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Nightmares of nuclear terrorism

The author, an accomplished former counterterrorism official at the CIA and Energy Department, outlines the nuclear terrorism scenarios that keep him up at night—and suggests how best to prevent them.

BY ROLF MOWATT-LARSSEN

When working abroad for the CIA in the early 1990s, I received a senior officer from Washington on a mission to collect an important piece of evidence to help identify the culprits behind the bombing of Pan Am Flight 103. As we sat in a restaurant sipping a glass of wine, "Mike," a veteran counterterrorism agent, enumerated the reasons why the investigation was among the CIA's highest priorities. His eyes narrowed as he recalled that the terrorist attack on the commercial airliner had killed one of our own. "Terrorism is deeply personal business," he sighed. "It will be around as long as there are people with scores to settle." He continued, "Terrorists embarrass politicians, and their attacks are always painful for the families of their victims. But terrorism isn't a strategic problem. It won't affect our way of life, and it isn't a threat to our national security."

That might have been true at the time, but on 9/11, Al Qaeda rewrote the terrorist playbook by executing mass casualty attacks against strategic U.S. targets. In essence, these attacks ended one era and ushered in a new one. It is an age in which a few terrorists hold the means to alter the course of history with a single blow. Having set a standard that dares to change the world, it is likely only a matter of time before 9/11 is eclipsed by an even more devastating event.

So why has it not happened yet?

For starters, having pulled off such a complex and successful operation as 9/11, Osama bin Laden may find it problematic to settle on anything lesser—or riskier—that might damage his movement's almost mythological standing in the annals of terrorist lore.

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Al Qaeda is a conservative, risk-averse organization. The group's leadership apparently recognizes that it is better to not attack at all, than to do so in a way that falls short of the lofty goals they have set for themselves. And for now at least, the Al Qaeda leadership may have few credible options for making good on threats to disrupt the global economy and to convince their adversaries that they are fighting a war that cannot be won.

A further—and highly unsettling—explanation of Al Qaeda's extraordinary patience is that group members think time is on their side. They probably believe they have drawn the United States into a deepening commitment to fight a protracted insurgency in Afghanistan. Moreover, Saddam Hussein was deposed, opening up long-term possibilities for an Islamic theocracy in Iraq. Gen. Pervez Musharraf is out of power in Pakistan, and the domestic instability there is growing every day. These developments create opportunities to change the global status quo. In other words, Al Qaeda may be waiting for a perfect storm in the alignment of targets, opportunity, and timing to launch another game-changing attack. If they do so, it will certainly be based on a calculation that the moment is ripe to try to force Washington's hand in ways that favor Al Qaeda's long-term goals.

In this light, the group's long-held intent and persistent efforts to acquire nuclear and biological weapons represent a unique means of potentially fulfilling its wildest hopes and aspirations. As bin Laden declared in 1998, it is his duty to obtain WMD. He apparently understood at this early juncture that using such weapons might become necessary at some stage of his confrontation with the United States and its allies. With this in mind, Al Qaeda feverishly pursued nuclear and biological weapons capabilities before 9/11. These efforts were managed by the group's most senior leadership, with a sense of purpose and urgency that suggests it was important to make progress on possessing WMD prior to its 2001 attack on the United States. Yet in spite of bin Laden's declaration and Al Qaeda's subsequent efforts to acquire nuclear and biological weapons, the threat is not widely being treated as a clear-and-present danger that requires an urgent response.

Nuclear terrorism detractors point out that the threat has been hyped. Unfortunately, it is true that some have used the WMD threat to incite fear and to justify extreme tactics to combat terrorism. Skeptics argue that there were no WMD in Iraq, so why should people believe intelligence that terrorists are seriously trying to acquire them? Plus, if terrorists have such a weapon, why haven't they used it? They also argue that it is impossible for men in caves to acquire and detonate a nuclear bomb. They acknowledge some nuclear material may be missing from global stocks, but they exude con-

fidence that it is surely not available in sufficient enough quantities to constitute a real threat, and that in any case, it is preposterous to believe that primitive, unsophisticated terrorists might be able to construct a bomb capable of producing a nuclear yield.

