

# Introduction

## BEFORE THE MORNING AFTER

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### I. AMERICA IS THREATENED

In April of 1995, home-grown American terrorists parked a rented Ryder truck packed with fertilizer-based explosives outside the Federal Office Building in Oklahoma City.<sup>1</sup> As noted at trial, their objective was to deliver the weapons during a period in which they might get a high body-count.<sup>2</sup> They succeeded in killing 168 American men, women and children.<sup>3</sup>

Two years earlier, Sheik Rahman, an Egyptian Islamic cleric, and his collaborators rented a minivan, packed it with fertilizer-based explosives and parked it in the basement of the World Trade Center.<sup>4</sup> They anticipated that the resulting blast would cause one World Trade Center tower to fall on the other.<sup>5</sup> The trial revealed that their ultimate targets were not just the World Trade Center, but also the United Nations building, the Federal Office Building in lower Manhattan, the George Washington Bridge and the Lincoln and Holland

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1. See Jo Thomas, *After Two Years, Bombing Trial is Set to Begin*, N.Y. TIMES, Mar. 30, 1997, § 1, at A1.

2. See Pete Slover, *McVeigh Admitted Bombing, Memos Say; His Attorney Disputes Document's Credibility*, DALLAS MORNING NEWS, Mar. 1, 1997, at A1.

3. See Thomas, *supra* note 1, at 1.

4. See Ralph Blumenthal, *The Twin Towers: The Overview; Inquiry Traces Suspect to Occupied Territories*, N.Y. TIMES, Mar. 7, 1993, § 1, at 38; Mary B.W. Tabor, *Specter of Terror: U.S. Indicts Egyptian Cleric as Head of Group Plotting "War of Urban Terrorism,"* N.Y. TIMES, Aug. 26, 1993, at A1.

5. See Alasdair Palmer, *Man with 10 Faces Stands Trial for New York Bomb*, DAILY TELEGRAPH, May 12, 1996, at 23.

tunnels.<sup>6</sup> They hoped to kill a large number of Americans. If they had parked their minivan in the right place, they could have killed forty thousand people.<sup>7</sup>

The Aum Shinrikyo attack, too, makes chilling reading. In Tokyo, Japan, normally thought to be an orderly city, a religious sect called Aum Shinrikyo operated a chemical weapons factory.<sup>8</sup> The sect also had a fifty thousand-acre farm in Australia where they attempted to mine uranium and tested their chemical weapons on sheep.<sup>9</sup> Well-funded, with \$1 billion in the bank, the sect actively searched for nuclear materials in Russia.<sup>10</sup> Their mission was to destroy the Japanese government.<sup>11</sup>

The Oklahoma City, World Trade Center, and Aum Shinrikyo examples remind us that the threats of megaterrorism<sup>12</sup> are not mere hypotheticals. Imagine the result if the World Trade Center van, or the Oklahoma City truck, were packed not with fertilizer-based explosives, but with a thirty-pound lump of highly-enriched uranium, about the size of a grapefruit. With that lump, technology available from Radio Shack, a design off the internet, and a couple hundred thousand dollars, the bombers would be equipped to accomplish their missions. The Oklahoma City bombers would have entirely leveled Oklahoma City. The World Trade Center bombers would have leveled Wall Street and the entire tip of Manhattan up to Gramercy Park.<sup>13</sup> A second circle of destruction would look like the federal office building in Oklahoma City—with very few survivors inside.<sup>14</sup>

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6. See Richard Bernstein, *Bomb Plot Defendant Shifts Plea to Guilty and Implicates Others*, N.Y. TIMES, Feb. 7, 1995, at A1.

7. See Tom Mashberg & Michael Rezendes, *World Trade Center Rocked by Bomb*, BOSTON GLOBE, Feb. 27, 1993, at 1.

8. See *Global Proliferation of Weapons of Mass Destruction: A Case Study on the Aum Shinrikyo: Hearings Before the Comm. on Governmental Affairs*, 104th Cong. 89 (1995) (statement of the Staff of the Subcomm. on Investigations).

9. See *Australia Believes Sect Tested Gas on Ranch*, N.Y. TIMES, May 12, 1995, at A9.

10. See William J. Broad, *Seismic Mystery in Australia: Quake, Meteor, or Nuclear Blast?*, N.Y. TIMES, Jan. 21, 1997, at C1.

