

**Crying Wolf?**  
**Assessing Unconventional Terrorism**

Marianne van Leeuwen

September 2000

NETHERLANDS INSTITUTE OF INTERNATIONAL RELATIONS  
'CLINGENDAEL'

CIP-Data Koninklijke bibliotheek, The Hague

Leeuwen, Marianne van

Crying Wolf? Assessing Unconventional Terrorism / M. van Leeuwen – The Hague,  
Netherlands Institute of International Relations *Clingendael*.  
Clingendael-Study  
ISBN 90-5031-077-X

*Desk top publishing by Kitty l'Ami and Wilma Singeling*

Netherlands Institute of  
International Relations *Clingendael*  
Clingendael 7  
2597 VH The Hague  
Phonenumber # - 31 - 70 - 3245384  
Telefax # - 31 - 70 - 3282002  
P.O. Box 93080  
2509 AB The Hague  
E-mail: [research@clingendael.nl](mailto:research@clingendael.nl)  
Website: <http://www.clingendael.nl>

The Netherlands Institute of International Relations *Clingendael* is an independent institute for research, training and public information on international affairs. It publishes the results of its own research projects and the monthly 'Internationale Spectator' and offers a broad range of courses and conferences covering a wide variety of international issues. It also maintains a library and documentation centre.

© Netherlands Institute of International Relations *Clingendael*. All rights reserved. No part of this book may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the copyright holders. *Clingendael* Institute, P.O. Box 93080, 2509 AB The Hague, The Netherlands.

# Introduction

---

With the end of the Cold War, the biggest threat of that era – nuclear war between the United States and the Soviet Union – faded away from public perception. Although recently a number of serious political disagreements between Russia and the West have to some extent rekindled worries about nuclear war between Western powers and Russia, these worries have not nearly reached their former prominence in the strategic thinking of major civilian or military leaders in the world.

In the United States in particular, during the past ten years or so policy-makers and opinion-leaders have (re)discovered a series of “smaller” problems to fill the threat gap. Top security risks are deemed to be: the proliferation of unconventional weapons – biological, chemical and nuclear – to rogue states;<sup>1</sup> an increase in the

---

1) The term “rogue state” has been made current by US administrations. It denotes a political regime that on a structural basis violates human rights, bullies its neighbors, seeks to produce unconventional weapons and supports international terrorism. (Rogues also tend to defy the United States). Rogue states are frequently the target of international boycotts. In June 2000, US Secretary of State Albright, pleased with the apparent rapprochement between South Korea (an American ally) and North Korea (a rogue) changed the label “rogue state” into the milder “state of concern.” For clarity’s sake, “rogue state” will be used in this text.

viciousness and lethality of international terrorism in general; and particularly terrorist use of biological, chemical, nuclear (or radiological) devices.

This study focuses on the current public debate concerning terrorism with unconventional means. The debate has been and still is dominated by scholars and to a lesser degree by policy-makers from the United States, but European experts have also contributed stimulating arguments. It may be noted that terrorism, including terrorist use of unconventional weapons, is an issue on various agendas for transatlantic security cooperation. This suggests that the debate matters, politically and academically, on the European side of the Atlantic as well.

This study is based on the hypothesis that a public debate in which prominent opinion-leaders participate will influence the way in which democratic governments, politicians and security experts formulate and implement policy. The quality of such a debate is not only of academic interest. It has a political importance. This may be especially true if, as is the case with our subject, the availability of relevant data from real-life incidents is small and the room for theorizing consequently relatively large.

The leading theme in this Clingendael Study, then, concerns the quality of the public debate about terrorist use of biological, chemical, nuclear or radiological weapons. The conclusion is reached that in the United States in particular, the debate has stimulated an atmosphere of ill-defined alarm rather than creating the right conditions for well-considered and effective counterterrorist policies. It will be argued that part of the explanation may be found in the circumstance that opinion-leaders have been concentrating on technical capabilities while sidestepping the equally important issue of incentives and motivations.

In order to substantiate the conclusion, the study explores the evolution of the arguments over the past twenty-five years. Opinion-leaders have raised four pivotal questions: (1) are terrorist organizations technically able to obtain and use biological, chemical or nuclear weapons?; (2) what incentives might lead them to use such weapons?; (3) in what ways might they apply them?; and (4), considering the answer to those three questions, how likely is it that the world will witness unconventional terrorist attacks with massive effects in the near future? The answers are analyzed. Moreover, an attempt is made to explain the development of the arguments by placing them in a wider societal context.

# 1 The history of a Fear

---

Approaching a topical subject from the past may not necessarily be the best way of introducing it. In this case, however, it turns out to be illuminating to go back some twenty-five years and follow the evolving history of the public debate on terrorist use of unconventional weapons. For one thing, the exercise puts the alleged novelty of unconventional terrorist threats in sobering perspective. It is, furthermore, important to see how the gist of many analyses was clearly influenced by a specific period's various societal or security problems. That raises the question of whether and how inadvertently – or not so inadvertently – our perspectives on terrorism are being colored in the same way today. It is, finally, instructive to trace how some arguments have been tenaciously held over the entire period in spite of their incongruity, while, in other respects, the evolution of the debate demonstrates a learning process.

The following short survey of older literature is impressionistic. A limited number of characteristic publications by leading scholars have been selected to illustrate the evolution of the debate.<sup>2</sup> In order to organize this brief survey, the year 1995 has been chosen as a dividing line between earlier and “topical” trends in literature because in March of that year the first – and until now only – major terror-

---

2) See annex I for the bibliographical data.

ist attack with a weapon of mass destruction was mounted, with limited success. Members of the Japanese Aum sect attempted to poison a busy Tokyo metro junction by using the nerve agent sarin, produced by their own staff.<sup>3</sup> Their aim was to kill as many passengers as possible. As it turned out, fatalities were low, although thousands were temporarily or even permanently injured. Since then, analyses of the risks of terrorist use of weapons of mass destruction have lost at least some of their previously entirely theoretical character, although the distinction between “before” and “after” the attack should not be exaggerated.<sup>4</sup> The year 1995 will also be used as a landmark with regard to the parameters influencing the public debate on the subject.

### **Parameters (1975-1995)**

As shall be discussed in more detail in the paragraphs on predictions and perceptions, in the 1970s concern about terrorist use of unconventional weapons was concentrated almost exclusively on *nuclear* terrorism. In the 1980s the imminence of nuclear terrorism seemed gradually to recede in the perceptions of analysts, yet the threat itself continued to be seen by many as feasible and potentially extremely dangerous. During this period, the risk that *chemical or biological* weapons might fall into the hands of terrorists with mass murder on their minds was hardly discussed at all. At the end of the 1980s, this began to change.<sup>5</sup> During the early 1990s, the dangers of biological or chemical terrorism became major concerns. By then, the risk of nuclear terrorism, specifically the use by terrorists of nuclear explosives, was widely considered to be the least likely of the three, and receded further into the background.