Let us hope the skeptics are right, because in terms of organizing the international community to confront the threat posed by large-scale WMD terrorism, not much has been accomplished. Intelligence and law enforcement agencies, in the United States and abroad, have been slow to dedicate resources and leadership to the problem. For example, there is a widespread assumption that terrorists will employ small-scale, crude forms of chemical, biological, and radiological weapons because they are easier to acquire and use. But the weight of the evidence suggests the opposite is true—i.e., terrorists choose weapons best suited for the targets they intend to strike. The history of Al Qaeda strikes against the United States bears this out. The group historically has utilized a remarkably diverse arsenal of weapons in its attacks against the United States: The embassy bombings in Kenya and Tanzania were ground attacks; the U.S.S. *Cole* bombing was a sea attack; and the World Trade Center and Pentagon bombings were air attacks. It chose the desired weapons based on operational considerations, most notably a weapon's capacity to destroy the intended target.

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Another dangerous bias in assessing the threat is the belief that once terrorists obtain a nuclear bomb, they will use it. Thus, the following argument is proffered: Since Al Qaeda has yet to use a nuclear weapon, it does not possess one. This might comfort the doubters, but terrorists may not agree that it is difficult to stash a nuclear or biological weapon in a safe place for future use, without fear of discovery. After all, it has proved exceedingly difficult to find bin Laden and his lieutenant Ayman al-Zawahiri, and we have a pretty good idea of where they might be hiding. Plus, nothing in Al Qaeda's behavior suggests that its leaders follow predictable patterns concerning the means and timing of attacks.

But accepting that nuclear terrorism can happen does not mean that it is inevitable. The odds are stacked against a terrorist successfully acquiring a nuclear bomb. That said, in a twenty-first-century world of rare and unpredictable events, prudent risk management must prioritize threats based on both the probability of an event and its potential consequences. Accordingly, terrorists must be denied any possibility, however remote it might seem,

from ever succeeding in their quest to launch a nuclear or large-scale biological attack on any city. Better still, if we can anticipate how a nuclear terrorist threat might unfold, it stands to reason that we might be able to prevent such an attack from happening.

The following scenarios are the nuclear nightmares that keep me up at night.

Pakistan loses control of its Bomb. Allegations that the threat posed by Pakistani "loose nukes" has been hyped and that the Pakistani military has everything under control may sound soothing, but they obscure the fact that South Asia is replete with violent extremists. Mix in a rapidly expanding arsenal of nuclear weapons and growing domestic instability, and there is a greater possibility of a nuclear meltdown in Pakistan than anywhere else in the world.

It is a good thing then that the Pakistani military approaches nuclear security with great professionalism, for Pakistan has fewer margins for error than any other nuclear state. For comparison's sake, in the United States, it was widely recognized that significant nuclear security upgrades had to be made after 9/11. Specific attention was given to the possibility that terrorists could gain access to a nuclear weapons–related facility, particularly with the assistance of insiders working at the facility. Accordingly, large increases in funding were allocated to assure a much higher U.S. nuclear security standard, including an increased emphasis on intelligence and counterintelligence programs. Nonetheless, in recent years, there have been appalling lapses in controls over nuclear weapons and the compromise of nuclear weapons–related information—e.g., a U.S. Air Force B-52 mistakenly and unknowingly flew six nuclear-tipped cruise missiles across the country (from North Dakota to Louisiana) in August 2007. With this in mind, U.S. concerns about Pakistani vulnerabilities should not be interpreted as finger-pointing or meddling; it obviously can happen in the United States as well. Some broader trends in Pakistan, however, elevate the risks of compromised nuclear security.

The burgeoning Pakistani nuclear arsenal. A growing domestic nuclear program means more nuclear activity taking place in more places—necessitating more materials, weapons, facilities, transportation, and storage. In short, there are now more places where something can go wrong.

Increased extremism. Growing levels of extremism means higher numbers of potential insiders in the nuclear establishment willing to work with outsiders to provide access to facilities and exfiltrate nuclear-related materials and weapons. Recent warnings by the Taliban and Al Qaeda that Washington will seize Pakistan's nuclear weapons amount to a clever recruiting pitch to insiders to collaborate with extremists. In an attempt to stoke such groundless

fears, A. Q. Khan, the father of the Pakistani nuclear program, and Bashiruddin Mahmood, the radical CEO of Khan's rogue nuclear supplier network, both recently called upon Pakistan to expand its arsenal of nuclear weapons, implying that they guarantee sovereignty and assure Islamabad's standing as a leading Islamic nation.

