



5.2 THE IMPACT OF CATAclySMIC EVENTS

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INTRODUCTION

To help remember my major points in simple terms, I reduced them to a mnemonic: $C^2I(T/2)$. The C in this equation represents a cataclysmic event, I is for intelligence, and T divided by two stands for terrorism and terror.

CATAclySMIC EVENTS

Why is it so difficult to assess the threat of nuclear terrorism? Because there is no precedent for this in the realm of terrorism, our knowledge of nuclear weapons comes from our experience with their use at the end of World War II—we certainly know the consequences. Todd Masse was correct in saying that a nuclear fission device is in a category all by itself. We talk about terrorist use of weapons of mass destruction, but the 2001 anthrax attack in the U.S. killed only five people—fortunately—and the 1995 sarin gas attack in Tokyo killed only 12 people, although it sent

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thousands to the hospital. It is really hard to fathom even a small nuclear explosion. A nuclear explosion is cataclysmic. Even a relatively modest explosion would be an event 10 times worse—perhaps a 100 times worse—than the 9/11 attacks.

In the equation here, C is squared because it is a cataclysmic event that we think about in the shadow of another cataclysmic event. The events of 9/11 fundamentally altered our perceptions. Nuclear terrorism is not a new idea or a new threat; it has been a concern for a long time. However, certainly in the wake of 9/11, it had a tremendous impact on our calculations as well as on how we conduct threat analysis.

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INTELLIGENCE

In the equation, I stands for Intelligence, but it could just as easily as “insofar as we know.” That phrase is often repeated in the discussion of nuclear threats. We are dealing with an inherently difficult assessment problem—it is always extremely difficult to assess that kind of a threat. We are dealing with a statistically rare, unprecedented event with enormous consequences, and we are still dealing with concerns about inadequate intelligence.

The events of 9/11 are considered to be the result of an intelligence failure. Whether this designation is entirely fair or not, there is a perception that we failed to identify a cataclysmic event for the U.S. If we do not see the attacks as just a perceived failure of intelligence, we still have a lack of confidence in our intelligence. We just do not believe that we know enough in this area. Therefore, when we discuss intelligence about events such as these, we add the caveat “insofar as we know” in front of everything.

As Todd Masse mentioned, Graham Allison’s book, *Nuclear Terrorism: The Ultimate Preventable Catastrophe*, talks about “Dragonfire” [1]. Shortly after the events of 9/11, a report

originating from a source named “Dragonfire” stated that there was a terrorist nuclear weapon in the city of New York, and the Nuclear Emergency Search Team was called out to look for it. The report caused great alarm. It turned out that “Dragonfire” was not a reliable source; it was simply not a reliable report.

Richard Myers, the former Chairman of the Joint Chiefs of Staff, recently published *Eyes on the Horizon: Serving on the Front Lines of National Security* [2]. He says that in an October 2002 National Security Council (NSC) meeting, the President said that they had received information that al Qaeda had a nuclear weapon. Jaws dropped around the table, as General Myers described it; this was obviously a source of great concern. It would be interesting for someone with the appropriate clearances to go back and unravel that story to see exactly where it originated and how it came about. Of course, as is the case of “Dragonfire,” it also turned out to be wrong. We cannot say with certainty that al Qaeda did not—or does not—have a nuclear weapon, but *insofar as we know*, it has no nuclear capability. Nonetheless, this shows the difficulties or lack of confidence—and in some cases, simply wrong information—in intelligence about nuclear terrorism.

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TERROR VERSUS TERRORISM

Now we have arrived at the variable T, which is divided by two to make the distinction between nuclear terrorism and nuclear terror. These are different domains. Nuclear terrorism is about the frightening possibility that terrorists will acquire and use a nuclear device (e.g., cause a nuclear explosion). Nuclear terror is about our apprehension of that event.

Nuclear terrorism is about intelligence, evidence, threat assessments, and estimates of capabilities. Nuclear terror is driven by our imagination. The history of nuclear terrorism can be briefly summarized: There has been none—although many would hasten

to add “yet.” Nuclear terror has its own rich, natural history that in fact reaches back even before the first explosion of a nuclear bomb in New Mexico; it is deeply embedded in our public mind and in our policy-making circles.

So when we talk about threat assessment, we have to be careful. Are we being driven by nuclear terror, or are we assessing nuclear terrorism? In fact, I will spin off one of Todd Masse’s remarks: In the eyes of some Americans right now, because of our economic crisis, the U.S. is at a particularly vulnerable moment, and therefore this would be an opportune time for al Qaeda to strike with a nuclear weapon. That may be true, but it leaves out the other part of the observation that assumes al Qaeda has a nuclear weapon and that timing is simply a matter of choice. The fact that this year is an opportune time compared with a less opportune time last year or a less opportune time two years from now is irrelevant to the assessment of al Qaeda’s capabilities. When it has a nuclear weapon—if it ever has a nuclear weapon—it will strike.

