligence–Policy Relationship', *International Journal of Intelligence and Counterintelligence* 2/4 (Winter 1998) pp.547–576.

to the second stage of the postmortem: tracing the myriad ways cognitive flaws manifest in misperception, faulty logic and a general failure to recognize analytic, procedural and organizational shortcomings that impede the production of accurate and timely warning and analysis. By reviewing documentary evidence, and conducting extensive interviews, it becomes possible to reconstruct how analysts interpreted information about ongoing events. Participants also have an opportunity to express their own observations about analytical, procedural and organizational shortcomings to a neutral observer, which makes it possible to discern the weaknesses that bedevil the entire enterprise. Problems are often apparent *ex ante* to intelligence managers and analysts; they simply lack a way to gather and express their thoughts in a constructive manner.

The fact that the methodology and research design employed in these postmortems is straightforward, however, should not overshadow the personal, bureaucratic and political issues that lurk just behind the scenes of the entire enterprise. Professional reputations are sometimes on the line as the researcher documents the way analysts failed ‘to connect the dots’ as events unfolded. Jervis also points to the fundamental uncertainties and artificialities created by any *ex post facto* investigation of what was on the minds of people *ex ante*. It is hard to determine the extent to which a retrospective examination distorts the recollections of the situation facing analysts in the weeks and months preceding some crisis:

The conditions under which people worked fade and become obscure even in their minds and can never be known by the reviewer. Such a person knows what the outcome of the events is, and he cannot fail to be influenced by that knowledge. Moreover, the material that he reads in order to determine what happened, what people knew, and what they wrote about it comes to him in a form much different from the way it comes to the intelligence analyst. The reviewer has the opportunity to read material through in a coherent order. For the analyst working on events as they happened, material or information must be absorbed as it comes in – sometimes in fragments, often not in a timely fashion.⁸

Empathy with the situation confronting analysts and a recognition of the inescapable influence of hindsight is thus crucial to both the credibility and accuracy of an intelligence postmortem. Nevertheless, analysts too have to face the reality that estimates written to meet the needs of the day have to withstand the test of time.

The Iran and Iraq intelligence postmortems represent an important benchmark both in the study of intelligence and in the history of the US intelligence community. In the late 1970s, the way that beliefs shaped analysts’ perceptions, and effort to make them receptive to discrepant information, were just emerging in a formal way as key elements of analytic

⁸Iran Report, pp.3–4.

tradecraft.⁹ The postmortems also highlight the role played by international relations theorists in the emergence of intelligence studies as an important sub-field in political science. By offering theoretically informed and rigorous insights into government policy and processes, these postmortems stand as examples of scholarly support to the formation and conduct of public policy, a contribution from the academy that is rare today.¹⁰ They also demonstrate the impact of intelligence studies on the practice of intelligence. The sophistication of the postmortems, and the ability of the target audience to understand what went wrong, has apparently improved over time.

To support these claims and to illustrate the interaction between theory and practice between intelligence studies and the intelligence community, the article begins by placing Jervis's work in the literature on intelligence analysis and by describing the fundamental analytical and theoretical insights he brings to the intelligence autopsy. It then describes the findings of the intelligence postmortems. It concludes by offering some observations on the issues raised by these intelligence postmortems and the way they relate to contemporary issues of intelligence reform.

Stepping Outside the Historical Moment

The role of human cognition in intelligence failure became a matter of public and scholarly interest in the aftermath of the 7 December 1941 Japanese attack on Pearl Harbor. Although several investigations, blue ribbon panels and boards of inquiry were launched in the aftermath of the attacks, Congressmen agreed to forgo the politically divisive Congressional hearings into the fiasco until the conclusion of the war effort. When the Joint Committee on the Investigation of the Pearl Harbor Attack released its 39-volume report in 1946, the image it depicted of the situation inside the US government was highly disturbing. By listing and describing all the 'signals' related to the possibility of hostile Japanese action, their findings suggested that it was in fact possible to predict the onset of hostilities with Japan and that only incompetence, dereliction of duty, or general inattention to detail could explain a failure to anticipate the attack.

Today, the findings of the report still influence our thinking about intelligence in two important and relevant ways. First, it is generally assumed that accurate information about what is about to transpire always exists somewhere in the intelligence pipeline prior to the occurrence of surprise;

⁹Jervis actually appended portions of *Perception and Misperception* to the Iran Report, and cites favorably Richards Heuer's early classified work on the impact of cognition on intelligence analysis; see Iran Report, p.29. For an unclassified version of Heuer's contribution to analytic tradecraft see Richards Heuer, Jr, *Psychology of Intelligence Analysis* (Washington, DC: CIA, Center for the Study of Intelligence 1999).