### *International terrorism*

- 
- 3) This notorious attack will be dealt with in more detail below.
  - 4) On the question of whether the attack has ushered in a new era in terrorism, see J.F. Pilat, “Prospects for NBC Terrorism after Tokyo,” in: Roberts (1997), pp. 2-4; also Brian M. Jenkins, “Understanding the Link between Motives and Methods” and Anthony Fainberg “Debating Policy Priorities and Implications,” in the same publication, pp. 43, 44, 48 and 78, respectively.
  - 5) See, for instance, Leventhal and Alexander (1987), p. 14. The passage is characteristic of the no more than fleeting attention given to chemical and biological hazards at this stage.

There have been major circumstantial factors influencing the themes and directions of the historical debate on nuclear terrorism. To begin with, during the 1970s and 1980s international terrorism *in general* was a prominent security issue, arguably more so than during the early 1960s or early 1990s, when the occurrence of terrorist attacks was low. Twenty-five years ago, public attention was high, while governments were wrestling with the question of how to deal effectively with the problem. The worries about nuclear terrorism thus fitted into a wider, deeply felt concern about terrorism in general.

The virtually worldwide outbreaks of terrorist actions during the 1970s have rightly gained that period the qualification of Decade of Terrorism.<sup>6</sup> In Latin American countries such as Uruguay, Brazil, Argentina, Colombia and Venezuela, terrorist or guerrilla activities since the late 1960s have claimed hundreds of victims. As far as the political ambitions of the terrorists were concerned, the effects were counter-productive: their actions were instrumental in helping right-wing (military) dictatorships into the saddle. In Europe and in Japan, extremist left-wing groups such as the Rote Armee Fraktion or Baader Meinhof group in Germany, the Brigade Rosse in Italy and the Japanese Red Army kidnapped, hijacked and murdered their way into public attention – without succeeding in bringing about the downfall of capitalism. Driven by incentives of frustrated nationalism and sometimes also by socialist ideals, the Irish Republican Army (IRA), the Basque Euzkadi Ta Askatasuna (ETA) and a number of Palestinian groups, most of them linked to the Palestine Liberation Organization (PLO) followed very much the same course. They did so with mixed success, but certainly with the result that their nationalistic desires were noticed worldwide. For the Palestinians, in particular, this attention in itself was indeed a major achievement. While the ETA mainly limited its actions to Spain (including the Basque province) and the IRA focused on targets in Great Britain, Palestinian terrorists adopted a wider range of action, covering Europe and the Middle East. Organizations from the two major categories (extreme left and radical nationalists) frequently cooperated. In the United States, radical left-wing groups and black rights organizations such as the Weathermen and the Black Panthers were responsible for a lot of terrorist violence, while Americans abroad were frequently targeted, mainly by Palestinian terrorists. In short, during the 1970s terrorism was internationally experienced as a pressing security problem.

---

6) A fine survey in Laqueur (1999), pp. 8-48.

### *Nuclear energy*

Secondly, there was increasing concern and unease about the negative side effects of civilian use of nuclear energy. With the growing role of nuclear power stations in generating electricity, especially during the 1970s, the problem of storing nuclear waste gained urgency. The reprocessing of irradiated fuel on an industrial scale also caused public anxiety about concomitant risks for the environment and the health of people living near such plants. The ill-fated plans for a second generation of reactors built on the principle of fast breeding of plutonium only strengthened such fears, as did notorious accidents as in the United States at the Three Mile Island reactor in March 1979, or in the Ukraine at the Chernobyl nuclear power station in April 1986. In addition, the effectiveness of safeguards on sensitive nuclear material and installations was questioned, as reports started to circulate about instances where large amounts of such material had gone missing.

Finally, the 1970s and early 1980s saw many protest demonstrations, some of them fairly aggressive in nature, against the use of nuclear energy for civilian purposes, and against the nuclear arms race between the superpowers. Some of these demonstrations highlighted flaws in the security that surrounded civilian or military installations containing nuclear materials or weapons. Concern about nuclear terrorism thus fitted into more general concerns about the accidental destructive side-effects of civilian use of nuclear power, and the intentional destructive potency of nuclear-weapon states.

During the 1980s a number of developments gradually steered the public debate on unconventional terrorism in new directions. Nuclear issues in general lost poignancy because since the early years of the 1980s the previous prognoses of the demand for nuclear power to generate electricity had to be lowered dramatically. The end of the Cold War and the presumed end of rivalry between the United States and Russia also heralded an era of substantial nuclear arms reductions in those countries in the second half of the 1980s.

### *Rising concerns about chemical and biological proliferation*

From the late 1980s onward, new efforts were being made to strengthen the international regimes countering nuclear, chemical and biological proliferation. These efforts produced qualified successes. In 1993, the Chemical Weapons Convention (CWC) was concluded,<sup>7</sup> which provided for the establishment of an international control regime and the destruction of existing weapon stocks. Since 1994, difficult

---

7) In 1997 the conditions for implementation of the CWC were met and the treaty went into force.

but not entirely discouraging negotiations were held to fortify the Biological and Toxin Weapons Convention (BTWC) through the formulation and implementation of an effective verification protocol.<sup>8</sup> In 1995, the Nuclear Non-Proliferation Treaty (NPT)<sup>9</sup> was extended indefinitely. China and France by then had ratified the NPT, as had Argentina and a number of the Soviet Union's successor states. In the same period, South Africa gave up its nuclear weapons program and joined the NPT. Brazil joined shortly after, thus substantially lowering the risks of nuclear proliferation in Latin America. As North Korea threatened to violate its obligations under the NPT, the United States intervened. As a result, an agreement was reached in 1994.<sup>10</sup> In exchange for substantial economic help, including support for the modernization of its civilian nuclear infrastructure and other provisions for the country's pressing energy needs, North Korea agreed to comply fully with its obligations under the Treaty.

In a related development, it looked in 1995 as if negotiations on a Comprehensive Nuclear Test Ban Treaty might succeed.<sup>11</sup> In short, the first half of the 1990s was an era of relative optimism about the future of the official international non-proliferation regimes. During the second half of the decade this optimism was gradually to unravel.

Still, the sky had started to cloud over even then. While concerns about nuclear hazards decreased from the early 1980s until the mid-1990s, worries about the use of chemical and biological weapons increased. These concerns, however, were focused not so much on use by superpowers as by rogue states. Already during the 1980s there were indications that horizontal chemical proliferation, mainly to developing states, was gaining speed.<sup>12</sup> The terrible accident in a chemical plant in the Indian city of Bhopal in 1984 may have initiated increasing awareness of the potential dangers.<sup>13</sup> But the main impetus no doubt came from the wars in the Gulf region. During the first Gulf War, which raged between Iran and Iraq for the largest part of the 1980s, both sides deployed chemical weapons against hostile troops, while the

---

8) The BWC was concluded in 1972 and went into force in 1975. Negotiations about a verification protocol are still going on today.