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The perilous military-civilian relationship. Although Pakistan's nuclear National Command Authority is controlled by the military, the Pakistani constitution delegates certain nuclear weapon responsibilities to the civilian government. This creates the potential for a military-civilian standoff over nuclear assets during a crisis, especially in the event that extremist elements assume power. Moreover, there are no guarantees of how the military and government would react to all contingencies they may encounter in a rapidly unfolding crisis. For instance, how would they respond to a breakdown in internal communication, or with the outside world? Unconfirmed news reports of a seizure of nuclear weapons in transit? A takeover of a facility by a rogue military unit? Taliban penetration of a nuclear weapons storage site? More importantly, how would India interpret and react to such developments? Along these lines: Are current communication mechanisms between Islamabad, New Delhi, and Washington robust enough to be reliable during a crisis?

At least in Pakistan, the risks are well-known and extra precautions are being taken to avert nuclear compromise. That is not the case for the next scenario.

North Korea sells the Bomb. The discovery of Syria's Al Kibar reactor, believed to be built with North Korean assistance, was a wake-up call that Pyongyang does not possess strong self-imposed constraints on transferring nuclear technologies to other parties—a sobering, if unsurprising, reality. After all, North Korea routinely prints counterfeit U.S. currency, traffics narcotics, and starves its own people. So it is not unexpected that it would provide nuclear-related technologies for profit. If anything, North Korea's erratic and irresponsible behavior makes it a leading potential source—on a witting or unwitting basis—for terrorist acquisition of nuclear-related technologies and materials.

The extraordinary level of secrecy in handling intelligence concerning the North Korean-Syrian project at Al Kibar helped ensure that knowledge of its existence did not leak before Israel could effectively neutralize the reactor militarily in September

2007. Unfortunately, secrecy also restricted the international community's ability to run down all leads on the reactor before the North Koreans discovered that it had been compromised. So an opportunity was lost to begin an early examination of active proliferation pathways flowing from Pyongyang. Nonetheless, there are three broad implications of North Korean-Syrian nuclear cooperation that should be assessed urgently.

The viability of the nonproliferation regime. To date, the regimes of Kim Jong-il and Bashar al-Assad have suffered no consequences for conspiring to develop a nuclear weapons capability, casting doubts on the viability of the Nuclear Non-Proliferation Treaty and the credibility of the global nuclear order. In fact, U.S. dialogue with Syria improved after the Israeli raid. And the countries participating in the Six-Party Talks with North Korea (the United States, Russia, China, South Korea, and Japan) continue to cajole Pyongyang back to the negotiating table to make new concessions in exchange for more promises the North will not keep. Basically, Al Kibar obliterated all of the red lines thought to exist in terms of nuclear deterrence, accountability, and responsibility, setting a precedent that it is okay to clandestinely provide nuclear-related technologies to other states.

An "A. Q. Kim" network? Since Kim Jong-il came close to providing Syria with the building blocks for a nuclear weapon, how confident can the international community be that there is not a long-running "A. Q. Kim" network in North Korea that is analogous to the Khan nuclear supplier network in Pakistan? Clearly, the chapter of proliferation history that suggests Khan was a historical anomaly may need to be rewritten. But what will it say? Today, there is fresh information and new leads that must be explored to determine the full extent of North Korea's proliferation activity.

Intelligence shortfalls. It is important to remember that the Al Kibar facility was uncovered thanks to a windfall of intelligence and expert analysis. Yet that windfall did not occur until the facility was nearly complete, exposing deficiencies in intelligence collection efforts specific to the nuclear arena. As such, it should create doubts in the international community's ability to identify and neutralize clandestine nuclear sites and networks that might exist in other parts of the world. This inability to reliably assess state-related clandestine nuclear activity further reduces the prospects of uncovering clandestine nuclear trafficking and acquisition efforts of nonstate actors, which would have a much smaller footprint than their state program counterparts.

Al Qaeda acquires the Bomb. It is difficult to objectively assess the feasibility of nuclear terrorism without being suspected of hyping and overdramatizing the threat. It is also hard to set aside

fear in contemplating nuclear catastrophe. That said, it is necessary to approach the task with an optimistic mind-set. Methodically sifting through all of the threat's variables can systematically lower the risks—an approach that requires collection and analysis of each potential terrorist nuclear plot pathway, attack indicator, and choke point. Such a dynamic modus operandi can serve as the basis for undertaking anticipatory action that will identify actionable leads, compromise terrorist planning, and neutralize an impending attack.