¹⁰Alexander L. George, *Bridging the Gap: Theory and Practice in Foreign Policy* (Washington, DC: USIP Press 1993); Joseph S. Nye, Jr, 'Scholars on the Sidelines', *Washington Post*, 13 April 2009, <http://washingtonpost.com/wp-dyn/content/article/2009/04/12/AR2009041202260html> (accessed 22 November 2012).

explaining why analysts and officials have a hard time recognizing this data for what it is forms the basis of the scholarly effort to understand the cognitive sources of intelligence failure. Second, following the recommendations of the Joint Committee, it is generally assumed that better data ‘fusion’ can solve the intelligence problem. If all relevant data together can be delivered to a central location – hence the creation of the US Central Intelligence Agency – analysts would have an easier time ‘connecting the dots’ to better anticipate future events. This second finding also happens to provide the basis of organizational explanations of intelligence failure.

The first important reassessment of these findings emerged with the 1962 publication of Roberta Wohlstetter’s *Pearl Harbor Warning and Decision*.¹¹ Wohlstetter, who based her work on the empirical data contained in the 1946 report, objected to the Committee’s finding that incompetence offered the best explanation of analysts’ failure to recognize indications of impending attack and that better data fusion could overcome human frailty or sheer incompetence when it came to intelligence analysis. Wohlstetter noted that the Committee’s analysis of events and conclusions were heavily influenced by hindsight and that one could only understand the Pearl Harbor disaster by viewing it in the context of the day. From this perspective, the ‘signals’ that were so clear to observers in 1946 now became overwhelmed by ‘noise’, irrelevant or misleading information about unfolding events. Wohlstetter described the prevailing mindset of the analysts, officers and officials as they monitored the unfolding situation. Americans shared one view in common – there was no compelling reason for the Japanese to attack the United States. The Japanese might strike the Soviet Union, to eliminate its rival at a moment of great weakness, or the French, Dutch and British to seize important natural resources for their war effort in China. But from the American perspective, it made no sense for the Japanese to attack a far greater power in their rampage across the Pacific, dooming them to a long, attritional campaign that they had no hope of winning.

Wohlstetter confirmed that there were indeed signals in the intelligence pipeline, but that these signals were incredibly difficult to discern against background noise and the general context of ongoing events, especially when reality was at odds with analysts’ and officials’ mindsets. Under these circumstances, data fusion simply adds to the intelligence problem because there is no a priori way to separate the wheat from the chaff when it comes to collecting data. Wohlstetter concluded that there was no solution to the problem of intelligence failure; it would be best if policy-makers adopted ‘intelligence-proof’ or ‘human-proof’ systems when it came to critical matters such as the survivability of the US nuclear deterrent.

Wohlstetter’s gloomy conclusion, however, left a host of questions about the interaction between humans and information unanswered. For example, she could identify but not explain the kaleidoscope effect, the fact that it is easy with the aid of hindsight to separate signals from noise in the intelligence

¹¹Roberta Wohlstetter, *Pearl Harbor: Warning and Decision* (Stanford: Stanford University Press 1962).

pipeline. She also could not explain why preconceptions and prevailing wisdom held such a grip on analysts and officials even when they were confronted with disturbing information that should have undermined their beliefs.

Jervis's work on the role of cognition directly addresses these issues. It explains how pre-existing beliefs about an unfolding situation act as a filter, drawing individuals' attention to data that confirms these beliefs, while filtering out information that does not conform to existing schema.¹² These beliefs can be based on analogies, which often reflect events within living history or personal experiences, or prevailing theories about world politics, or existing judgments concerning likely trends in world or national politics. Regardless of the exact origin of an individual's belief system, the principle of 'availability' drives their perceptions: people tend to interpret information based what is on their mind at the moment the information is received. For example, prior to Pearl Harbor, US officers and officials were pre-occupied by the political limits on their ability to interfere in potential Japanese aggression in Southeast Asia. As a result, they failed to realize that the Japanese might want a more certain guarantee that the United States would not move to stop the expansion of their 'Co-prosperity Sphere'. In other words, the Japanese were about to respond to a problem that to American minds did not exist.

Jervis also highlights several common 'biases' that often emerge in descriptions of intelligence failure. 'Mirror imaging', the tendency to rely on perceptions of 'us' to explain 'them' is a pitfall well known to analysts. It emerges because individuals tend to 'fill in the blanks' when it comes to explaining or anticipating the behavior of others using experiences that are most salient (available). Observers also tend to see the behavior of opponents' as highly strategic, centralized and rational. In fact, analysts and officials often ascribe an ability to orchestrate resources and capabilities to opponents that upon realistic reflection is beyond the capability of any terrorist cell, bureaucracy or national government. As a result, when confronted with evidence of an unfolding initiative that appears irrational from their perspective, analysts tend to dismiss signals of some emerging fait accompli or attack as too 'hare-brained', or risky to be taken seriously. This rationality bias actually offers an alternative definition of the kaleidoscope effect: events that appear to be too incredible to be taken seriously ex ante in hindsight appear too cut and dried to be ignored.

