SECURITY, SCIENCE & SURVIVAL

Bulletin of the Atomic Scientists

Our Afghan lie

Smuggling nukes

When satellites attack

SEVEN MINUTES TO MIDNIGHT
September/October 2006
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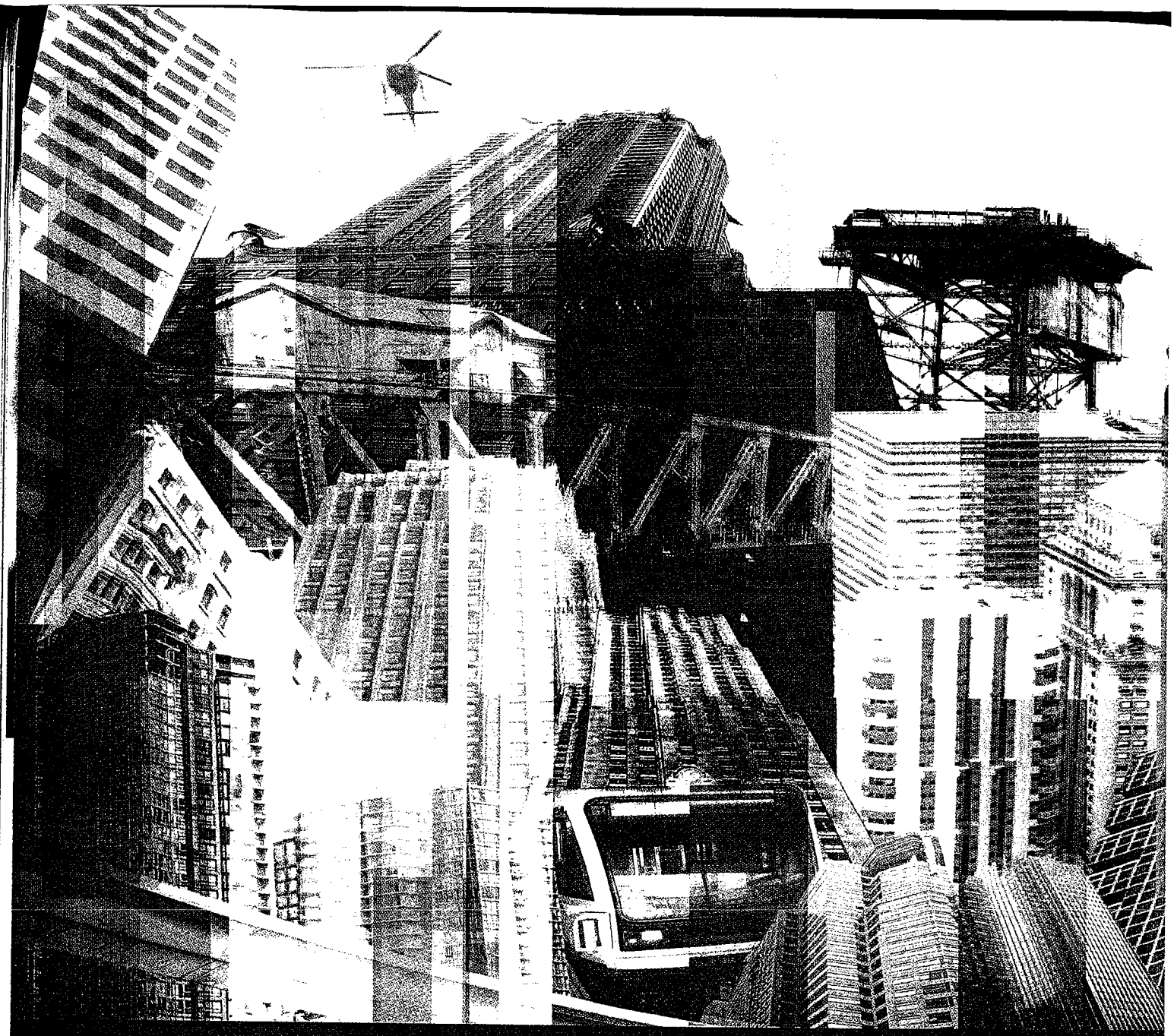
NUCLEAR 9/11

Will it happen?