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The chances of identifying indicators of a nuclear terrorism plot are highest in the earliest stages of planning. Over time, the likelihood of interdiction decreases. With this in mind, a premium must be paid to penetrate terrorist leadership, facilitation, and support networks during a plot's most formative stages. Here is how it can be done: Finely tuned terrorist communication intercepts must be used to generate actionable leads. Satellite surveillance and state-of-the-art sensors also must be widely employed to enhance quick detection of nuclear material. And every tool of intelligence tradecraft needs to be focused on finding a logistical and support footprint no larger than that of Mohammed Atta's limited 9/11 plot. Fortunately, the challenges faced by terrorists who want to acquire a nuclear weapon are no less formidable than for the global intelligence agencies that are trying to stop them. In fact, by my count, there are only three pathways to a terrorist nuclear attack.

Sabotage. Terrorists could attack a nuclear facility in hopes of causing a large release of radioactivity—similar to how they used airplanes on 9/11 as an inscrutable weapon. There is evidence that Al Qaeda's leadership considered such a possibility before 9/11, when their operatives reportedly conducted some light casing of U.S. nuclear reactor facilities. But thanks to enhanced security and reinforced defenses at U.S. nuclear sites, the available intelligence seems to indicate that Al Qaeda has concluded that it is too difficult to either (a) crash a plane into a nuclear facility or (b) use a team to penetrate a nuclear facility to gain access to nuclear weapons and materials.

Purchase. After the Cold War ended, the former Soviet Union was an attractive place to shop for nuclear components. In fact, there are credible reports that Ayman al-Zawahiri visited Russia in the mid-1990s. However, al-Zawahiri's announcement in 2001 that Al Qaeda had obtained nuclear devices in the former Soviet Union does not ring true. If the terrorist organization had purchased such weap-

ons, why announce it to the world? Of course, there is a possibility that Al Qaeda's nuclear materials are being held in storage or have not reached their final destination yet. But no credible reporting has surfaced that Russian/Soviet nuclear weapons have been lost, much less that they have found their way into terrorist hands. (Reports of Russian "loose nukes" appear to have been greatly exaggerated.)

Construct. Counting assembled nuclear weapons is far easier than accounting for nuclear material in bulk form. Al Qaeda's experience on the nuclear black market has taught its planners that their best chance at some sort of nuclear or radiological attack is to construct an improvised nuclear device comprised of illegally purchased weapons-usable material—i.e., the direct pathway of finding a "loose nuke" or "suitcase nuke" is riddled with scam artists and intelligence services dangling their wares to terrorists in hopes of landing big fish. So while building a bomb is surely not the preferred course of action, it might be the only realistic pathway for sub-state actors who cannot develop the infrastructure necessary to enrich fissile material. To realistically do so would involve recruiting malicious insiders at nuclear facilities who are in a position to smuggle fissile material from their workplace and patiently combing the nuclear black market for similar material. It also requires enlisting specialists to build a device, rig the explosives, and assemble the pieces, all in complete secrecy. Finally, a suicide bomber is needed to transport the bomb to the intended target. Even if they succeeded in avoiding discovery throughout the planning stages, a terrorist would never know for certain whether his device would reach a nuclear yield or whether he had a viable bomb until he tried to detonate it.

Al Qaeda must understand that the odds are long of conducting a successful nuclear attack. Yet, it is determined to try. And regrettably, time favors intent; if terrorists get something wrong the first time, they can continue to try until they succeed. More likely, however, their plans will be exposed somewhere during the planning stage: Stolen or smuggled fissile material might be interdicted at a port or border crossing equipped with state-of-the-art sensors; a suspicious neighbor might report the curious activities of a rogue scientist from a state weapons program; or an alert analyst might flag the intercept of an unusual container, shipment, or consignment of goods that did not fit the usual patterns. Somehow, though, a clue is likely to emerge that will present an opportunity to disrupt an Al Qaeda nuclear plot—probably when, and where, it is least expected.

In this regard, terrorist use of WMD presents a litmus test of the current state of global counterterrorism response. It is an apt challenge. The prospect of an Al Qaeda nuclear bomb stretches the mind to its limits, as such an attack entails almost unimaginable consequences. As such, it is essential to develop a robust, highly

creative capability to identify pathways terrorists might take to obtain a bomb in order to interdict plots before they reach fruition—and to do so quickly. In planning for success, one thing is certain: If we cannot imagine a nuclear catastrophe, we will surely fail to prevent it from happening. ■

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