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GLEANING INSIGHT FROM ABSENCE: INTELLIGENCE TRADECRAFT LESSONS FROM FINDING BIN LADEN

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Abstract

Shortly after the May 2011 raid by American Special Forces that killed Osama Bin Laden, several of the fascinating clues that the Intelligence Community had used to unlock the puzzle of the Al Qaeda leader's final whereabouts became public. While much analysis has focused on the centrality of surveillance of a trusted al Qaeda courier to narrow the bin Laden search, this paper offers attention to other compelling clues including the size and composition of bin Laden's compound, its lack of internet or telephone service, and the peculiar behaviour of its occupants. On the basis of these leads, this paper evaluates methodologies that were proposed for use in the bin Laden search, including micro-level manhunt tactics and macro-level wide area search approaches involving satellite imagery and calculated search areas. Finally, the paper concludes with original proposals—ranging from information technology tools, to organization of analysts, to analytic methodology—designed to aid future such manhunts.

Keywords

Osama bin Laden, al Qaeda, manhunt, Abu Ahmed al-Kuwaiti, courier, Abbottabad, intelligence, CIA, distance-decay theory, intelligence tradecraft, analytic methodology, terrorist networks

INTRODUCTION

The post-9/11 U.S.-led search to capture or kill Osama bin Laden will be remembered as one of the most exhaustive manhunt efforts not only in American history but also in human history. Though careful not to predicate the success of intervention in Afghanistan on the ability to find this one man, American leaders quietly pursued the al Qaeda chief for nearly a decade. This pursuit employed all available levers of U.S. national power, ranging from the intelligence community, to military forces, to financial sleuthing and diplomatic cooperation. On the basis of publicly available information, it appears that key breakthroughs uncovered as recently as 2010 concerning the identity and location of a courier believed to be trusted by bin Laden were the linchpin to the ultimate successful conclusion of the search.

While acknowledging the centrality of the courier breakthrough lead in locating bin Laden, this paper offers attention to the more challenging subject of absent leads: on the basis of what we know now, are there tradecraft steps that could have been taken to narrow the search for bin Laden's location even without the smoking gun of the courier? This does not mean to suggest that bin Laden could have been pinpointed without a direct lead but rather seeks to use the benefits of hindsight to consider strategies that might have narrowed the search earlier. Consideration of this question should not be construed as second-guessing the profoundly diligent efforts of the professionals that relentlessly pursued this successful search; rather, this is undertaken as an academic exercise to evaluate and improve methodology based on available lessons learned.

This paper begins with an accounting of the publicly available data on leads that proved crucial to locating bin Laden. On the basis of these leads, I consider which clues point to larger patterns and trends that could have narrowed down bin Laden's location even if direct leads had not linked these clues to bin Laden. In doing so, I analyse other methodologies that were proposed to aid the bin Laden search and evaluate them in light of bin Laden's ultimate disposition. Finally, I conclude with lessons learned from this episode that could aid future manhunts.

OPEN SOURCE ACCOUNTS OF THE BIN LADEN HUNT

Public Context

Building on previous Clinton Administration-era attempts to bring Osama bin Laden to justice for his role in the 1998 bombing of U.S. embassies in Africa, the hunt to capture bin Laden began in earnest following the 9/11 attacks and subsequent American intervention in Afghanistan. Despite early confidence and near misses such as the December 2001 Battle of Tora Bora (during which bin Laden reportedly successfully diverted the American dragnet by giving his satellite phone to a subordinate [Shroder, 2011]), bin Laden was successful in using the passage of time to his advantage and eventually became nearly undetectable. By 2006, public reports began to characterize the trail as "stone cold" and the frustration of policymakers was increasingly palpable. As reported in *The Washington Post*: "The clandestine U.S. commandos whose job is to capture or kill Osama bin Laden have not received a credible lead in more than two years. Nothing from the vast U.S. intelligence world -- no tips from informants, no snippets from electronic intercepts, no points on any satellite image -- has led them anywhere near the al-Qaeda leader, according to U.S. and Pakistani officials" (Priest & Tyson, 2006).