Three recent factoids point out how we really must make the careful distinction between nuclear terror and nuclear terrorism:

- According to a 2007 Harris poll, 42 percent of all Americans thought it likely and another 14 percent thought it highly likely that a nuclear bomb would explode in an American city in the next five years. That was 2007. It is now 2009—we have three years to go. Clearly, that assessment is inconsistent with our daily behavior. You cannot seriously believe that a nuclear weapon is going to go off in an American city within five years and still buy a home, reside, and raise your children there.
- In a September 2008 address, then-director of the Central Intelligence Agency (CIA), Michael Hayden, said that although Iran and North Korea have the capability to produce nuclear weapons, al Qaeda was the CIA’s top nuclear concern because it was most likely to use them. This declaration was quite interesting because we know that North Korea has nuclear weapons and we know that Iran has nuclear ambitions as well as a lot of centrifuges

and scientists, but the CIA's number one nuclear concern was al Qaeda because, as Hayden said, "The question is not of capability, but intent."

- In November 2008, the Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism indicated that the likelihood of terrorists using biological weapons or nuclear weapons in the next five years was 50/50. The Commission went on to give some perfectly sensible, preventive recommendations.

These three items were driven by three different motivations. The first—that a large percentage of Americans believe a nuclear attack is likely in the next five years—is simply driven by fear; the American public is terrified of a terrorist nuclear weapon.

The second item was obviously an assessment of intentions rather than capabilities; al Qaeda is our number one nuclear concern not because we necessarily believe it has a nuclear weapon, but we believe that if they had a nuclear weapon, it would likely use it—the concept of deterrence is very difficult to think about with al Qaeda, at least in the traditional application of that concept.

The third item is driven by the necessity for a call to action. Like all commissions, the Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism has no statutory authority. Its members have only power of persuasion; they have 15 minutes of fame, and they have to get people's attention and persuade them to do something within that short time frame. The Commission members involved declared a 50/50 percent likelihood of a nuclear attack as a summons to action.

THE PERCEPTION OF INEVITABILITY

When I wrote my book, *Will Terrorists Go Nuclear?* [3], I polled a number of people that I thought of as legitimate experts. These were people at the weapons labs, physicists at Sandia Laboratory and Los Alamos, intelligence specialists, and terrorism analysts. I asked: "What is the probability of a terrorist nuclear explosion in the next 10 years?" The estimates ranged from one in a

million to a virtual certainty. What is even more interesting is that there was no distribution curve; it was flat. There was no consensus conclusion. Another interesting result of my polling, which I did in both Europe and the U.S., was that if you considered the Americans separately from the Europeans, you saw strikingly different answers. For the Europeans alone, the probability was one percent. Some would argue that even the European-selected one-percent likelihood is more than enough for us to take serious precautions.

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The second question asked in the polls was: “Why has it not occurred yet?” These polls called for simple answers, not essays. The answers fell into two large categories: capabilities and intentions. Most Americans pointed to capabilities. Terrorists, they said, “do not have the capability.” The Europeans had a much more complex view and introduced the issue of intentions.

We tend either to view terrorists as mad dogs or to consign them to the realm of evil—no further inquiry necessary. Bruce Hoffman raised this point in his address, “Terrorism – from IEDs to WMDs.” I agree. We do not know enough about the enemy. Americans have a comic book, two-dimensional understanding that portrays terrorists as mindless villains, which leads us into what I would characterize as “ka-pow” strategies: not very thoughtful responses.

The Europeans have a bit more experience with terrorists. I am not sure they are necessarily right, but they have a very different picture. They see terrorists as far more complex beings in terms of their recruiting, radicalization, motivation, etc.

I do not believe a nuclear attack is inevitable. I do not believe there is any inexorable progression from terrorist truck bombs to terrorist atomic bombs. Estimates of probability are interesting, but they have no predictive value in themselves, so why do we

think in terms of probabilities? Opinion is divided here, too. We would hardly spend billions of dollars to prepare for an event that we thought was a one-in-a-million shot. Probabilities are related to perceptions and well-placed, authoritative calls to action.

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In calls to action, consequences trump probabilities. No matter what the estimates of probability are, forecasts are a murky area. However, consequences are concrete and quantifiable. If we consider an estimated death toll in the tens of thousands to hundreds of thousands, we would be looking at an event 100 times worse than the unfortunate losses from the attacks of 9/11. The death toll would exceed, in an instant, all of the fatalities suffered by the U.S. during World War II.