U.S. $6 Canada $8



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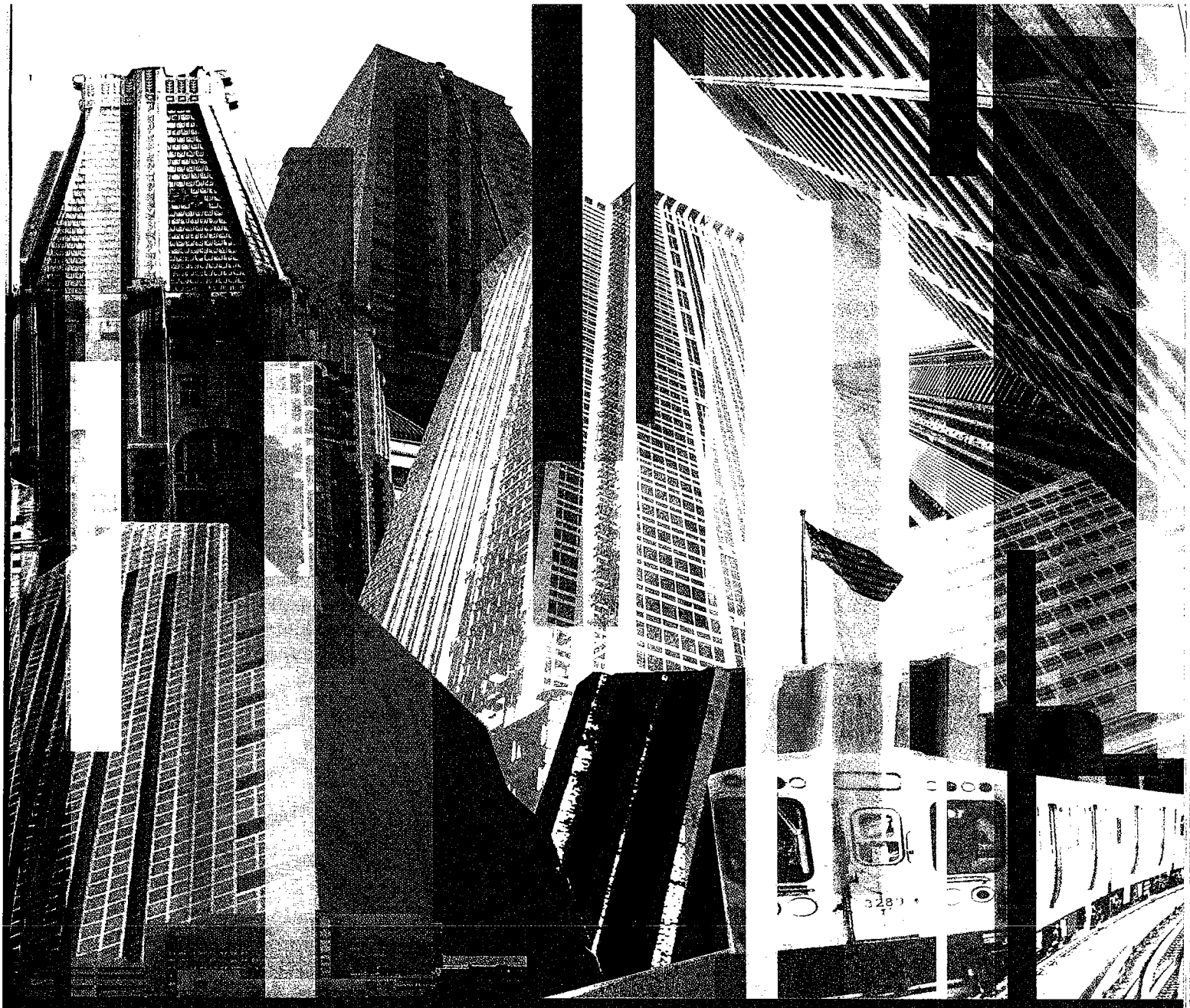


9/11?

When the Twin Towers fell on September 11, 2001, so too did America's confidence that it was secure from calamitous acts of terrorism. Mindful that terrorists might next seek to use nuclear weapons, the United States has undertaken concerted efforts to secure loose nukes and bombmaking materials. But, five years later, are we any safer? For an assessment, the *Bulletin* sought the views of **GRAHAM ALLISON (P. 36)**, author of *Nuclear Terrorism: The Ultimate Preventable Catastrophe*, and **WILLIAM M. ARKIN (P. 42)**, a security analyst and online columnist for the *Washington Post*.

The ongoing failure of **imagination**

BY GRAHAM ALLISON

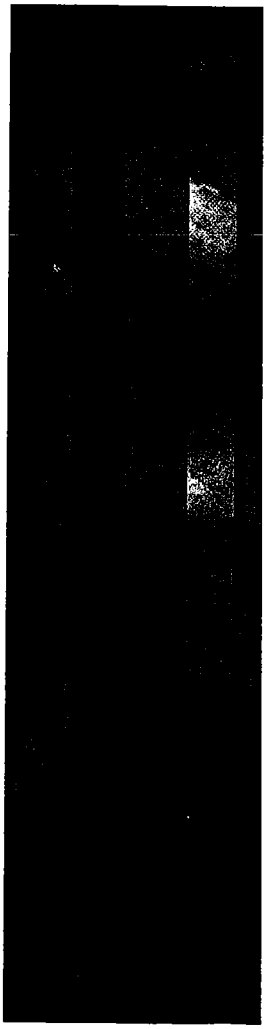
PRIOR TO 9/11, MOST AMERICANS FOUND the idea that international terrorists could mount an attack on their homeland and kill thousands of innocent citizens not just unlikely, but inconceivable. Psychologically, Americans imagined that they lived in a security bubble. Terrorist attacks, including those on U.S. embassies in Tanzania and Kenya, occurred elsewhere. These beliefs were reinforced by the conventional wisdom among terrorism experts, who argued that terrorists sought not mass casualties but rather mass sympathy through limited attacks that called attention to their cause.