These setbacks fueled the reorganization and reinvigoration of the search across the U.S. government. At the CIA, this reinvigoration was dubbed Operation Cannonball, an effort later deemed a "bureaucratic reshuffling that placed more C.I.A. case officers on the ground in Pakistan and Afghanistan" (Mazzetti, Cooper, & Baker, Behind the Hunt for Bin Laden, 2011). These efforts further magnified the core challenge: the response of increased resourcing, prompted by President Bush's order to "flood the zone," resulted in new pursuit mechanisms that were still constrained by a scarcity of starting points—ultimately, an uncertainty of "where the 'zone' is" (Priest & Tyson, 2006). Chief among explanations of the search's inability to find traction was an "inability to develop informants in Pakistan's isolated tribal regions, where bin Laden is believed to be hiding" (Whitlock, 2008).

By early 2011, some observers were reaching a point of exasperation with the search. Writing in *The Washington Post*, Peter Bergen—the producer of the first ever bin Laden television interview in 1997—poignantly captured this increasingly widespread sentiment:

> We have almost 100,000 troops in Afghanistan. We've launched more than 200 drone attacks in Pakistan's remote tribal regions. We've spent billions of dollars on intelligence. And as the 10th anniversary of the Sept. 11 attacks approaches, we're still no closer to finding Osama bin Laden. It seems possible, even likely, that we'll be saying much the same on the 15th anniversary of Sept. 11, and again on the 20th… What will it take to get him? Cash rewards have helped ensnare other al-Qaeda leaders, but well-advertised bounties for bin Laden's head have yielded nothing. Similarly, bin Laden has not communicated via cellular or satellite phone for a decade. The United States, which relies heavily on signals intelligence, is virtually blind in its pursuit. If the trail has run cold, our best chance may be to wait for a misstep on bin Laden's part. (Bergen, 2011)

It was from this context of public frustration that the bin Laden search entered a new decade.

Signatures & Couriers

Outside of public view, the key fruit borne by the additional reinvigoration of the bin Laden search in the Obama Administration was a back-to-basics reset that focused on signatures of bin Laden's lifestyle that *could* be observable, even if they weren't being reflected in current reporting. Examples of these signatures included "prescription medications that he might purchase" as well as "his passion for thoroughbred horses," his potential desire to attend "family events such as the weddings of children living nearby," and even traces of "unusual amounts or types of food" since his first wife had revealed his favourite dish to be zucchini stuffed with marrow (Coll, 2011 and Bergen, 2011). These efforts represented a fresh attempt to "get inside the thinking that had kept bin Laden safe for so long" by reproducing and widening the success of a 2006 study that had identified, among other leads, a reference to bin Laden's penchant for keeping "safe houses in Kabul because he believed the Americans would never bomb a big city for fear of killing innocent civilians" contained in the book *Growing Up Bin Laden* by the bin Laden's wife Najwa and son Omar (Shroder, 2011).

Bin Laden's avoidance of electronic communications also turned attention to another potential key signature: his reliance on a system of couriers to maintain contact with his network and release periodic audio and video

statements. Insight into these courier networks had long been a target of interrogations of detained al Qaeda members, but the key breakthrough did not emerge until investigators realized that what the detainees *weren't* saying was in some ways more important than what they were revealing. As explained in *The New York Times*: "Prisoners in American custody told stories of a trusted courier. When the Americans ran the man's pseudonym past two top-level detainees -- the chief planner of the Sept. 11 attacks, Khalid Shaikh Mohammed; and Al Qaeda's operational chief, Abu Faraj al-Libi -- the men claimed never to have heard his name. That raised suspicions among interrogators that the two detainees were lying and that the courier probably was an important figure" (Mazzetti, Cooper, & Baker, Behind the Hunt for Bin Laden, 2011). According to interviews with U.S. officials following the death of bin Laden, American intelligence learned the courier's real name (Abu Ahmed al-Kuwaiti) around 2007 but did not discover his area of operations until 2009 (Mazzetti & Cooper, 2011).