There are literally scores of cognitive biases that can manifest in pitfalls that are specific to intelligence analysis and Jervis makes good use of these biases when it comes to identifying analysts' specific lapses of situational awareness, logic and judgment. These 'idiosyncratic' explanations of intelligence failure, however, have an uncanny tendency to 'cluster' in support of the dominant

¹²John Hollister Hedley describes the impact of 'mindset' on analysis somewhat differently: 'Mindset is the tendency to evaluate newly acquired information through an existing hypothesis, rather than using new information to reassess the premises of the hypothesis itself'; see John Hollister Hedley, 'The Challenges of Intelligence Analysis' in Loch K. Johnson (ed.) *Strategic Intelligence*, Vol. 1 (Westport, CN: Praeger Security International 2007) p.133.

beliefs embraced by analysts and officials. Like flags flying in unison, these intelligence pathologies and pitfalls align themselves in the support of dominant beliefs, making it even more difficult for analysts to recognize flaws in their analysis. For example, the Senate Select Committee on Intelligence identified a ‘layering’ effect in related to the Iraq national intelligence estimate, whereby assessments were based on previous judgments (i.e. that Iraq was had active weapons of mass destruction programs) without carrying forward the uncertainties involved in earlier estimates.¹³ The fact that individuals are generally unaware of how their pre-conceptions guide their perceptions makes it hard for them to recognize intelligence pathologies that do not obviously contradict their beliefs. It also makes it difficult for them to recognize the myriad ways these beliefs can shape seemingly innocuous aspects of their analysis, elements of their estimates that in hindsight turn out to be critical.

Identifying and understanding the dominant belief systems is thus critical to explaining why analysts and officials interpret unfolding events because it provides the critical context necessary to understand how information appeared without the gift of hindsight. It can also explain why certain intelligence pathologies, so obvious after events have unfolded, become virtually invisible before things are fully cut and dried. Jervis’s work also suggests that the hardest task facing analysts is the need to step outside their own strategic context and historical moment and to understand how their beliefs shape their perceptions of reality. In a sense, analysts and officials are like travelers riding on a moving walkway at an airport. Unless they take some deliberate or unusual action (e.g. jump off the walkway), they will be swept up by data streams, the flow of everyday events, previous judgments, and bureaucratic processes along a strait line determined by their dominant belief systems.

The Fall of the Shah

The Iran report, which was co-authored with John P. Devlin, is not a typical postmortem in the sense that it does not assess an instance of outright or clear-cut intelligence failure. It is more of an inquiry into why the intelligence community overestimated the ‘staying power’ of the Shah’s regime when there were repeated indications that unusual forms of political instability were emerging in Iran. The study covers the period from the summer of 1977, when information began to be received that the Shah faced serious opposition to 7 November 1978, the day after Shah installed a military government in response to domestic unrest. Hours later, the Central Intelligence Agency (CIA) warned that the Shah had delayed too long at taking decisive action and that the future of the Pahlavi dynasty was not going to be settled quickly using traditional methods to repress domestic opposition. As things were becoming cut and dried, the CIA began to draw attention to the fact that the Shah was in serious trouble.

¹³*Report on the US Intelligence Community’s Prewar Intelligence Assessments on Iraq*, Senate Select Committee on Intelligence, 7 July 2004, p.22.

Another interesting aspect of the Iran report is that it traces the impact of several intelligence pathologies that also emerge on the pages of the Iraq postmortem even though the former is an instance of Type II error and the later is a case of Type I error. An externality also emerges as part of the study: officials seemed to interpret Jervis's methodology and fundamental theoretical assumptions as a form of hindsight.¹⁴ These officials did not seem to recognize the importance of privileging one set of beliefs over another when it came to understanding how the analysts involved in monitoring events in Iran developed their judgments. The Iran report, along with official reaction to its findings, also was completed entirely before the real reason was known why the Shah hesitated when faced with an emerging threat to his regime. Neither the authors of the postmortem nor the government officials who initially responded to its findings knew that the Shah was terminally ill with cancer, although there were hints from the field that the Shah appeared 'depressed, dispirited and uncertain' in the fall of 1978.¹⁵

The Prevailing Belief

The intelligence community had closely followed the fortunes of the Shah in the years before the Iranian revolution. In a written response to the Iran report, Klaus Knorr noted that the 'prevailing belief' about the situation in Iran apparently was in place by 7 May 1968, the publication date of a 'Special Memorandum' entitled 'The Shah's Increasing Assurance'. Jervis found that the judgments presented in this memo still constituted the conventional wisdom about the situation in Iran in the fall of 1978. According to the 1968 memorandum:

The Shah is said to have dramatically strengthened the position of the monarchy during the past decade. He has undercut the already fragmented opposition by carrying out economic and social reforms. From a timorous, titular monarch he has turned into a self-confident potentate. Longer-range problems remain, but for some time to come the unrest of earlier days seems under control. Over the long term, the Shah's policy of rapid industrialization will probably not provide a

¹⁴For example, in a response to the Iran Report, Robert Bowie noted: 'The report seems to me to be much affected by hindsight despite the express recognition of this danger. The premise that the events which took place were bound to happen underlies much of the discussion. There does not seem to be any element of contingency where events might have taken a different turn had conditions been different or had the Shah or other followed a different course. My perception of the way in which events unfolded was certainly different at the time... I cannot convince myself that the actual course of events was inevitable until rather later than is implied in much of the discussion of the report'. Robert R. Bowie, 'MEMORANDUM Subject: Iran Post Mortem', 20 July 1979, p.1.

¹⁵Iran Report, p.xiv.

satisfactory substitute for greater political participation, but for some time to come the unrest of earlier days seems under control.¹⁶

Analysts and officials alike generally assumed that the Shah had the nerve and the instruments needed to repress the opposition. As a draft national intelligence estimate dated 6 September 1978 stated: 'The government [of Iran] has the ability to use as much force as it needs to control violence, and the chances that the recently widespread urban riots will grow out of control is [sic] relatively small'.¹⁷ They also believed that it was unlikely that disparate opposition groups would rally around the fundamentalists led by the Ayatollah Khomeini and that opposition solidarity would be fleeting.

These beliefs were particularly resistant to falsification because in the absence of the disintegration of the Shah's regime, it was hard to identify disconfirming evidence. As Jervis noted, just because the opposition was unified on a given day did not mean that it would not fragment in the near future. The Shah's refusal to use force in the face of some ongoing disturbance also did not mean that he would refrain from using force against a future demonstration. In fact, restraint could be taken evidence that the opposition was not all that serious because the Shah had failed to respond to the protestors. Ironically, analysts actually couched their reporting about the Shah's failure to respond forcefully to disturbances with warnings that the Shah might possibly use excessive force in the face of additional provocations. Analysts did have information about the Shah's dispirited attitude and vacillation when it came to responding to the protests. Because they were accustomed to firm direction from the Shah, his overall behavior in the face of growing opposition led many of his followers to believe that he was 'losing his grip', an important observation that was never fully explored in agency reporting.¹⁸

The way that Shi'a clerics emerged as a focal point for the opposition to the Shah constituted a wild card in the situation facing analysts. The Iran report notes, for example, that NFAC analysts tended to see Khomeini's appeal as based on a fundamentalist response to the Shah's 'white revolution'; they believed that opposition was based on a rejection of industrialization and the general effort to modernize Iranian society at the expense of Islamic principles. In their minds, this platform made Khomeini a poor rallying point for the opposition because most groups adopted agendas that had little to do with Islamic fundamentalism. In hindsight, analysts missed key aspects of Khomeini's agenda that made him an attractive, populist force inside Iran. Khomeini championed the rich over the poor when it came to the Shah's economic programs. He depicted the Shah as a foreign tyrant, a nationalist theme that had great appeal among Iranians. Khomeini's ability to speak and act from authority without any formal position is common in Shi'a traditions,

¹⁶Klaus Knorr, 'Memorandum for Dr Bowie, Subject: Earlier Estimates on Iran', 18 July 1979, p.3.

¹⁷Iran Report, p.ix.

¹⁸Ibid., p.x.

but at the time was not well recognized by analysts.¹⁹ The intelligence community apparently underestimated Khomeini's skill as a politician and overestimated the impact of the fact that he was a fundamentalist preacher in a relatively secular society.

Intelligence Pathologies

Jervis and Devlin also found of evidence of the interaction between beliefs and information in several intelligence pathologies that emerged in CIA reporting in the months leading up to the Iranian revolution. Analysts fell victim to an 'empirical bias', a tendency to report facts as they unfolded without attempting to place them in a broader historical context or using them to reassess prevailing beliefs and assumptions. The following passage from the report, provides an interesting description of how the empirical bias can vector analysts along a narrow analytic path:

In the case of Iran, the system produced a steady stream of summaries of recent events with a minimal degree of commentary, analysis, and prediction... The problems are greatest with the *National Intelligence Daily*, which concentrates on telling what has happened and only rarely contains analysis or forecasts of political trends and developments... Furthermore, stories in the *National Intelligence Daily*, like those in the newspapers, which the *National Intelligence Daily* so strongly resembles, generally do not assume that the reader has been closely following events. They therefore do not build on what the analysts have said before, steadily producing a better understanding of the underlying forces or the dynamics that are believed to be at work.²⁰

Like good reporters, analysts stuck to the 'facts' of the situation without adding much analysis. The Iran report also noted that current intelligence failed to offer an appropriate format for in-depth analysis and reassessment of prevailing wisdom – articles were intended to be short, factual, and catchy. Time pressures and the constraints imposed by previous analyses – analysts might have felt constrained by existing themes in their reporting – also worked against any sort of fundamental reexamination of unfolding events. The empirical bias also has an extremely negative impact when it comes to predictive intelligence because it tends to turn the analyst into a historian. It shifts the analyst's focus to what has happened from a more concerted effort to anticipate what might happen in the future.