11. See Norman Kempster, *U.S. Vulnerable to Cult Attacks, Senator Nunn Says*, L.A. TIMES, Oct. 16, 1995, at A8; Nicholas D. Kristof, *A Guru's Journey—A Special Report; The Seer Among the Blind: Japanese Sect Leader's Rise*, N.Y. TIMES, Mar. 26, 1995, § 1, at 1.

12. Terrorism using a weapon of mass destruction such as chemical, biological or nuclear weapons.

13. See GRAHAM T. ALLISON ET AL., *AVOIDING NUCLEAR ANARCHY* 1 (1996).

14. See *id.*

## II. WHAT IS THE THREAT?

These three examples answer this question quite vividly. However, conventional wisdom in American politics and most public opinion continues to repeat a mantra: We face no direct threats to the United States today in the aftermath of the Cold War.<sup>15</sup> President Clinton voiced this view in the State of the Union message last February, stating that there are no direct threats to American security today.<sup>16</sup> Contrast this with the answer FBI Director Louis Freeh gave at a Congressional hearing when he was asked whether the United States is under a greater threat from nuclear detonation now than at the height of the Cold War. He answered bluntly,

[I]f you describe that nation as a criminal, or terrorist, or rogue operation, I think the answer would be yes. The controls that were in place for many of these weapons and structures [during the Cold War] don't apply to a terrorist or organized criminal, or an opportunist who could get access to them.<sup>17</sup>

The greatest external threat to American lives and liberties today is the threat of "loose nukes"—the theft and sale of Russian weapons or weapons-useable material to a terrorist group or rogue state. For the first time in history, we can trace a very plausible path by which a terrorist group, like Sheik Rahman or the Oklahoma City bombers, could acquire a crude nuclear device and use it against an American target, at home or abroad.

## III. WHY NOW?

If the Cold War is over and our nuclear nemesis has "retargeted" its nuclear weapons, why does a nuclear threat still hang over us?

The answer is that the demise of the Soviet Union left behind an arsenal of thirty thousand nuclear warheads and seventy thousand nuclear weapons-equivalents—lumps of highly-enriched uranium and plutonium.<sup>18</sup> These items are now located in a society convulsed by a revolution whose central control systems cannot even collect taxes. Russian society has become increasingly free, increasingly chaotic,

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15. *See id.*

16. *See* President's Address Before a Joint Session of Congress on the State of the Union, 33 WKLY. COMP. PRES. DOC. 136, 136 (Feb. 10, 1997).

17. *Int'l Crime And Terrorism: Hearings Before the House Comm. on Int'l Relations*, 105th Cong., available in Washington Alert, Transcripts Library, Congressional Hearings File (1997) (statement of Louis Freeh, Dir. of the FBI).

18. *See* 138 CONG. REC. H4135-01 (daily ed. June 4, 1992) (statement of Rep. Burton).

and increasingly criminalized.<sup>19</sup>

For example, Dr. Nachaev, the head of Chelyabinsk, one of the two major weapons-design facilities in Russia,<sup>20</sup> committed suicide last year.<sup>21</sup> He had been making nuclear weapons for the past twenty years, running the equivalent of America's Los Alamos or Livermore.<sup>22</sup> He left a suicide note which read, "I can no longer fulfill my professional responsibilities."<sup>23</sup> He had taken out a loan the prior year to pay the thirty thousand scientists and technicians he employed. Because he was unable to repay the loan and pay his employees, he killed himself.<sup>24</sup> Mr. Nachaev could have taken other desperate measures. He could have put twenty weapons or weapons-equivalents into an airplane and flown to Iran or Iraq or Afghanistan, or any number of other locations.

Another example of conditions in Russia today is reflected in the prosecution of Mr. Klevnov. Mr. Klevnov, the Chief of Staff of the Russian Navy, is being prosecuted by the Pacific Fleet for misappropriations from the sale of ships to South Korea.<sup>25</sup> He claims that he was going to use the money for building houses for his men.<sup>26</sup> The head of the Pacific Fleet of Russia could have chosen to sell something other than ships without a problem.