9) The NPT was concluded in 1968 and went into force in 1970 for a first period of 25 years.

10) See, for instance, A. Mack, "Nuclear End-Game on the Korean Peninsula," in: Marianne van Leeuwen (ed.), *The Future of the International Nuclear Non-Proliferation Regime* (Dordrecht: Martinus Nijhoff, 1995), pp. 15-56.

11) The text of the CTBT was indeed finalized in 1996.

12) Spiers (1994), pp. 18-41.

13) Details about Bhopal on the website of the Organization for the Prohibition of Chemical Weapons (OPCW): <<http://www.opcw.nl/chemhaz/chemacci.htm>>.

Iraqi leader also used chemical means against Kurdish civilians.<sup>14</sup> Anxiety about chemical and biological weapons, however, rose much higher still during the Kuwait war of 1991. It was generally feared at the time that Iraq might use chemical weapons against the coalition of forces opposing it, and against Israel. Concerns climaxed when after the military defeat of Baghdad, IAEA and United Nations inspectors discovered and revealed the full size and contents of Iraq's programs. As it turned out, Saddam Hussein's regime had developed major programs for the production of nuclear, chemical and biological weapons, and had made more progress than had been anticipated even in pessimistic evaluations. Iraq's enemies, it was widely felt, had escaped disaster by the skin of their teeth. Iraq's invasion of Kuwait offered the United States and its allies a unique opportunity to reverse the danger. They forced the Iraqi rulers to accept a straitjacket of inspections and arms demolitions. Even so, the aftermath of the Second Gulf War was discouraging from a counterproliferation point of view. Iraq's defeat did not lead to a change in government in Baghdad. Its weapon designers were not apprehended. The tenacious Iraqi leadership used every trick in the book to thwart the UN inspectors.

### **Predictions (1975–1995)**

A survey of the literature shows how the imminence of nuclear terrorism was stressed at various intervals ever since the early 1970s. In 1975 Brian Jenkins, an internationally acclaimed authority on terrorism, addressed the issue. Nuclear terrorism, he argued, *if* it occurred would probably take the form of low-level nuclear incidents. Actions such as threatening conventional attacks on nuclear power reactors; theft of radioactive waste, car-napping vehicles transporting nuclear fuel, etc., would not be too demanding technically. Terrorists could reach the desired nuclear shock effect on the general public and policy-makers without resorting to (or threatening) the use of nuclear explosive devices.<sup>15</sup> In 1979 the American political scientist Louis René Beres wrote in far blacker terms about five "harbingers" of nuclear terrorism: terrorist access to weapons of mass destruction; terrorist orientations to nuclear violence; terrorist insensitivity to traditional threats of deterrence; cooperation amongst terrorist groups and between terrorist groups and state sponsors; and tolerance and support of terrorism. In his view, those factors would be coming together soon, leading to horrors of enormous proportions: "The world is pregnant with apocalyptic possibilities. These possibilities must be acknowledged forthrightly,

---

14) Spiers (1994), p. 18, points at the first official confirmation, by the United Nations, of the use of mustard gas and tabun by Iraq in its war with Iran.

15) Jenkins (1985), p. 515, on the development of his own views.

with ruthless frankness [...].”<sup>16</sup> Three years later, Thomas Schelling began his article in *International Security* worrying that “sometime in the 1980s an organization that is not a national government may acquire a few nuclear weapons. If not in the 1980s then in the 1990s. The likelihood will grow as more and more governments acquire fissionable material from their own weapon programs, their research programs, their reactor-fuel programs, or from the waste products of their electric power reactors.”<sup>17</sup> In other words, the threat was still seen as serious, but no longer as imminent. In 1985 Brian Jenkins squarely denied the inevitability of the nuclear terrorist threat coming true. In far more optimistic tones than Schelling he wrote: “Despite the theoretical increase in opportunities as nuclear programs have grown, and the demonstrable escalation in terrorism, going nuclear still represents a quantum jump for terrorists, and one that is not impossible but by no means imminent or inevitable.”<sup>18</sup> In 1987, the International Task Force on the Prevention of Nuclear Terrorism stated that while the probability of terrorists turning to nuclear forms of violence was still low – in itself a perspective less alarmist than Beres’ and Schelling’s views – it was on the increase. “The net balance at this time is tilting towards an increase in the risk of nuclear terrorism. This shift should be a matter of widespread concern.”<sup>19</sup>

By the early 1990s, however, the nuclear threat – both its feasibility and its imminence – had virtually evaporated from the agenda of many experts, while interest in chemical and biological threats had simultaneously increased dramatically. Various factors, as we have seen, contributed to this development. An article in the summer 1993 edition of *Orbis* may illustrate the trend.<sup>20</sup> The American author Jessica Stern raised the question of whether poison would become a major terrorist weapon. She argued that technical constraints on the acquisition of chemical and biological means were eroding fairly quickly. At the same time she practically dismissed the terrorist use of nuclear weapons because of continuing, virtually unsurmountable technical constraints. Strikingly, her exploration of hypothetical use virtually ignored a risk that would grow again upon the worried minds of analysts (including her own)<sup>21</sup> by the turn of the millennium, that is, the risk of terrorist *mass murder* by chemical, biological or, indeed, nuclear means. Her interest in biological and chemical terrorism was clearly inspired by the growing stream of revelations about the weapons programs of Saddam Hussein.

---

16) Beres (1979), p. 45.

17) Schelling (1982), p. 61.

18) Jenkins (1985), p. 515.

19) Leventhal and Alexander (1987), p. xi.

20) Stern (1993).

21) Stern, (1999), p. 1, begins with the ominous question: “What if terrorists exploded a homemade nuclear bomb at the Empire State Building in New York City?”

### Technical capabilities and opportunities

Before the following short survey of perceptions of technical capabilities and opportunities in earlier literature, a note of caution is in order. Assessing the risk of terrorist use of weapons of mass destruction with an acceptable degree of reliability requires substantial knowledge of both technical and motivational aspects of the issue. Among the authors of the literature discussed here, those with a background in political science or history abound. Several of them have worked for extended spells at think tanks specializing in issues of international security, or with organizations such as the National Security Council or the now defunct Arms Control and Disarmament Agency in Washington. Thus they were able to learn from scientific colleagues and enrich their technical knowledge. Still, the large majority lack solid first-hand technical expertise; for that, they have to rely on what scientists tell them. They are experts on political processes with a substantial and intelligent technical interest, rather than scientists with a feeling for the political sides of security issues.