As we approach the fifth year without a second successful terrorist attack upon U.S. soil, a chorus of skeptics now suggests that 9/11 was a 100-year flood. They conveniently forget the deadly explosions in Bali, Madrid, London, and Mumbai, and dismiss scores of attacks planned against the United States and others that have been disrupted.[1] The idea that terrorists are currently preparing even more deadly assaults seems as far-fetched to them as the possibility of terrorists crashing passenger jets into the World Trade Center did before that fateful Tuesday morning.

As one attempts to assess where we now stand, and what the risks are, the major conclusion of the bipartisan 9/11 Commission deserves repetition: The principal failure to act to prevent the September 11 attack was a "*failure of imagination.*"[2] A similar failure of imagination leads many today to discount the risk of a nuclear 9/11.

How great a risk? Risk equals probability times consequences. During the Cold War, strategists understood that even the slight possibility of a nuclear war that could kill every American made it imperative to do everything possible to avoid nuclear conflict. Similarly, the magnitude of the consequences of even a single nuclear bomb exploding in just one U.S. city swamps differences in judgments about the likelihood of such an attack. A terrorist armed with one nuclear bomb could murder a million people—killing in one day twice as many American souls as died in both World Wars combined.

On a normal workday, half a million people crowd the area within a half-mile radius of New York City's Times Square. If terrorists detonated a 10-kiloton nuclear weapon in the heart of midtown Manhattan, the blast would kill them all instantly. Hundreds of thousands of others would die from collapsing buildings, fire, and fallout in the hours and days thereafter.



The blast would instantly vaporize Times Square, Grand Central Terminal, and every other structure within half a mile of the point of detonation. Buildings three-quarters of a mile from ground zero would be fractured husks.

Lest this seem too hypothetical, recall an actual incident that occurred in New York City one month to the day after the 9/11 attacks on the World Trade Center and Pentagon. A CIA agent, code-named Dragonfire, reported that Al Qaeda had acquired a live nuclear weapon produced by the former Soviet Union and had successfully smuggled it into New York City.[3] A top-secret Nuclear Emergency Support Team was dispatched to the city. Under a cloak of secrecy that excluded even Mayor Rudolph Giuliani, these nuclear ninjas searched for the 10-kiloton bomb whose blast could have obliterated a significant portion of Manhattan. Fortunately, Dragonfire's report turned out to be a false alarm. But the central takeaway from the Dragonfire case is this: The U.S. government had no

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grounds in science or in logic to dismiss the warning.

A nuclear terrorist attack on the United States would have catastrophic consequences even for other countries. After the nuclear detonation, the immediate reaction would be to block all entry points to prevent another bomb from reaching its target, resulting in the disruption of the global "just-in-time" flow of goods and raw materials. Vital markets for international products would disappear, and closely linked financial markets would crash. Researchers at RAND, a U.S. government-funded think tank, estimated that a nuclear explosion at the Port of Long Beach in California would cause immediate indirect costs worldwide of more than $3 trillion and that shutting down U.S. ports would cut world trade by 10 percent.[4]

The negative economic repercussions would reverberate well beyond the developed world. As U.N. Secretary-General Kofi Annan has warned, "Were a nuclear terrorist attack to occur, it would cause not only widespread death and destruction, but would stagger the world economy and thrust tens of millions of people into dire poverty."[5]

How does one assess the probability of an unprecedented event that could have catastrophic consequences? Since there is no established methodology, the soundest way to proceed is to ask and answer the core questions: who, what, where, when, and how?

Who could be planning a nuclear terrorist attack? Al Qaeda remains a formidable enemy with clear nuclear ambitions. In 1998, Osama bin Laden declared that he considered obtaining weapons of mass destruction "a religious duty."[6] According to the final report of the 9/11 Commission, "Al Qaeda has tried to acquire or make nuclear weapons for at least 10 years . . . and continues to pursue its strategic goal of obtaining a nuclear capability." The commission also discusses bin Laden's fascination with what he calls an American "Hiroshima."[7]

Documenting Al Qaeda's growing intent, the CIA reports uncovering "rudimentary diagrams of nuclear weapons inside a suspected Al Qaeda safe house in Kabul. These diagrams, while crude, describe essential