Another pathology was identified by intelligence managers in their response to the Iran report: a breakdown in the relationship between analysts and officials when it came to integrating US policy into assessments of the Shah's future. According to Klaus Knorr:

¹⁹Ibid., p.xiii.

²⁰Ibid., p.22.

There is perhaps one angle – an extremely sensitive one – which the post-mortem may be said to have neglected. The post-mortem argues that there was enough information to call into question the underlying assumption on the solidity of the Shah's power and the weakness of his domestic opposition. Yet, if a serious re-examination of this preconception had taken place, it would have been hard to avoid the impact of US policy toward Iran. Not only may US policy on human rights and political liberation have pushed the Shah further than it was safe to go, there is also the question of whether he felt that his option of restoring order by suing the military was weakened by US policy.²¹

Analysts apparently failed to realize that US policy was directly opposed to their expectations related to the Shah's response to his domestic opposition. To the extent US policy succeeded, the less likely it would be that the Shah would 'over react' in responding to the demonstrators. The resulting lack of 'net assessment' (measuring the impact of US policy on the target) is an externality produced by the tendency of analysts to remain detached from policy and the policy process. With the aid of additional hindsight, it is probably safe to say that the Shah's illness, rather than a deep respect for the preferences of US policy-makers, probably led him to vacillate when faced with concerted domestic opposition. Nevertheless, how to strike the proper balance between policy-makers and analysts when it comes to intelligence estimates remains an unresolved issue today.²²

Jervis and Devlin also identified a structural weakness within the intelligence community related to the fall of the Shah. There were very few analysts working on Iran in the months leading up to the Iranian revolution, too few to provide any sort of peer review, competitive analysis or even ongoing informal assessments of trends and analysis. No secondary effort was maintained to backstop current analysis. Analysts were also isolated by bureaucratic stovepipes, and no effort was made to reach out to the broader academic community to identify competing analyses or divergent perspectives.²³

The Iraq NIE

Type I errors, false positives, are not necessarily rare in the annals of intelligence – indeed they are often described as the 'cry wolf' syndrome, a well-known intelligence pathology. But, it is rare that they are the subject of postmortems because they generally are not the proximate cause of the more spectacular forms of intelligence failure. This observation applies to the 2002 NIE on Iraq. In the words of Paul Pillar: 'Official intelligence on Iraqi weapons programs was flawed. But even with its flaws, it was not what led to

²¹Knorr, 'Memorandum for Dr Bowie', p.6.

²²James J. Wirtz, 'The Intelligence-Policy Nexus' in Loch K. Johnson (ed.) *Strategic Intelligence*, Vol. 1 (Westport, CN: Praeger Security International 2007) pp.139–150.

²³Iran Report, p.vii.

the war. On the issue that mattered most, the intelligence community judged that Iraq probably was several years away from developing a nuclear weapon'.²⁴ Instead, intelligence was used to bolster what amounted to an existing preference of both the British and US governments to launch a preventive war to topple Saddam Hussein from power in Baghdad.²⁵ The political decision to end Saddam's regime through the use of force if necessary was apparently in place before the publication of the 2002 NIE on Iraq.

This state of affairs did not generate a firestorm of protest from the intelligence community in the months leading up to the US invasion of Iraq because it was generally accepted among US and allied policy-makers and intelligence analysts that Iraq was involved in some sort of activity related to the acquisition, production or storage of weapons of mass destruction. No intelligence 'dissenters' were speaking out against this prevailing wisdom in the months leading up to the invasion. By contrast, the intelligence community fought to counter the George W. Bush administration's assertion that Saddam and Al Qaeda were in cahoots, especially when it came to planning or conducting the September 11, 2001 terror attacks against the World Trade Center and the Pentagon. But when it came to Iraq's weapons of mass destruction programs, disagreements between the intelligence community and the Bush administration were on the margins, over details and matters of emphasis. Jervis recognizes this state of affairs. Unlike the Iran report, which noted that there was evidence to contradict pre-existing mindsets, the Iraq postmortem takes a far more circumspect position on availability of contradictory evidence in the months leading up to the Second Gulf War. As Jervis noted in another context: 'the fundamental reason for the intelligence failure in Iraq was that the assumptions and inferences were reasonable, much more so than the alternatives'.²⁶ There simply was little evidence to overturn what in hindsight appears to be a highly plausible assessment of Iraq's ongoing interest in developing or maintaining a weapons of mass destruction capability.