This matters because, as we shall see, references to technical data have frequently, to put it gently, been less than precise, while conflicting evaluations have been presented in open literature. A commendable wish not to provide potential wrongdoers with relevant information is one explanation. Genuine analytical disagreements between technical experts who provide information to political analysts are likely to be another. But part of the confusion may also have been caused simply by insufficient technical knowledge, worsened by a tendency to copy uncritically the technical evaluations of valued but not necessarily better-informed colleagues, or, sometimes, by analytical prejudices. Readers should be aware of this.<sup>22</sup>

What technical risk perceptions emerge from the earlier literature and what are they based upon?<sup>23</sup> Two broad themes can be used to organize this quick chronological survey: (1) where, according to authors, could terrorists obtain the necessary knowledge and (2) how, according to authors, could they obtain the necessary hardware?

#### *Obtaining knowledge*

- 
- 22) *Author's note:* the author wishes to stress that she is a contemporary historian with a keen interest in, but no expert knowledge of, technical aspects of weapon production.
- 23) Most of the earlier literature referred to in this paper was focused on nuclear terrorism. A very detailed study has been made of the much scantier writings on biological and chemical terrorism published in the 1970s and 1980s: Purvis (1995). At the time of writing, Purvis was Strategic Analyst of the Canadian Security Intelligence Service.

The British scholar Peter Janke (1977, p. 106), a historian by training and a staff member of the Institute for the Study of Conflict in London, argued in 1977, without indicating his source, that disaffected youngsters who would like to destroy a way of life they despised, could find “men and women possessed with the will and with sufficient knowledge of nuclear physics to make a bomb, given the materials. Therein lies the most credible threat, and the growing environmental protest movement in France and West Germany might provide the most apt cover.” He then elaborated on the virulence of various environmental groups in Europe, who might take to blackmail by threatening to sabotage or damage nuclear installations. The argument seems somewhat incongruous. Why, after all, should protectors of the environment, even if willing to resort to terrorism, choose means that might do the environment irreparable harm?

Beres, too, was convinced that relevant knowledge could easily be obtained. This political scientist, whose previous research had been supported by the Arms Control and Disarmament Agency, referred like Janke to reports by official American organizations such as the Office for Technology Assessment (presented in 1977), as well as private institutes or persons of learning, to substantiate his argument.<sup>24</sup> In his analysis figured the prototypical talented although mildly freakish MIT sophomore science student producing an effective design for a nuclear explosive in a couple of weeks.<sup>25</sup> He also introduced equally peculiar feminists to his readers. Without giving any indication of taking his information less than seriously, Beres wrote: “Articles in both the underground newspaper, *Take Over*, and the feminist journal, *Majority Report*, contained detailed plans on how to build an atomic bomb using a coffee can and explosives. The article in *Take Over*, which was published in the July 4 1974 issue, was adapted by the feminist journal with the title, ‘Handy Woman’s Guide: How to Build Your Own Atomic Bomb and Strike a Balance of Power with the Patriarchy.’”<sup>26</sup> The coffee can cropped up again in the *Nuclear Task Force Report* of 1987, but between inverted commas and as a negligible risk.<sup>27</sup> The report read: “Previously, some analysts [...] believed that a group gaining entry to a civil nuclear fuel fabrication plant could fashion a crude bomb on the site simply by wrapping some high explosive around a ‘coffee can’ container of a few kilograms of plutonium oxide powder and then detonate the contraption to obtain a nuclear yield equivalent to hundreds, even thousands, of tons of TNT.” The Task Force, which did

---

24) Beres (1979), pp. 22, 23. He refers in particular to the study by Mason Willrich and Theodore Taylor, *Nuclear Theft: Risks and Safeguards* (Cambridge MA: Ballinger, 1974).

25) Leaving aside the alleged effectiveness of the design, designing a bomb is, of course, not the same thing as building one.

26) Beres (1979), p. 25.

27) Leventhal and Alexander (1987), p. 9.

have the help of former weapon designers, concluded that “such a ‘coffee-can bomb’ is not feasible,” although it took a graver view on the possibilities for terrorist groups helped by a small team of technical experts to produce a crude nuclear device with much larger quantities of reactor-grade nuclear material.<sup>28</sup>

Brian Jenkins, less excitable than Beres, in his *Orbis* article of 1985 made the commonsensical remark that most terrorists, while often relatively highly educated, usually were versed in humanities rather than science.<sup>29</sup> He suggested that it was therefore not likely that terrorists would find it easy to produce nuclear explosives. Like Janke and Beres (see below) he pointed, albeit in passing, at civilian nuclear installations’ vulnerability to sabotage. Unlike producing a bomb, attacking such installations would arguably not require specialized information or exceptional technical capabilities.

In 1993 Jessica Stern – like the members of the International Task Force – wrote about the possibility that terrorists might hire professionals to do their technical work for them, but she focused on biological and chemical weapon designs. Pointing at the risk that dissatisfied experts from the former Soviet Union might put themselves at the disposal of terrorist groups if the pay was right, she wrote: “For example, a single Russian expert could fashion a crude but lethal chemical or biological weapon, given access to a chemistry or biology laboratory. This is not the case for production of a nuclear device, which would require difficult-to-acquire materials and equipment, as well as the expertise of both physicists and engineers.”<sup>30</sup>

### *Obtaining hardware*

Janke<sup>31</sup> pointed at the vulnerability of nuclear installations for conventional attacks and sabotage, as proven by rather a large number of well-recorded incidents in the US and Europe. Highlighting serious flaws in nuclear safeguards systems, he mentioned various spectacular thefts of sensitive nuclear material, including two particularly notorious ones. In the United States, 362 pounds of highly enriched uranium disappeared in 1965 from a nuclear plant in Apollo, Pennsylvania; and in 1977 large amounts of uranium ore owned by EURATOM were stolen while on transport from Rotterdam to Antwerp. Janke duly noted, by the way, that the second theft was attributed not to terrorist groups but to special agents of the state of Israel – who arguably play in a different league. Referring to a report prepared for the United

---

28) Leventhal and Alexander (1987), pp. 9, 10.

29) Jenkins (1985), p. 510; a characteristic that terrorists share with most authors on terrorism.

30) Stern (1993), p. 401.

31) Janke (1977), p. 107.

States Atomic Energy Commission in 1974, he warned that “there was sufficient knowledge publicly available on how to make a bomb, so that all that stood in the way of a group which desired to have such [nuclear] weapons was the acquisition of special nuclear material.” The source should be taken seriously, but the statement is so general in its wording as to become irrelevant.