Apart from casualties, the direct damages from 9/11 ran to about \$50 to \$60 billion, and the overall economic impact was in the hundreds of billions of dollars. A nuclear attack would have a financial impact a hundredfold that of 9/11, potentially approaching the nation’s entire gross domestic product of about \$14 trillion. Of course, destruction at that level presumes a worst-case scenario. A 10-kiloton device detonated in the heart of Manhattan would compare to a nuclear 9/11 or an American Iwo Jima, two very popular terms in threat literature.

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TERRORIST CAPABILITIES

There is a great deal of debate about terrorist capabilities. Some say that a 10-kiloton device would really be extraordinary for terrorists to achieve; most likely, they might be capable of a

kiloton or tens of tons, if they achieved any yield at all. The debate, interestingly enough, is divided between the weapon designers and the weapon builders. Weapon designers—the people who do the math—tend to argue that this is easier than people think. However, the people who actually build the weapons—those you meet at Los Alamos who are missing a finger or something because of a machine accident—say, “No, even when you have the math right, this is really hard to do.”

I probably could not tell the difference between a diagram of a hydrogen bomb and a diagram of a soft-drink vending machine, so I have no particular opinion on this. Actually, I probably could: Vending machines take quarters; bombs do not. The point is—thinking of how we are dealing in the shadow of a cataclysm—the events of 9/11 fundamentally altered our perceptions of plausibility. Terrorist scenarios that were dismissed as far-fetched on 10 September became operative presumptions on 12 September. If terrorists could carry out the attacks of 9/11, then how could we dismiss anything? Thinking of all the possibilities has brought about a fundamental shift in how we assess terrorist threats. Traditional threat assessment is based upon some analysis of the adversaries’ intentions and capabilities. This technique was pretty straightforward during the Cold War. We could count Soviet tank divisions parked in the Fulda Gap and Soviet missiles and warheads; we knew they were pointed not at Paraguay, but at the U.S. So much for intentions; we knew capabilities. It was a calculation one could make.

In the current era of terrorism, we lack that kind of intelligence about enemy capabilities, as was demonstrated on 9/11. Therefore, the threat assessments shifted to vulnerability-based analysis. You start with a vulnerability, posit a hypothetical terrorist foe, and outline a scenario. Vulnerability-based analysis is perfectly legitimate if we are concerned with assessing consequences. If the terrorists were to do this (fill in the blank), what would be the consequences and how would we respond? Would we be prepared to deal with those consequences?

I give very few public lectures where I am not approached by someone after the lecture saying, “You know, if I were a terrorist,

I would..." It is extraordinary that even ordinary-looking people, e.g., librarians and bankers, can come up with extraordinarily diabolical schemes. There is a little armchair terrorist in all of us.

A vulnerability is not a substitute for threat, but it frequently becomes one. In many vulnerability analyses, you will see something that starts out as a possibility, and as you read through the report, it becomes a probability; you read further, and it becomes inevitable. By the time you are at the end of the report, it is imminent. This trend is a problem that has led to what I call threat advocacy.

The problem with vulnerabilities is that they are virtually infinite. All of us at this symposium could fill volumes with vulnerabilities and diabolical scenarios, but resources are finite. Competition for finite government resources leads to threat advocacies in which champions of particular scenarios assert themselves to capture resources because their threat must be worse than all the others and therefore must deserve greater attention and support.

"There is no terror in a bang, only in the anticipation of it." — Alfred Hitchcock

THE AMERICAN PSYCHE

Threat advocates are not fear mongers. The risks are real; action is necessary. However, our noisy democratic system responds to fear. This is a contest that nuclear terrorism easily wins. Alfred Hitchcock once said, "There is no terror in a bang, only in the anticipation of it." Americans are uniquely susceptible to nuclear terror. Part of it is the hangover from the Cold War, and the other part is a fundamental element of the American psyche. Todd Masse used an interesting phrase: "etched into the American psyche." How did this happen? What kind of acid etched this into the American psyche? How come we are so susceptible to it? Beneath our characteristic American optimism lies a lot of anxiety. We worry that America will lose its exceptional place in the world, we fear that our military will be challenged by new foes

against which we have little defense, and we fear that our borders no longer protect our territory or our culture. We fear subversion from within.

In some respects, we are a very religious country, and there are many Americans who see the threat of nuclear terrorism as consistent with biblical prophecy—a sign of the end plus, a confirmation of faith. Nuclear terrorism figures heavily in the fictional literature of popular religious writers. By the way, if you want to talk about writing a best seller, ask Hal Lindsey and Carole C. Carlson, the authors of the book, *The Late, Great Planet Earth*, published in 1970, which has sold 50 million copies, an extraordinary phenomenon.