By August 2010, surveillance of al-Kuwaiti—including reported eavesdropping "on telephone calls and e-mails of the courier's Arab family in a Persian Gulf state"—yielded a break: CIA sources followed the courier's vehicle to the compound in Abbottabad, Pakistan where he was living, which consisted of a three-story concrete residence, a guesthouse, and a few outbuildings (Mazzetti, Cooper, & Baker, Behind the Hunt for Bin Laden, 2011 and Schmidle, 2011). As intelligence analysts debated the likelihood of al-Kuwaiti harboring bin Laden, his decision to live in Abbottabad became an important consideration since the city was home to the Pakistan Military Academy, was "insulated from the natural disasters and terrorist attacks that have afflicted other parts of Pakistan," and "would also have kept Bin Laden out of the range of American drones, which could not venture so far into Pakistan" (Goddard, 2011 and Masood, 2011). While this proximity to the Pakistan Military Academy would later raise questions as to complicity of the Pakistani government in sheltering bin Laden, analysts theorized that the site might have been favored by al Qaeda because it was believed that "foreign spies would have been unlikely to be able to pry in a town with high-level military installations" (Masood, 2011).

A Peculiar Compound

Even more unusual than the city that surrounded al-Kuwaiti's residence were the idiosyncrasies of the compound itself. Nearly all of the publicly known facts about the compound originated from a background briefing conference call from a "senior administration official" (possibly then-CIA Director Leon Panetta) to reporters held hours after the President Obama announced the demise of bin Laden:

> The compound sits on a large plot of land in an area that was relatively secluded when it was built. It is roughly eight times larger than the other homes in the area… The physical security measures of the compound are extraordinary. It has 12- to 18-foot walls topped with barbed wire. Internal wall sectioned off different portions of the compound to provide extra privacy. Access to the compound is restricted by two security gates, and the residents of the compound burn their trash, unlike their neighbors, who put the trash out for collection. The main structure, a three-story building, has few windows facing the outside of the compound. A terrace on the third floor… has a seven-foot privacy wall. It's also noteworthy that the property is valued at approximately $1 million but has no telephone or Internet service connected to it. (Goddard, 2011)

Further striking was the odd behaviour of one of the residents: though al-Kuwaiti and others regularly left the compound, another man living on the sheltered third floor of the residence never departed and stayed behind the compound's walls even when venturing outside for exercise. "Some analysts speculated that the third man was bin Laden, and the agency dubbed him the Pacer" (Schmidle, 2011). Impressive technological steps were reportedly taken to gain further insight on this mysterious third man but none were successful in confirming his identity. Creative means, such as the CIA's covert sponsorship of an immunization drive in the nearby town that sought to obtain DNA samples from the children living at the compound, were also attempted to no avail (Schmidle, 2011).

Despite sharp disagreements concerning the wisdom of a raid on the compound precipitated by this lack of hard evidence confirming bin Laden's presence, President Obama gave his approval on Friday, April 29 for a raid that was ultimately conducted on Sunday, May 1 that ended in the death of bin Laden (Shroder, 2011).

EVALUATING EARLIER SUGGESTED SEARCH STRATEGIES

During the course of the bin Laden hunt, academics, military analysts, and other interested observers published numerous recommendations to enhance the search's effectiveness. In light of what we know now, this paper examines two starkly different such proposals: a micro-focused 2005 Naval Postgraduate School thesis that proposed manhunting methodology improvements to better track an individual evader which could be applied to the bin Laden case and a macro-focused 2009 study by UCLA professors and students that suggested the combined use of biogeographic theories and satellite imagery to evaluate wide areas for likely bin Laden hideouts.