Beres, too, emphasized that the increase in the civilian use of nuclear energy might well make it easier for terrorists to do harm, either by sabotaging or attacking nuclear installations or by making use of the shortcomings of safeguards to steal sensitive materials, to be used either as radioactive contaminants or in explosive devices.<sup>32</sup> He also pointed out that substantial amounts of nuclear fuel had already gone missing.<sup>33</sup> He referred to the notorious cases in point: the Apollo theft; and the disappearance of uranium ore off the Dutch coast. As noted above, these were not related to terrorist activity but, in all likelihood, to illegal actions by a state’s agents. In addition, among his examples of sabotage of nuclear installations by angry environmental activists, separatists and other private groups, Beres mentioned the recent destruction in France of two “experimental nuclear reactors for Iraq.” In this case, too, the state of Israel rather than a terrorist group must be considered responsible. Its reason for destroying the research reactors was that it wanted to prevent Iraq from producing nuclear weapons, and anyway, no radioactive contamination of any kind resulted from this action. Unlike his British colleague, Beres argued that nuclear terrorism might escalate into full-scale nuclear war.<sup>34</sup> Some ten years later, the *Nuclear Task Force Report* still pointed at nuclear installations’ vulnerability to sabotage.<sup>35</sup>

Janke and Beres drew attention to the increases in nuclear arsenals.<sup>36</sup> Beres, in particular, worried about the efficacy of controls over these stockpiles. How easy would it be for terrorists to steal from them? In 1987, the Nuclear Task Force qualified the storage of nuclear weapons in areas of “intense terrorist activity” and the concomitant risk of theft as causes of great concern.

Thomas Schelling pointed at organizational aspects of potential nuclear weapons production by terrorists, implying that it would be hard for terrorists to be successful in such an endeavor: “In sum, it appears to require a group of significant size,

---

32) Beres (1979), pp. 15-29.

33) The explanation may be innocent. During use in nuclear installations, particles of uranium or plutonium may remain behind within pipelines, filters, etc. This is called Material Unaccounted For or MUF. In large installations, the amount of MUF may become sizable. Safeguards experts calculate what amounts of MUF can be considered acceptable for a particular installation, and, as a consequence, at what point to sound the alarm.

34) Beres (1979), pp. 50, 51.

35) Leventhal and Alexander (1987), pp. 8, 9.

36) Janke (1977), p. 111; Beres (1979), pp. 15-18.

high professional quality, and excellent organization and discipline to convert unauthorized or illicitly obtained materials into a usable weapon.”<sup>37</sup>

In 1993 Jessica Stern focused on the risk of terrorist use of biological and chemical weapons. Overall, her evaluation was low-key. Small-scale, non-lethal incidents in her opinion were far more likely than attacks bringing about mass destruction. It would be easiest for terrorists, she argued, to obtain chemical or biological weapons if they enjoyed state sponsorship. She pointed out that Iran, Iraq, Libya, North Korea and Syria all supported terrorist groups. At the same time, Stern remarked, these countries were all believed to possess “at least some capability for chemical and biological warfare.”<sup>38</sup> Without further elaboration, she implied that the regimes of these countries were likely to provide friendly terrorist organizations with the necessary chemical or biological means. Stern also mentioned the possibility of theft, noting that chemical and biological weapons, unlike nuclear explosives, are not equipped with Permissive Action Links impeding illicit use. Finally, she pointed out that relevant scientific and technical knowledge might be for sale from the market of underpaid or laid-off Russian weapons experts. In her conclusions, Stern did not even refer to nuclear weapons: “Although terrorists have so far displayed restraint in this area [acquiring and using weapons of mass destruction], the constraints against their use of chemical or biological weapons are eroding.”<sup>39</sup>

### *Motivations and applications*

As we have seen, many scholars analysing potential terrorist use of weapons of mass destruction lack the educational or professional background to perform first-hand evaluations of the technical aspects of their subject. By and large, however, they should be able to put forward convincing and transparent evaluations of terrorist motives to use such weapons. Or should they? One problem confronting political scientists is the speculative character of their subject. There are virtually no real-life cases of terrorist attacks aimed at mass murder with unconventional weapons to fall back upon. Furthermore, even though terrorists, generally speaking, have not been shy to proclaim their views to the world,<sup>40</sup> it may be difficult to find irrefutable evidence of a propensity to use chemical or biological or nuclear weapons in their frequently verbose and stark statements. These circumstances help to explain the highly theoretical character of many analyses over the years. Still, the cautionary

---

37) Schelling (1982), p. 65.

38) Stern (1993), p. 399.

39) Stern (1993), p. 410.

40) Contrary to complaints by some, this still holds true in many cases.

note at the beginning of the previous paragraph is also valid here. Readers should be aware that authors and policy-makers participating in the public debate have missed the disciplinary constraint provided by a critical mass of concrete data. This has allowed them substantial room to theorize or speculate. It is even possible that they do not *want* to understand the motives driving the terrorists that they analyze, out of revulsion for their deeds, or out of a fear of looking sympathetic to the terrorists' cause.<sup>41</sup> For many, in any case, the motivational aspects of the subject turned out to be even more elusive than the technical ones. Interestingly, when they have found themselves wrestling with both a lack of concrete evidence concerning motivations and a lack of first hand knowledge as to capabilities, authors have often preferred focusing on the latter.

#### *Speculating about motives*

What motives did scholars come up with over the years, and what sources did they use for their evaluations? Broadly speaking, two motivational categories emerge from our list of earlier literature. In the first category, potential use of unconventional weapons by terrorists is explained as a means to add extra compelling power to traditional terrorist demands, rather like semtex with a twist. Traditional ambitions, again generally speaking, are concerned either with political radicalism or frustrated nationalism. According to this interpretation, unconventional means logically may be used to blackmail, to threaten or cause economic havoc, but not to kill massively.

In the second category, potential use of unconventional weapons is directly linked with the ambitions of religious zealots, in particular with a putative wish, ascribed to divine inspiration, to bring about the end of the world in order to create a better one. In this apocalyptic category, use of unconventional means as weapons of mass destruction makes sense theoretically.

Janke, in his contribution on nuclear terrorism to Brassey's *Defence Yearbook* of 1977, briefly weighed and then dismissed the possibility that nationalist terrorist groups active in Europe (he mentioned the IRA, the ETA, the Moluccan movement in the Netherlands) would use nuclear blackmail to further their ambition for independence. He considered the use of nuclear means by political exiles from authoritarian regimes to be even less likely. Janke took a grimmer view, however, of "the floating, cosmopolitan, disaffected element amongst young people who have voluntarily broken their family links and opted out of conventional beliefs and politics. These young men and women have nothing to lose from the destruction of a way of

---

41) Adrian Guelke has some noteworthy things to say about this refusal of empathy; Guelke (1998), pp. 15, 16.

life they themselves reject and sometimes selfishly seek to destroy for others.”<sup>42</sup> He noted how such disaffected youngsters had been willing to perform the dirty work of others, both of states or of terrorist groups such as the Popular Front for the Liberation of Palestine (PFLP). Janke went on to describe a number of fairly aggressive demonstrations at nuclear installations in Europe by a medley of environmental activists who wanted to thwart the growth of civilian nuclear industry. His exploration of motives was based on very general information concerning terrorist attacks during the early 1970s and environmental activism in the same period. Janke never even mentioned the potential use of nuclear explosives as a terrorist means of mass destruction. His evaluation of motives had a tentative quality.