The Prevailing Belief

The origins of the intelligence community's overestimate of Iraq's weapons of mass destruction capability probably can be found in its underestimation of Iraq's nuclear capabilities that became apparent in the aftermath of the First

²⁴Paul R. Pillar, 'Intelligence, Policy, and the War in Iraq' in James P. Pfiffner and Mark Phythian (eds.) *Intelligence and National Security Policymaking on Iraq: British and American Perspectives* (Manchester: Manchester University Press 2008) p.235.

²⁵John Dumbrell, 'The Neo-conservative Roots of the War in Iraq', in James P. Pfiffner and Mark Phythian (eds.) *Intelligence and National Security Policymaking on Iraq: British and American Perspectives* (Manchester: Manchester University Press 2008) pp.19–39; Scott Lucas, 'Recognising Politicization: The CIA and the Path to the 2003 War in Iraq', *Intelligence and National Security* 26/2–3 (April–June 2011) pp.203–227; Jervis, 'Reports, Politics and Intelligence Failures', pp.6–7.

²⁶Jervis, 'Reports, Politics and Intelligence Failures', p.42.

Gulf War. Information obtained by US forces in the immediate aftermath of the war, data gleaned from United Nations Special Commission (UNSCOM) inspections, and the revelations of Hussein Kamil settled first order questions about Saddam Hussein's weapons of mass destruction programs: the Iraqi regime was interested in all types of weapons of mass destruction. Baghdad also seemed determined to hide the extent and nature of its programs, attempting to confirm only information that was already uncovered by UNSCOM.²⁷ With justification, the intelligence community concluded that information available to it before the First Gulf War really was just the tip of the iceberg and at least until the mid-1990s, more data became available that painted an increasingly vivid picture of Iraq's past weapons of mass destruction efforts. What emerged was a policy-intelligence consensus about Iraq's WMD: Saddam Hussein would do everything in his power to obtain weapons of mass destruction, the full extent of Iraq's weapons development program was being concealed by the regime, and new data generally confirmed worst case estimates of Iraq's weapons of mass destruction capability. The very nature of this shared view made it inherently difficult to discredit or disconfirm. According to Jervis:

Much of the reason why each new bit of information that *could* be interpreted as showing that Iraq had active programs *was* interpreted in this way was the hold of the belief that Saddam was doing all that he could to get WMD. Ambiguities were missed or downplayed, alternative interpretations rarely were fully considered... and when they were... the more damning implications won support in part because they fitted with the prevailing view.²⁸

This estimate and the baseline data used to assess Iraq's weapons programs did not significantly change until the aftermath of the Second Gulf War. This is an example of the 'layering effect' identified by the Senate Select Committee on Intelligence. Judgments based on past analysis focused on historical events, slowly but surely formed the basis of contemporary assumptions about the situation in Iraq. One might also add that given the combination of time constraints created by the need to produce current intelligence and the 'cut and paste' capabilities created by the information revolution, it was far easier to integrate new information into the conventional wisdom, rather than return to first principles in every piece of finished intelligence.

A turning point for the intelligence community came with the ejection of UNSCOM inspectors in the late 1990s. New information about Iraq's activities was now in short supply, making information from past inspections about past activities all the more central to efforts to write current estimates. The ejection of the UNSCOM inspectors itself became an important part of the ongoing estimates. No longer hamstrung by the threat of detection by

²⁷Gregory D. Koblenz, *Living Weapons: Biological Warfare and International Security* (Ithaca and London: Cornell University Press 2009) pp. 74-105.

²⁸Jervis, 'Reports, Politics and Intelligence Failures', p.22.

UNSCOM, analysts concluded that the Iraqi regime would be able to restart its WMD programs and given Saddam Hussein's objectives, probably *would* restart its WMD programs. The reasonable assumption (the more 'damning implication' in Jervis's words) was that Saddam would avail himself of the opportunity created by the breakdown of the inspection regime.

What analysts failed to realize, however, was that the Iraqi regime had been subjected to nearly a decade of international sanctions, UNSCOM inspection, continuous over flights, and concerted preventive attacks (Gulf War I and Operations Desert Fox) intended to destroy, disrupt and dissuade further efforts to produce, store or militarize (train, equip, exercise) weapons of mass destruction. These actions had a profound impact on the ability or will of the Iraqi regime to continue its WMD programs, despite the fact that the Iraqi regime continued to create suspicion that nefarious activities continued outside the prying eyes of the intelligence community. In other words, there was a complete absence of a 'net assessment' when it came to assessing Iraq's current ability to fulfill Saddam Hussein's objectives. Analysts seemed to discount the possibility that a decade of concerted US and international action had taken a toll on Iraq's weapons of mass destruction programs. Ironically, the real failure of the Iraq NIE was a failure to recognize US policy success: Iraq had been fundamentally constrained by a decade's worth of concerted counter-proliferation strikes, sanctions and scrutiny.