Improved Manhunt Methodologies

Writing in their 2005 joint Naval Postgraduate School thesis, U.S. Army officers Steve Marks and Matthew Nilson with U.S. Air Force officer Thomas Meer, argue that the current U.S. security apparatus was built to deal with institutions, such as nation states and manoeuvre armies, but—as seen in the bin Laden search—is insufficient to deal with the granularity of hunting specific individuals (referred to in the paper as Persons of National Interest [PONIs]). Illustrative of this distinction between conventional military operations and manhunting, they argue, is a core difference in strategy: "In the competition between two enemy combatants, the goal is to win the battle by defeating the adversary—both combatants must confront to win" versus in the manhunt context "the pursuer must confront to win, whereas the fugitive must evade to win," meaning ultimately, "the evader has no requirement to win, just not to lose" (Marks, Meer, & Nilson, 2005). The result of a failure to adapt to this distinction, they argue, is a shortfall: "The U.S. military's limited experience conducting manhunts has created a doctrinal, legal, and procedural void. No established set of systems or procedures has been formalized…" (Marks, Meer, & Nilson, 2005). The thesis proposed several paradigms designed to fill this gap and explained many of them through application to the bin Laden search.

Building on basic concepts, such as general strategies of the evader and pursuer, Marks, Meer, and Nilson ultimately arrive at five-step manhunting process that can be illustrated as follows. Note that these steps are interrelated and are not exclusively sequential.

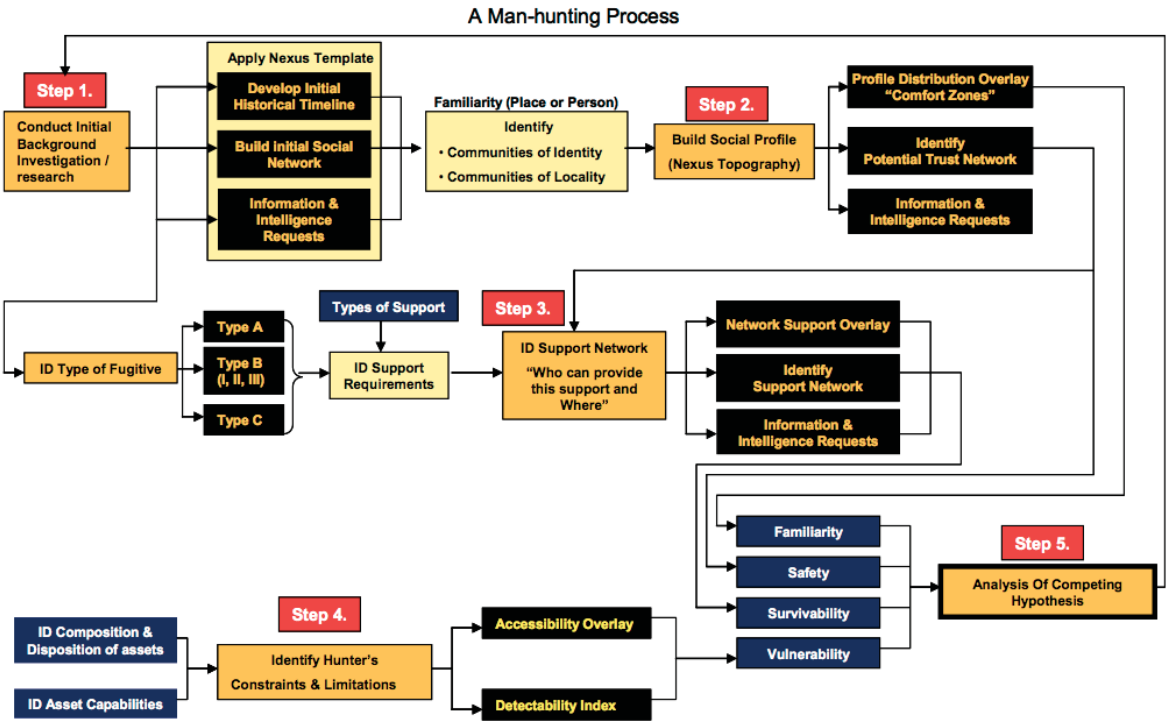

Figure 1. Manhunt Methodology Proposed By Marks, Meer, & Nilson

In the case of bin Laden, the authors suggest that the background investigation should focus on identification of signatures (such as dietary habits, movement patterns, and family relations) similar to those that were ultimately identified. Less successful in hindsight, however, is the study's tendency to apply these micro-level signatures of individual behaviour to broad-brush designation of macro (country-sized) areas of likely refuge (such as the conclusion that "…bin Laden is likely to be in a country with a weak regime, and where there is also ethnic and religious discrimination… [and] a poor quality of life and sub-standard infrastructure" [Marks, Meer, & Nilson, 2005]).