Beres, as we have seen, was explicit about the possibility, or even the likelihood, that terrorists would use nuclear means to cause mass destruction. He was also positive, although at the same time extremely essayistic, about the motives driving terrorists to nuclear mass murder. He ascribed such motives especially to Palestinian groups, but did not seriously examine their concrete aims, and hardly referred to their statements or writings. Rather than using the Palestinian National Charter with its threatening reference to the destruction of Israel,<sup>43</sup> he based his theories on quotations from a large number of wise though sometimes very ancient observers of the world, such as Aristotle, Plato, Cicero, Shakespeare, Yeats, Kafka, Pirandello, Brecht, Nietzsche and Freud, as well as some relatively modern theoreticians of terrorism such as Bakunin, Fanon, Sorel and Sartre.<sup>44</sup> In short, Beres’ analysis of motives was really too impressionistic and personal in style to be taken quite seriously. It should in all fairness be noted, however, that his instinctive approach became prophetic when he mentioned the World Trade Center towers as an attractive target for a terrorist attack.<sup>45</sup>

Apart from noting soberly that “[nuclear weapons] are out of proportion to most of the things that terrorists demand in response to some finite threat, like something or somebody held hostage,”<sup>46</sup> Thomas Schelling in his article “Thinking about Nuclear Terrorism” did not spend much thought on motives, except for noting that the self-proclaimed leadership of unrecognized states might believe that the possession of nuclear weapons would help them gain official status. He particularly had

---

42) Janke (1977), p. 105.

43) The Palestinian National Charter was first published in 1968. Article 9 reads: “Armed struggle is the only way to liberate Palestine;” while Article 22 speaks of the destruction of the “Zionist and imperialist presence.” Parenthetically, nuclear destruction of Israel would have meant nuclear destruction of Palestine as well. Even the Charter therefore would not have been a serious indication for Palestinian use of nuclear means. The PLO, it should be noted, has long since abandoned the Charter.

44) Beres (1979), for example pp. 29-45.

45) Beres (1979), p. 45.

46) Schelling (1982), p. 71.

Basque and Palestinian organizations in mind.<sup>47</sup> He made no mention at all of mass destruction as a terrorist aim.

Brian Jenkins in his *Orbis* article of 1985 briefly discussed motives and sources. He noted that terrorists had not provided any serious insights into how they might look upon the use of nuclear weapons. He maintained his famous view that terrorists want a lot of people watching, not a lot of people dead, even though he acknowledged that since the 1970s terrorists seemed to have become more violent and less considerate of human life. Finally, he pointed at one incentive for mass murder by terrorists that he considered more or less credible: that of ethnic hatred. “The threshold against mass murder may be lowered if the terrorist’s perceived enemies and victims are members of a different ethnic group. As we have seen throughout history, the presumed approval of God for the killing of pagans, heathens, or infidels can permit acts of great destruction and self-destruction. In addition, state sponsors might covertly use terrorists to carry out a nuclear threat (although it is hard to imagine the scenario in which a state would relinquish a nuclear capability to terrorists without retaining direct control over its use.)”<sup>48</sup> It is interesting to note how Jenkins closely related ethnic and religious motives for terrorism – a relationship that would become more prominent over time.<sup>49</sup>

The International Task Force on Prevention of Nuclear Terrorism, whose report was published in 1987, admitted that it had not seriously considered motivational issues at all. Its summary reads: ‘It is beyond the mandate of the task force to explore in depth the causes of terrorism generally, including possible nuclear terrorism. We recognize, however, that terrorism often thrives in an environment where prevailing political, economic, and social conditions create anger and despair among social, ethnic, religious or national populations.’<sup>50</sup> This statement obviously was too general by far to explain anything at all. Yet the background papers to the report offered several pertinent contributions on this seemingly unmanageable issue.

In his essay, mainly devoted to psychological background of terrorists, behavioral scientist Jerrold Post cited the attempt of January 1984 by Jewish millenarian Kabbalists to destroy the Aqsa mosque and the Dome of the Rock in Jerusalem in order to pave the way for the coming of the Messiah. Post, pointing at the “holiness” of these mosques for Muslims, argued that the attack, should it have succeeded, would have caused a world-wide *jihad*. In his opinion, “in that climate, nuclear terrorism against Israel would have been considered fully justified by many in the

---

47) Schelling (1982), p. 68.

48) Jenkins (1985), p. 513.

49) Jenkins returned to the subject in the late 1990s; see Jenkins in Roberts (1997), pp. 49, 50.

50) Leventhal and Alexander (1987), p. 10.

Islamic world.”<sup>51</sup> He also stated that, in his view, nuclear hoaxes would occur with increasing frequency. He concluded by pointing at the danger of “terrorist losers.”<sup>52</sup> “What,” he wrote, “can be said of the terrorist group or faction on its way out, that has lost its support and its headlines, and, in a factional struggle, has lost its influence to a rival group? Desperate for success, might not such a group ask “What have we got to lose?” Could the pressures of group decision-making, coupled with the requirement for organizational survival, not argue for a nuclear spectacular as a way of regaining prominence?”

In another contribution, Konrad Kellen gave a brief analysis of principal terrorist groups that had been active over the preceding ten years or so, in order to see whether any of these might be interested in the use of nuclear means. He came to the conclusion that while all of these groups had used violence without hesitation, they showed no special inclination to commit mass murder. “All things considered, every group is as likely – or as unlikely – to resort to severe nuclear terrorism.”<sup>53</sup> Further elaborating upon this altogether general view, Kellen argued that in all probability “the temptation to go nuclear, for terrorists as well as for nations, probably will arise only when all other means are exhausted.”<sup>54</sup> Both Post and Kellen, freely emphasizing the speculative character of their analyses, claimed that relevant statements by terrorists about their aims and objectives were hard to find. In fact, neither mentioned relevant sources to speak of, but they at least pointed out the importance of the motivational side of the issue to their readers.

Finally, Jessica Stern joined the choir by claiming that “[p]redicting how terrorists might use chemical and biological weapons is difficult, because terrorists rarely discuss their motivations and objectives.”<sup>55</sup> Still, she ventured a guess as she opened her 1993 article in *Orbis* by stating: “With [the] capacity to fascinate and frighten, poisons may be ideally suited for terrorists, for whom creating fear in the target population is more important than creating casualties per se.”<sup>56</sup> Her opinion at this point was that terrorists might use unconventional means in order to draw attention from a public that had grown more and more inured to political violence, but that they did not want to kill on a massive scale, whether discriminately or indiscriminately. She also pointed at the documented dangers of low-level use of biological or chemical weapons, mentioning several cases in which quite simple use of chemical means (injecting fruit with cyanide, for instance) had caused a good deal

---

51) Post in Leventhal and Alexander (1987), p. 100.