In Russia today, the good news is an explosion of freedom. The prison walls have been broken down.<sup>27</sup> The bad news is that the people who are charged with arming, protecting and managing a vast superpower nuclear arsenal are now free to do most anything they choose.<sup>28</sup>

#### IV. WHY HAS MORE NOT YET HAPPENED?

The answer to this question remains a puzzle. For a long time people have tried to convince one another that terrorists lack the mo-

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19. See R. Adam Moody, *Armageddon for Hire*, INT'L DEF. REV., Feb. 1, 1997, at 21.

20. See generally 138 CONG. REC. S3756-01, S3760 (1992).

21. See Grigory A. Yavlinsky, *Death of a Scientist*, N.Y. TIMES, Nov. 15, 1996, at A2.

22. See *supra* note 20.

23. Yavlinsky, *supra* note 21, at A2.

24. See *id.*

25. See *Russian General Arrested in Alleged Military Corruption*, Associated Press, July 11, 1997, available in 1997 WL 4874538.

26. See *id.*

27. See ALLISON ET AL., *supra* note 13, at 1-2 (describing the impact of the 1989 fall of the Berlin Wall on the Soviet Union).

28. See *id.* at 2, 11, 36-37.

tivation to kill a large number of people.<sup>29</sup> Terrorists want to kill only a few because they are trying to focus attention on their cause rather than to destroy just for the sake of being destructive.<sup>30</sup> But Sheik Rahman and Aum Shinrikyo are exceptions.<sup>31</sup> Indeed, some ethically-motivated or “millennial” groups actually have as part of their mythology a vast catharsis, a destruction of large groups.<sup>32</sup>

One deterrent to a further increase in terrorist activity has been higher levels of professionalism among the Russians charged with containing and controlling these materials than one would have reasonably hoped for.<sup>33</sup> There are thousands of people in Russia today who could take, at their own discretion, weapons or weapons-equivalents and become rich.<sup>34</sup> Considering that Russian nuclear workers have not been paid regularly,<sup>35</sup> it is fairly remarkable that many of them do their jobs. It is something for which we should be thankful.

Another deterrent is that terrorists need to be competent, and fortunately, many of the groups that would like to be very destructive are not very effective. Sheik Rahman’s people parked their van in the wrong place.<sup>36</sup> They had no structural engineer as part of their

29. See John F. Sopko, *The Changing Proliferation Threat*, FOREIGN POL’Y, Dec. 1996, at 3, 11 (stating that “For years it was thought that terrorist groups imposed some self-restraint. As espoused by terrorism experts, terrorists or their state sponsors did not want to cause too many casualties, as it would destroy sympathy and support for their cause.”).

30. See Gavin Cameron, *Nuclear Terrorism: A Real Threat?*, 8 JANE’S INTELLIGENCE REV. 422, 424 (1996) (stating that “Mass murder is a relatively rare terrorist phenomenon since, in most cases, killing a handful is as effective for achieving group goals.”).

31. See *id.* at 424-25 (stating that “Religious terrorist groups appear to have a higher level of lethality than most other types of groups . . . Religion . . . can morally justify and even require the sort of indiscriminate violence that most secular terrorists would regard as immoral and counter-productive.”).

32. See generally Sopko, *supra* note 29, at 11 (stating that “[R]eligious . . . or simply politically disaffected groups have become more aggressive in seeking to further their aims by using weapons that cause large-scale casualties.”).

33. See, e.g., Owen R. Coté, Jr., *The Russian Nuclear Archipelago*, in GRAHAM T. ALLISON ET AL., AVOIDING NUCLEAR ANARCHY 177, app. A, at 188 (1996) (describing the discovery by Kazakh officials of 600 kilograms of HEU that “fell through the cracks” of the nuclear material accounting system of the FSU); ALLISON, *supra* note 13, at 30-31 (stating that the Russian military “has done a remarkably good job under extremely difficult circumstances” of guarding its inventory of nuclear weapons).

34. See generally ALLISON ET AL., *supra* note 13, at 28-29, 40, 48 (stating that both among ordinary Russian citizens and the special troops assigned to guard weapons storage facilities, “harsh economic conditions can create incentives for nuclear theft and smuggling.”).

35. See *id.* at 28 n.17.

36. See Matthew Wald, *Figuring Out What It Would Take To Down A Tower*, N.Y. TIMES, Mar. 21, 1993, §4, at 5.

group.<sup>37</sup> Aum Shinrikyo had an ineffective dispersal mechanism for the gases that it tried to release in the Tokyo subway.<sup>38</sup> However, one would not want to count on such ineffective planning.