Finally, the study raises a key point concerning consideration of operational networks versus life-long social networks. Indeed, it was a surveillance of the trusted courier—an individual who was likely introduced to bin Laden through his operational network but eventually crossed over to become part of a trusted inner personal circle—that provided the lead most crucial to concluding the bin Laden case. Understanding these long-term relationships can prove crucial in pursuing evaders with disciplined operational security that keeps them insulated from their current operational network; paradoxically, however, these long-term personal connections are often the most tedious and difficult to identify.

Taken in whole, this target-centered methodology appears sound, particularly in its focus on developing a profile of signatures likely associated with the target. Marks, Meer, and Nilson also raise valid points concerning capabilities required to succeed in manhunting versus conventional military engagements. Less convincing, however, is the study's argument for new structures and doctrine aimed exclusively at the manhunting challenge: particularly as seen in Iraq, U.S. counterinsurgency doctrine subsequent to this study has shown remarkable success in adapting to deconstruct terror cells, to include regularly successful manhunts of insurgent leaders.

Applied Biogeographic Theories & Remote Sensing

Opposite from the manhunting paradigm, which works from the evader outward, are macro-level search techniques that consider wide areas which may contain the evader and subsequently narrow the search based on characteristics likely sought by the evader. This approach, as applied by Geography Department professors and students at the University of California at Los Angeles (UCLA) in a paper entitled *Finding Osama Bin Laden: An Application of Biogeographic Theories and Satellite Imagery*, became one of the most widely publicized proposals in the public discourse of the bin Laden search. Their approach sought to overlay focus areas generated by biogeographic theories common in the field of geography—such as those that "predict how plants and animals distribute themselves over space and over time"—on publicly available satellite imagery to identify likely whereabouts of the al Qaeda leader (Gillespie, et al., 2009). This approach appears particularly appealing in a case such as the bin Laden search when few recent starting points for the search were available; indeed, in the absence of places *to look*, efforts that identified places *not to look* became valuable in their own right.

The UCLA researchers predicated their results on primarily on the biogeographic theory of distance-decay which states that "as one goes further away from a precise location, there is an exponential decline in the turnover of species and a lower probability of finding the same composition of species." In the case of the bin Laden search, this application suggested, "he is closest to the point where he was last reported and, by extension, within a region that has a similar physical environment and cultural composition…" (Gillespie, et al., 2009). Based on his last known 2001 location, the researchers calculated the area with the highest probability (98%) of bin Laden's presence to be the Federally Administered Tribal Area (FATA) of Kurram in Pakistan and, more specifically, its fourth largest city of Parachinar. Visually, this probability and its associated decay was illustrated as follows:

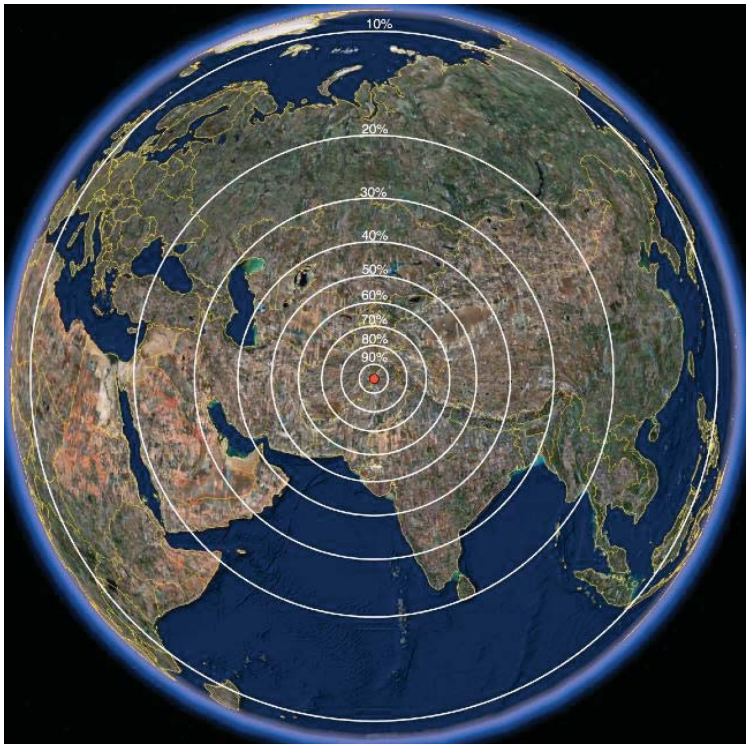

Figure 2. Probability Model of bin Laden's Current Location Based on Distance-Decay Theory (Gillespie, et al., 2009)

Within cities identified by these theories as possible refuges of bin Laden, the researchers then studied individual buildings to find specific locations likely aligned with criteria they believed to be associated with bin Laden. These criteria were:

Life History Characteristics	Physical Structure Attribute
Is 6'4" tall	Tall building
Requires a dialysis machine that uses electricity	Electric grid hookup or generator
Prefers physical protection	Walls over three meters high
Enjoys personal privacy	Space between structures
Retains a small number of body guards	More than three rooms
Prefers to remain protected from aerial view	Trees for cover when outside

Figure 3. Life History Characteristics of Osama bin Laden and Associated Physical Structure Attributes (Gillespie, et al., 2009)

From perspectives of both hindsight and critical analysis, these criteria appear to be the weakest component of the UCLA argument. Indeed, bin Laden's supposed dependence on dialysis had been previously debunked in the open source and it seems quite tenuous to assume that a tall individual automatically will live in a tall building (rather than just a building of any size equipped with high doorways and ceilings). To their credit, the researchers were seeking to demonstrate a methodology more than a result and recognized the limitations of the unclassified criteria they chose.

Taken in whole, this UCLA research is a thought-provoking demonstration accessible to readers outside the intelligence community of the powerful idea that it is possible to "narrow down where Osama bin Laden is by ruling out where he is unlikely to be." The methodology was limited by the quality of unclassified data available to it and, resultantly, overreached its usefulness in analysing individual buildings, but the ease and relative correctness of this approach stands in stark contrast to perceptions of a gridlocked bin Laden search.

Indeed, perhaps this research demonstrates the right approach with the wrong variables. In the case of the bin Laden search, what if analysis had been undertaken to identify sizable buildings without telecommunications connections within regions of interest in Pakistan? What if analysts had similarly used wide-area thermal analysis to identify locations where trash was being burned despite availability of refuse collection service? Would study focused on these variables have revealed the location of the bin Laden compound sooner? This answer will not soon be known. However, focus on these types of questions does bring us to consideration of the most important takeaways from the bin Laden search.

FINAL ANALYSIS

The Importance of Absence

At several key moments in the bin Laden case, the importance of missing investigative links equalled or outweighed the consequence of available data points. Instances such as simultaneous denials of awareness of the trusted courier by high-level al Qaeda detainees, an absence of electronic communications services at the Abbottabad compound, and an inability to identify its curious "Pacer" resident point to moments when analytic methodology was required to span the chasm of absent hard data. Further, in addition to observing what was present at the compound, identification of what it lacked (telecommunications services, trash collection service) cemented its intriguing status.

This experience suggests that further steps can be taken inside the intelligence community to ensure that what *isn't* known about a target is documented just as clearly as what *is* known: indeed, vast investment has been made in complex database tools that catalogue these "knowns" by synthesizing every shred of relevant data. By comparison, however, parallel tools to capture, organize, and share perspectives on "unknowns" among analysts are significantly underdeveloped. An opportunity exists to adopt Web 2.0 wiki-like features inside intelligence databases that would not only allow but would mandate the analysis of possible meaning and importance of absent data points side-by-side with collected data points.