If analysts were going to assess accurately the changing nature of Iraq's WMD programs and current capabilities, they needed to step outside this policy-intelligence consensus about Iraqi behavior. This type of assessment is extraordinarily difficult because analysts would have to abandon their own policy-analytical-historical context to assess available information in a detached way. The intelligence community failed to take this reassessment of Iraqi policy and capability and, as far as we can tell, no one in the IC even thought to reassess the underlying assumptions behind the Iraq estimate. No one realized that the policy-intelligence consensus was no longer falsifiable because positive and negative evidence (because of deep suspicions about Iraqi denial and deception) suggested the presence of a clandestine Iraqi nuclear program.²⁹ If matters look cut and dried to intelligence analysts, suspicions should be raised that matters might be a little *too* cut and dried. This did not occur, however, in terms of the Iraq NIE. Some individuals were uneasy with what they considered to be slightly overstated findings in the Iraq NIE and that one had to read the text of the estimate to appreciate important caveats in its findings. But no one felt compelled to make his or her concerns known at the time the NIE was released by the intelligence community.

Intelligence Pathologies

Why did the authors of the NIE fail to realize that their underlying assumptions had been overtaken by events? Several obstacles stood in the way of anyone who wanted to look outside that policy-analytical-historical

²⁹Ibid., p.27.

context. These obstacles constitute specific reasons why analysts failed to reassess conventional wisdom. In a sense, the reason why analysts fail to reassess shared beliefs that they consider to be useful and accurate seems self-explanatory, but these intelligence pathologies helped to reduce the likelihood that analysts might recognize that something was amiss in the first place.

Agency personnel were under a pressure to produce, faced many demands from a variety of sources, and operated within a 'culture of excellence'. Ironically, the pressures to meet the demands of producing current intelligence have been exacerbated by the information revolution, which provides more ways that policy-makers can reach down into the bureaucracy to task analysts and managers. In other words, analysts and managers, individuals and offices are judged by their ability to keep fulfill an ever increasing demand for their products. To intelligence managers and analysts, who provide what amounts to a free service to their consumers, their ability to generate output to meet this demand is the criterion used to judge success. Meeting the demands of the day, not a detached review of well-supported assumptions and accepted wisdom, is what is most valued under these circumstances. The 'culture of excellence' means that analysts cannot spend too much time on any one request because all requests must be met regardless of suspense, subject matter or obvious importance. The old adage 'if you want it bad, you will get it bad', seems to be forgotten when it comes to meeting the demands for current intelligence. Under these circumstances, there is little incentive to return to first principles when it comes to giving what appears to be obvious answers to well known questions.

Analysts also seemed to lose track of the sources of information used in their analysis. The same sources were apparently referred to in different reports in different ways, leading analysts to overestimate the amount and variety of information supporting a given position. According to Jervis, 'this led analysts to overestimate the number of different sources who were reporting. In other cases, the descriptions [of the sources] omitted important details about the source's specific expertise and access that would have helped the analysts judge the information'.³⁰ This situation becomes especially problematic when earlier estimates are used as building blocks for new estimates: judgments that were once offered with a degree of uncertainty tend to be treated in succeeded generations of analytical product as facts that support new estimates. It is thus easy to imagine the following scenario. In Week 1, analysts report that source 'A' has described renewed weapons manufacturing activity, in Week 3, analysts report that source 'B' has described renewed weapons manufacturing activity, which confirm earlier reports by source 'A', and in Week 5 analysts report that source 'C' has described renewed weapons manufacturing activity, confirming reports by source 'A' and 'B'. If one failed to recognize that data from source 'A', 'B', and 'C' were gleaned from the same individual during the same interview, then this sort of analysis would simply strengthen conventional wisdom.

Negative information – information disconfirming the presence of a significant Iraqi weapons of mass destruction capability – was apparently never forwarded to analysts because it failed to respond to the second order

³⁰Ibid., p.30.

questions (i.e. where were Iraq's weapons of mass destruction?) that were of interest to the intelligence community. Jervis notes, for instance, that there was widespread evidence of 'confirmation bias' in the types of information that was gathered on Iraq. Analysts made a concerted effort to track and follow up on positive reporting, but there was little effort made to solicit disconfirming information about an absence of activity in Iraq and little effort to track and document the number of individuals who stepped forward and reported that Iraq weapons of mass activities were moribund.³¹

Discredited or inaccurate reports continued to resurface in intelligence estimates and reports. This occurred because once reports are released, they are stored and used by analysts in various ways, even though the originator no longer fully supports the analysis they contain. Intelligence managers and analysts failed to account for the impact of many unintended consequences of the information age – analysts have at their disposal a virtually unlimited, and in some respects a private, store of information and they often are the ones who judge its veracity. The story of Iraqi efforts to purchase yellow cake in Niger continued to emerge in various reports, for instance, despite the fact that analysts who knew the full story discounted the significance of the entire incident. Like an urban legend, however, the story did not die. Ironically, it reappeared on the State Department's own website, even though the State Department's own intelligence organization was the first agency to discredit the report.