Our current news networks have magnified this phenomenon. Because the news organizations today in this country increasingly look for sensational stories to hold their audiences, they contribute to the general sense of alarm. Unfortunately, this is reinforced by a relentless message of fear coming out of Washington—from both political parties, which have participated in the manufacture and dissemination of doom.

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Of course, terrorists are also active participants in this process. That is what terrorism is all about. It is what terrorists are good at. Terrorism is violence that is calculated to create an atmosphere of fear and alarm, which in turn causes people to exaggerate the threat that the terrorists pose and consequently the importance of their cause. They achieve this through violence but also through words and images. Bruce Hoffman correctly pointed out the influence of al Qaeda’s media jihad, with its hundreds of Websites and the ability to manipulate a narrative, a message of fear.

I think the most dramatic development in contemporary terrorism has not been terrorists' acquisition of new weapons—the weapons have changed relatively little in the past quarter century. It has been the Internet and the media skills that al Qaeda is providing to its affiliates and others around the world. What is interesting is that even as the operational capabilities of al Qaeda—or at least those of al Qaeda Central—have been somewhat degraded, its media campaign—its global media jihad—aimed at inspiring and instructing its followers has increased in volume and sophistication.

Online jihadis participate both as consumers and as co-producers, which has enabled al Qaeda to become the world's first "virtual terrorist nuclear power." We know that al Qaeda has nuclear ambitions. They have tried to obtain nuclear material, and they have talked about its use—from deterrents to an implied first-strike strategy. Insofar as we know (again that famous phase), they do not possess nuclear weapons. According to certain documents that have been discovered, they do not possess the knowledge to make them, but they have figured out that fomenting nuclear terror does not require possession of nuclear weapons at all.

There have been reports of internal debate within al Qaeda's planning circles about weapons of mass destruction. If they are true, these reports indicate that there were serious planners within al Qaeda who thought that weapons of mass destruction were a distraction, but they went along with the others who wanted to acquire them because the language of weapons of mass destruction could create fear. They concluded that "this is part capability and part illusion, and we are really good at creating illusion so we will hold onto this."

What al Qaeda does have is a very effective propaganda machine. Top leaders give official comments with increasing frequency, and then the second and third tiers of online jihadis—the powerless who fantasize about ultimate power—embellish this fantasy with calls to nuclear terror, nuclear threats, and vivid graphics. It becomes real.

If you look at the graphics on these Websites they are really fascinating. There is one of bin Laden poring over a map table, and if you look very closely, the map is of midtown Manhattan. If you look even closer, there are little orange blobs, which are little mushroom clouds at all of the iconic targets in New York. Another favorite theme in al Qaeda nuclear artwork—they should have an exhibit—is the U.S. Capitol building with the mushroom cloud of a nuclear explosion behind it. Another graphic features a mushroom cloud overlaid with the gaunt, bearded figure of Osama bin Laden himself. It is a kind of art, but its production provides a certain amount of psychological satisfaction. This is video-game stuff to a lot of the online jihadis. Naturally, we also view these graphics, and they contribute to our general alarm.

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CONCLUSION

We do have to take the possibility of nuclear terrorism seriously, even if the possibility of nuclear terrorism is a long shot. Nothing that I am saying here should in any way diminish the seriousness of concern, but we have to be careful not to succumb to nuclear terror.

Fear is not free. Fear can distort the way we address the threat of nuclear terrorism itself. We may too readily accept as real scenarios that merit debate. Fear tends to warp our judgment, both in our threat assessment and in our reaction. It is remarkable that we have serious scholars writing that in case of an imminent nuclear threat to the country—or heaven forbid—a nuclear explosion somewhere, the Constitution of the United States must be suspended and martial law must be declared. One wonders why the courts could not still be working, assuming they are outside the area of the nuclear blast.

Nonetheless, such a scenario has become a serious issue in today's thinking. It is extraordinary for me to think that this nation has dealt with civil war, the Cold War, and decades of confrontation with a Soviet superpower armed with tens of thousands of nuclear weapons, and yet it is this warped judgment, warped by nuclear terror, that has caused people to seriously consider the suspension of the Constitution. Again, nothing that I have discussed here should diminish the seriousness of the issue, but I want to underscore the difficulty of coming to a concrete, rational assessment of the threat.

REFERENCES

1. Graham Allison, *Nuclear Terrorism: The Ultimate Preventable Catastrophe*, New York: Henry Holt and Company, 2004.
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3. Brian Michael Jenkins, *Will Terrorists Go Nuclear?* Prometheus Books, 2008.