Strategies Independent of Starting Points

The dearth of even the most basic clues as to bin Laden's whereabouts in the years following his successful escape from Tora Bora constituted a key challenge in the search. This thirst for starting points on which to focus the vast U.S. intelligence apparatus allowed bin Laden to use the passage of time to his advantage, as seen in handicapping of the U.S. search despite new resourcing and directives to "flood the zone." Had the length and scope of the bin Laden search been fully anticipated at its start, however, this passage of time could have been used to the U.S. advantage if search efforts had focused on narrowing where he was by ruling out where he was unlikely to be. Such an exhaustive, broad-to-narrow search effort would have consumed significant time and resources; in hindsight, however, it appears that both were available.

A practical challenge of this search paradigm, however, is that it relies on gradients of uncertainty and such uncertainty may prove incompatible with the bureaucracy managing the search (bureaucracies much prefer hard data points, however scant and unreliable they may be). As such, perhaps parallel search tracks were in order: the primary spotlight could be occupied by a conventional search effort chasing down every available lead while, in the background, a diligent analyst-run search sheltered from the larger bureaucracy and focused on broad-to-narrow search strategies could undertake the long-term, iterative study necessary to isolate promising search areas. In circumstances where the primary search effort lacked leads to pursue from available data points, the second-track broad-to-narrow search team could provide assessed locations worth exploring.

Extensive Connections

To prosecute searches in these refined areas, a key lesson taken from the bin Laden search is the salience of the "operational networks" versus "long-term networks" distinction made by Marks, Meer, and Nilson. Just as searching for direct leads among hard data is a default search strategy, so too is the tendency to limit analysis to an evader's current operational associates rather than attempt to develop his life-long web of contacts ranging from acquaintance to confidant. Though painstaking, it is this development of a target's wider network that may reveal the most helpful clues in the absence of immediate leads. In the case of bin Laden, it was the

development of the long-term yet low-profile courier that ultimately provided the breakthrough. Though still an active participant in bin Laden's network, this courier represented a unique example of someone that had originated in bin Laden's operational network but had evolved to become part of his inner circle to a family-like degree. Watching for these types of continuing but low-profile associations and possible evolutions of operational relationships may prove key to future such pursuits.

Central to such nuanced analysis, however, is the continuity of long-term analysts on the case. An unfortunate, if unspoken, intelligence community tendency is to implicitly assume that most any analyst with access to the correct databases can be equally successful against a target. This reliance on databases and preference for interchangability creates disconnects at the margins, such as efforts to develop less obvious, low-profile associations from a target's background. In addition to the information management tools discussed above, key to closing this gap is the assignment of dedicated analysts with cultural expertise to the target for the duration of the search. Indeed, this imperative runs contrary to many well-intended models of career development and diversification, but the importance of a core analytic backbone in these efforts cannot be understated. Successful searches will require steps be taken to find the right analysts for the case, assign them to the task for the duration, and empower them with the right tools to execute the process.

CONCLUSION

The successful conclusion to the bin Laden search granted the American intelligence community a rare public and decisive victory. While the public admiration for such a fascinating success is certainly valid, this emotion should not displace the careful examination of the search's strengths and shortcomings. Attention should not be focused on second-guessing the individual actions of analysts that persevered through the "thankless until finished" job of solving one of the most difficult intelligence puzzles in the country's history. Rather, careful study is merited to draw lessons learned from the improvised and imperfect construct that was used to tackle this challenge with the hope of better enabling the next cadre of analysts that will be called upon the decipher equally crucial enigmas. With hopes of contributing to this constructive self-assessment, this analysis has distilled the prescient insights that were offered in publicly suggested search strategies and has identified deficiencies within those same recommendations. Further, this paper has offered new proposals resulting from the bin Laden case study—ranging from information technology tools, to organization of analysts, to analytic methodology— that stand ready to aid other ongoing intelligence operations today as well as offer an insightful vector to the next search that is similarly void of starting points.

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