52) Post in Leventhal and Alexander (1987), p. 101.

53) Kellen in Leventhal and Alexander (1987), pp. 108, 109.

54) Kellen in Leventhal and Alexander (1987), p. 117.

55) Stern (1993), p. 403.

56) Stern (1993), p. 393.

of public attention and tremendous economic damage – but no casualties. Finally, she noted religious extremism as a possible incentive to spread epidemics as “instruments of divine retribution.”<sup>57</sup> Such terrorist endeavor would indeed be aimed at mass murder.

---

57) Stern (1993), p. 399.



## 2 Perceptions through the second half of the 1990s

---

### Parameters after 1995

---

Studies on the potential terrorist use of unconventional weapons after 1995 continued to concentrate on chemical and biological means. In addition, by the turn of the century concerns about nuclear terrorism were back in full force. Moreover, unlike most evaluations in the 1970s and 1980s, many scholars now considered use of such weapons *as a means of mass destruction* to be fairly likely.<sup>58</sup> In short, as far as perceptions on terrorist use of unconventional weapons were concerned, the twentieth century ended in gloom. What were the parameters influencing this mood?

#### *The non-proliferation regime and international insecurity*

First, the international non-proliferation regime was going through a difficult period during the latter half of the 1990s. The creation of the CTBT in 1996 had widely been greeted as a major breakthrough, even though the limitations to the effective-

---

58) See annex II for bibliographical details of literature referred to in this chapter.

ness of its verification system were recognized. An international ratification process was duly initiated. In late 1999, however, the Treaty suffered a serious setback when the United States Senate refused its ratification. As full participation by the United States (and a number of other countries) was an essential condition for the Treaty's entry into force, this refusal imperiled the future of the international agreement.<sup>59</sup> With regard to the NPT, there was little left of the excitement of 1995, when the Treaty, after fierce debates, had been extended indefinitely. No progress had been made on many of the various targets laid down in documents accompanying the extension agreement, such as a fissile cut-off arrangement or the creation of a nuclear-weapon-free zone in the Middle East. Many non-nuclear-weapon states continued to doubt whether the nuclear-weapon states, the United States in particular, were really committed to destroying all their nuclear weapons eventually, even though the major nuclear-weapon states had made substantial progress in the reductions of strategic weapons. Perhaps more important still, some of the safety catches of the Cold War seemed to have been removed. Already in the early 1990s, the Russian Federation had abandoned its previously held declaratory policy of no-first-use, because of the dramatic quantitative and qualitative reductions in its conventional forces. This had caused little alarm at the time. The emergence of new frictions between Moscow and Western capitals, however, and the lowering of the threshold for use in the latest Military Doctrine published by Moscow have made the first-use clause something of an issue again in the Western public debate about security.<sup>60</sup> Also, the Russian Federation was considered to be less committed than its formidable predecessor the Soviet Union to counterproliferation policies. This, at least, was how the United States interpreted the Russian willingness to conclude lucrative deals providing Iran with installations for its (civilian) nuclear infrastructure.

In the United States, meanwhile, forces advocating a National Missile Defense gained strength. The plan's advocates argued that the United States was entitled to defend itself against missile attacks by rogue states. Still, the missile shield was controversial for a number of reasons, one of them being that it violated the Anti-Ballistic Missile Treaty of 1972.

The rogue states continued to be an international source of concern. The regime in Baghdad, after years of quarrels, controversy and playing cat and mouse with the UNSCOM inspectorate, finally decided to defy the United Nations, and the United States and Britain in particular. It denied all access to UNSCOM inspectors, even

---

59) As far as the future of the CTBT is concerned, much will depend on the outcome of the November 2000 Presidential and Congressional elections.

60) "Russia's Military Doctrine," in: *Arms Control Today*, 30 (4), May 2000, pp. 29-38, offers annotated documentation.

though this was likely to postpone indefinitely the lifting of the crippling economic sanctions that had been clapped on the country immediately after the war. As a result, monitoring ongoing or newly started unconventional arms programs in Iraq became substantially more difficult.

During the same period, other internationally isolated states such as Iran, North Korea and Libya also remained under suspicion of pursuing unconventional proliferation programs. Meanwhile, more and more became known about the chemical and biological weapons programs that had been conducted in secrecy in South Africa,<sup>61</sup> and about the Soviet efforts to build biological weapons even after it had ratified the BWC.<sup>62</sup> Especially in the case of the Russian Federation, doubts remained whether these programs had been fully dismantled as the officials claimed. It is still a matter of considerable controversy as to whether North Korea is abiding by its promises under the 1994 accord.<sup>63</sup> Longstanding fears in South Asia that open nuclear proliferation would occur finally materialized when India and Pakistan tested nuclear weapons in 1998.

In sum, the end of the Cold War did not herald a New World Order in which unconventional arms were phased out once and for all. Rather, it ushered in a period of mixed successes and failures regarding non-proliferation. Security issues generally became more complex both to understand and to handle. This was especially true of various outbreaks of vicious ethnic violence in Europe, Africa and Asia. Well-intended international interventions to put an end to the bloodshed and general misery proved exceedingly difficult to organize and implement and had a tendency to boomerang against the would-be peacekeepers. While 1989 had ended in an atmosphere of great expectations, 1999 ended in an atmosphere of great uncertainties and considerable concerns.

---

61) For instance, news items from the South African Press Association from 1998: <<http://www.truth.org.za/sapa/9808>>; <<http://www.truth.org.za/sapa/9810>>; and <<http://www.truth.org.za/sapa/9811>>. Also: Conference Report CBACI/Lawrence Livermore (1999), Panel 5.

62) For instance Stern (1993), pp. 400, 401. Many first-hand details are to be found in Alibek and Handelman (1999). Also: Davis (1999) and Graeves (1999).

63) Steven Mufson, "'Rogue' States: Is It Reality or Rhetoric?" in: *Washington Post*, May 29 2000, p. A01, briefly explores the topical debate and quotes experts such as Jonathan Pollack (Rand) and Robert Litwak (former Director for Non-proliferation Policy at the NSC) as well as foreign politicians who obviously consider the prevalent American opinion to be a gross exaggeration of the potential dangers coming from North Korea.