Finally, the countermeasures that the United States has employed have made a significant difference. The Central Intelligence Agency does a good job trying to muddy the markets, so that the people who are trying to buy or to sell weapons, or weapons-useable material, believe they might be caught. In *Avoiding Nuclear Anarchy*, a book written by me and three of my colleagues at Harvard,<sup>39</sup> we document six public cases in which people attempting to sell stolen weapons-useable material were caught.<sup>40</sup> These are the cases we know about. There are dozens of additional cases that are not publicly documented.<sup>41</sup> What should concern us most are the cases that we do not know about. We are living on borrowed time.

## V. WHAT SHOULD WE BE DOING ABOUT IT?

The short answer is that we should ask ourselves what we would do on the morning after the first nuclear terrorist incident.

First, we would recognize this as a Category One<sup>42</sup> threat. The assertion that there are no direct threats to the United States today in the aftermath of the Cold War would be meaningless.

Second, we would mount a high-priority, all-azimuth program of action appropriate to a Category One threat, the same way our Defense Department does in other domains,<sup>43</sup> and the way our society can do when we mobilize ourselves. The fourth section of our book, *Avoiding Nuclear Anarchy*, details a very extensive program,<sup>44</sup> but here let me lay out the most pressing opportunities for action.

The Bush administration negotiated a contract with the Russian

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37. See Peter Benesh, *The Terrors of the Earth*, PITT. POST GAZETTE, Sept. 28, 1995, at A1.

38. See Sopko, *supra* note 29, at 8 (stating that the "crude" delivery system used by Aum Shinrikyo "consisted of plastic bags of sarin punctured by the tips of umbrellas").

39. See ALLISON ET AL., *supra* note 13.

40. See *id.* at 23-27.

41. See *id.* at 23-24.

42. A threat that would trump all others. In the case of U.S. dealings with Russia and other former Soviet Republics, it would be considered to be more important than, for example, promoting democracy, or even stabilizing the economy.

43. See Lieutenant Col. Winters, *The 1994 United States National Security Strategy*, ARMY LAW., Jan. 1995, at 62.

44. See *id.* at 147-76.

government to buy five hundred tons of highly-enriched uranium,<sup>45</sup> which is about half of the uranium left in that country. The contract is being implemented, but very slowly.<sup>46</sup> Presently, it is a \$12 million contract over twenty years, but it would be about half that price if it were executed now.<sup>47</sup> We should buy the material in the next two to four years and dilute it to low-enriched uranium so that it could be used as fuel rods in civilian reactors. What we buy and take becomes secure only when it reaches our soil. For example, we bought one thousand pounds of highly-enriched uranium that had been left in Kazakhstan and is now in Oak Ridge, Tennessee.<sup>48</sup>

However, the problem is not about the material we buy, but rather the material left behind. Therefore, we should strictly condition our willingness to buy and take on specific steps that Russia must take toward securing the leftover material. The key words are: buy, take, and condition. Russia should concentrate the remaining material in the fewest possible locations and control those locations like a bank vault.<sup>49</sup> Control systems should also be implemented and include regularly paying the guardians of these materials, since no physical control system is invulnerable if the people who are running the system are starving.

Some may argue that Russia would never agree to this plan or that the plan is impossible to execute.<sup>50</sup> However, the example of the International Monetary Fund (IMF) demonstrates a successful analogue and suggests otherwise.<sup>51</sup> The IMF provides substantial sums of money to Russia, but strictly conditions the receipt of that money upon specific actions required of the government. The action-reward

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45. See generally Agreement Between the Government of the United States of America and the Government of the Russian Federation Concerning the Disposition of Highly Enriched Uranium Extracted from Nuclear Weapons, Feb. 18, 1993, U.S.-Russ., Hein's No. KAV 3503, Temp. State Dep't No. 93-59.

46. For a comprehensive look at the HEU Deal, see Richard A. Falkenrath, *The HEU Deal*, in ALLISON ET AL., *supra* note 13, app. C.

47. See *id.*

48. See R. Jeffrey Smith, *Kazakhstan had Lax Security; Americans Detail Story of Uranium Removal*, WASH. POST, Nov. 24, 1994, at A52.