Conclusion

Despite the fact that Jervis's postmortems on the Iran report, a Type II error, and the Iraq NIE, a Type I error, were separated by nearly 25 years and covered vastly different problems and subject matter, they also display a remarkable continuity. For instance, both postmortems identify structural shortcomings within the intelligence community. Net assessment – how best to integrate the impact of US policy in intelligence estimates – remained a weak spot in estimates on Iran and Iraq. Fundamental reassessments of prevailing beliefs also seemed beyond the reach of analysts who felt pressured to respond to the ongoing demands of producing current intelligence products.

Additionally, both postmortems do an outstanding job at illustrating how specific intelligence pathologies and failures in analytic tradecraft bedeviled analysts and managers. Both also show how the cumulative impact of these shortcomings helped to shield analysts, managers and officials from what was so apparent in hindsight – that prevailing beliefs could no longer account for developing events. Jervis's work thus combines first and second order explanations of intelligence failure by linking existing belief systems to real organizational, behavior and cognitive consequences.

Although the immediate response to Jervis's postmortem of the Iraq NIE apparently remains classified, there is documentary evidence to suggest that the Iran postmortem set off a lively debate within the intelligence community

³¹Ibid., p.25.

about tradecraft and the relationship between policy-makers and intelligence analysts. More importantly, however, Jervis's scholarly work and his direct involvement in the intelligence community have had a lasting and important impact on our understanding of the perils and pitfalls faced by intelligence analysts. Today, the notion that pre-existing beliefs shape perception is a well-accepted insight used by the intelligence community. As Richards Heuer, the intelligence community's most accomplished theoretician and methodologist, noted in his recently published handbook for intelligence analysts, the impact of 'mental models' is key to understanding both intelligence failure and success:

Intelligence analysts, like humans in general, do not start with an empty mind. Whenever people try to make sense of events, they begin with some body of experience or knowledge that gives them a certain perspective or viewpoint... Intelligence specialists who are expert in their field have well developed mental modes. Their mental model tells them, sometimes subconsciously, what to look for, what is important, and how to interpret what they see.³²

There was no need to append a chapter of *Perception and Misperception* to the Iraq NIE postmortem. Robert Jervis's work has played an important part in making the intelligence community aware of how human cognition shapes analysis.

Nevertheless, two issues raised by the postmortems remain to be fully addressed by scholars and analysts alike. No one has yet explored the 'clustering phenomena' when it comes to the relationship between dominant beliefs, intelligence pathologies and intelligence failures. Are the intelligence pathologies identified by the postmortems somehow produced by the impact of dominant belief systems, or are they independent phenomena made salient by hindsight? Are intelligence pathologies present when intelligence analysts also manage to 'connect the dots'? Or, do intelligence pathologies also exhibit a 'clustering phenomena' when intelligence analysts are successful, only in this instance they cluster in a way that supports what turn out to be accurate estimates?

The postmortems also are true to the 'cognitive' perspective when it comes to offering suggestions to improve the performance of intelligence agencies. Jervis focuses on analytic tradecraft, not bureaucratic reorganization, as the best way to improve intelligence. In that sense, he agrees with intelligence analysts, who often identify the quest for better tradecraft as the best guarantee against intelligence failure.³³ The cognitive school ultimately suggests that organizational reform or reorganization, which usually follows

³²Richards J. Heuer Jr, and Randolph H. Pherson, *Structured Analytic Techniques for Intelligence Analysis* (Washington, DC: CQ Press 2011) p.5.

³³Jennifer E. Sims and Burton Gerber, 'Introduction' in Jennifer E. Sims and Burton Gerber (eds.) *Transforming US Intelligence* (Washington, DC: Georgetown University Press 2005) pp.ix-x.

in the wake of intelligence failure, will do little to cultivate better analysts and analysis. Scholars and intelligence managers, however, remain relatively silent about the effectiveness of the waves of reorganization that periodically sweep the intelligence community in the name of ‘intelligence reform’.

Acknowledgements

This article was previously published in a collection of essays in honor of Robert Jervis; see James W. Davis (ed.), *Psychology, Strategy and Conflict: Perceptions of Insecurity in International Relations* (Oxford: Routledge 2012).

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