49. For a discussion of the problems with multiple storage locations, see generally Coté, *supra* note 33.

50. But see, e.g., David A. Koplow & Philip G. Schrag, *Carrying a Big Carrot: Linking Multilateral Disarmament and Development Assistance*, 91 COLUM. L. REV. 993 (1991) (finding the use of the IMF to be a mistake).

51. For an article finding the use of the IMF to be a mistake, however, see Cynthia C. Lichtenstein, *Aiding the Transformation of Economies: Is the Fund's Conditionality Appropriate to the Task?*, 62 FORDHAM L. REV. 961 (1994).

connection is tight and systematized. It involves a monthly loan of \$340 million<sup>52</sup> conditioned on Russia meeting specific requirements regarding collecting taxes, fighting terrorism, adjusting their budget, and paying wages.<sup>53</sup> When Russia fails to meet the requirements, the IMF withholds the loan.<sup>54</sup> These requirements are both in Russia's interest and in the interest of the world and the IMF. The action-reward connection has lowered inflation from about 2500% a year in 1992 to less than 20% a year currently.<sup>55</sup> This effect is a success more striking than one could have imagined.<sup>56</sup> Using a similar program, we must convince Russia, which now does not make control of loose nuclear weapons or weapons-usable material a priority, to take adequate actions to stabilize and secure its nuclear arsenal and stockpile.

This year, or next year, when Americans find themselves victims of a nuclear terrorist threat, how will the nation account for its behavior? Certainly the President, the leaders of Congress, and the public will not be able to claim credibly that they did not really know of such a threat. We must act now—before the morning after.

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52. In 1996 the IMF began a new three-year loan program worth \$10 billion, or \$280 million a month. See *IMF to Resume Russian Loans*, FIN. TIMES (London), Apr. 4, 1997, News-Europe at 2, available in LEXIS, News Library, Fintime File.

53. For an article describing the concept, see Irene A. Belot, Note, *The Role of the IMF and the World Bank in Rebuilding the CIS*, 9 TEMPLE INT'L & COMP. L.J. 83 (1995).

54. For a recent case where loans to Russia were suspended, see *IMF to Resume Russian Loans*, supra note 52, at 2; see also *IMF Releases 700 Million Dollar Loan Installment to Russia*, Agence France Presse, Sept. 4, 1997, available in LEXIS, News Library, AFP File.

55. See *Russia Brings Down Inflation*, FIN. TIMES (U.S.), Jan. 7, 1997, News-Europe at 2, available in LEXIS, World Library, Fintime File. For a report on inflation for 1997, see *Inflation down in Russia*, FIN. TIMES (London), May 2, 1997, News-Europe at 2, available in LEXIS, World Library, Fintime File. For a somewhat negative view regarding future inflation in Russia, see *Ruble Re-denomination Expected to Fuel Inflation*, J. COM., Aug. 12, 1997, Finance at 2A, available in LEXIS, News Library, JOC File. For a technical treatment of inflation in Russia, see generally BRIGITTE GRANVILLE & JUDITH SHAPIRO, RUSSIAN INFLATION: A STATISTICAL PANDORA'S BOX (The Royal Institute of International Affairs Discussion Paper No. 53, 1994); see also BRIGITTE GRANVILLE & JUDITH SHAPIRO, LESS INFLATION, LESS POVERTY: FIRST RESULTS FOR RUSSIA (Royal Institute of International Affairs Discussion Paper No. 68, 1996).

56. See generally *Impact of IMF/World Bank Policies Toward Russia and the Russian Economy: Hearing before the Senate Comm. on Banking, Hous., and Urban Affairs*, 133rd Cong. (1994). For an early account of the result of the economic reforms, see generally BRIGITTE GRANVILLE, THE SUCCESS OF RUSSIAN ECONOMIC REFORMS (1995). For a more recent account, see generally NICOLAS H. STERN & JOHN HICKS, THE TRANSITION IN EASTERN EUROPE AND THE FORMER SOVIET UNION: SOME STRATEGIC LESSONS FROM THE EXPERIENCE OF 25 COUNTRIES OVER SIX YEARS (European Bank for Reconstruction and Development Working Paper No. 18, 1997).