*Terrorist attacks: fewer, but deadlier*

Secondly, the latter half of the 1990s was scarred by a number of particularly ferocious terrorist attacks. According to the terrorism database maintained at the Rand Corporation in Santa Monica, the number of attacks perpetrated by non-state organizations declined during the 1990s in comparison with the previous decade.<sup>64</sup> At the same time, however, a small number of extremely bloody and spectacular incidents occurred, with 1995 as the peak year. As a result, percentages concerning the lethality of the attacks increased, feeding the notion that terrorists had now become mass murderers. Here is a list of the most spectacular cases:

- 1 Already in 1993, a heavy conventional device was exploded in a parking garage underneath the World Trade Center (WTC) in New York. A radical Islamic group calling itself the Liberation Army Fifth Battalion wrote a letter to the *New York Times* claiming the attack and explaining its motives. The newspaper, on official request, was very reserved about the contents. Six people died, while the number of wounded ran into hundreds. The perpetrators were arrested fairly quickly. They declared to have aimed to kill thousands of people by making one of the WTC towers tumble against the other. In addition, they had planned a series of similarly deadly attacks on various other landmarks in New York. The attack made a deep impression on Americans. Although they had become used to being targeted by terrorists abroad, this was the first time that their own country had been the scene of such a horrendous incident perpetrated by foreigners.<sup>65</sup>
- 2 In March 1995 members of the Japanese Aum sect released fluid sarin in a number of metro cars closing in on a busy metro hub in the center of Tokyo during the morning rush hour. Twelve people died, and the number of injured

---

64) Database information on terrorism is frequently less "exact" and trustworthy than one would like. For on thing, it is not always made clear what criteria are being used to define incidents as "terrorist." In the past, there have been more "discoveries" of trends that turned out not to be trends at all. For instance, in 1980 two extremely bloody attacks occurred, in Bologna and in Munich. At the time, this gave rise to the mistaken assumption that (right-wing) terrorism had become more indiscriminate and murderous than before. See Hoffman (1998) p. 116. On the history and philosophy behind the Rand-St Andrews database see Jenkins, "Foreword," in: Lesser (1999), pp. v-viii. On differences and similarities between the database maintained by Rand and the University of St Andrews on the one hand, and that of the State Department on the other, see Hoffman, "Terrorism Trends and Prospects," in: Lesser *et al.* (1999), pp. 11-13.

65) Details in Steven Emerson, "Terrorism in America: The Threat of Militant Islamic Fundamentalism," in: Kushner (1998), p. XXX. See also Andrew C. McCarthy, *Prosecuting the New York Sheikh*, at <[http://www.ict.org.il/articles/abdel\\_rahman.htm](http://www.ict.org.il/articles/abdel_rahman.htm)>.

was close to five thousand. The perpetrators were swiftly arrested. The sect's leaders' motivations may be captured under the heading "apocalyptic terrorism."<sup>66</sup> The sarin had been produced by the sect's own scientists and technicians, in a laboratory equipped and owned by Aum. During interrogation the perpetrators revealed that the intended number of victims had been much higher. Preceding the Tokyo attack, Aum had made a smaller but nearly as deadly sarin attack against a neighborhood in which three judges were living who were expected to hand down an adverse verdict in a real-estate dispute involving the sect.<sup>67</sup> In addition, Aum had been experimenting with very poor results in the production of biological agents. It was also reported to have shown an interest in obtaining nuclear weapons.<sup>68</sup>

- 3 In April 1995 a powerful conventional explosive destroyed the Alfred P. Murrah Federal Building in Oklahoma City. The explosion killed about 170 people and wounded many more. The initial, virtually automatic reaction of many American commentators was to blame the bombing on radical Muslims. It turned out, however, to have an entirely domestic character and to have been inspired by the perpetrator's anti-governmental feelings. He was arrested almost immediately. Nevertheless, the Oklahoma City bombing continues to be referred to in evaluations of international terrorism,<sup>69</sup> which is why it is mentioned here.
- 4 In November 1995 a car bomb destroyed a building in Riyadh, Saudi Arabia, which was occupied by American military trainers. The death toll was seven (five of whom were Americans), while sixty people were wounded. Three organizations vied for the honor of having perpetrated this atrocity: the Islamic Movement for Change, the Tigers of the Gulf, and the Combatant Partisans of God. In April 1996 the authorities arrested four Saudis who admitted their part in the bombing on television. Three of them belonged to the legion of "Afghans." They had once been soldiers for Islam in the war against the Soviet invaders in Afghanistan; since the end of that war they continued their fight against perceived enemies wherever these might turn up. For this attack, their *casus belli* was the American military presence in the land of the holy cities of

---

66) Apocalyptic terrorism is analyzed in more detail below.

67) Kaplan and Marshall (1997); also Olson (1999).

68) For example, as in the statement by Anaud de Borchgrave, Director, Global Organized Crime Project of the Center for Strategic and International Studies, before the US House of Representatives Committee on National Security, Military Research and Development Subcommittee, on October 1 1997.

69) See, for instance, the chapter by Hoffman in: Lesser (1999), pp. 7-38, especially p. 13.

Mecca and Medina. They claimed to have been inspired by their fellow Saudi-born Afghan veteran, Osama Bin Laden. In June 1996 the four suspects of the attack in Riyadh were beheaded.

- 5 In June 1996 the Khobar Towers complex in the Saudi town of Dahrán was bombed with the use of a truck loaded with conventional explosives. Nineteen American soldiers died while nearly five hundred people were wounded. After about a month, the attack was claimed by the Movement for Islamic Change. Many arrests followed but there were no convictions, while the cooperation between Riyadh and Washington on the matter became problematic. The United States began to suspect Osama Bin Laden as the instigator of both attacks. Bin Laden was born in Saudi Arabia. He has been deprived of his citizenship because of his fierce opposition to the Saudi monarchy, and is now believed to reside in Afghanistan as a host of the radical Islamic Taliban movement. In the United States in particular, Bin Laden has become the embodiment of radical religious terrorism at its bloodiest. He is believed to invest his considerable financial means into terrorist attacks against Americans and other pretended enemies of Islam in the world. The US authorities suspect him of trying to obtain biological, chemical and nuclear weapons. From his hideout, Bin Laden praised the attackers of the Khobar Towers but denied direct involvement.<sup>70</sup>
- 6 In November 1997 seventy people were killed and about ten were wounded when members of a radical Islamic group calling itself the Vanguard of Conquest emptied their guns on an international group of tourists visiting the Temple of Hatshepsut at Luxor in Egypt. The Vanguard claimed to be a successor organization to the group that had organized and implemented the fatal attack on Egypt's President Sadat in 1981.
- 7 On August 7 1997 heavy conventional car bombs were used in simultaneous attacks on the American embassies in Nairobi and Dar es Salaam. More than seven hundred people died and nearly six thousand were injured. The attacks were claimed by an organization calling itself the Islamic Army for the Liberation of the Holy Sites. A number of suspects were quickly apprehended while others remained at large. The United States put Osama Bin Laden on their "wanted" list in connection with the attacks.

---

70) Useful short surveys of these and similar attacks are to be found in the annual *Patterns of Global Terrorism* publications of the United States State Department, at <<http://www.state.gov/www/global/terrorism/index.html>>.

*Pre-millennial tensions*

In all these cases the intention to kill on a massive scale, or at least a stunning indifference to great losses of life, was evident, although the targets were not chosen at random. Only one organization, however, made use of an unconventional weapon.

This succession of horribly murderous attacks was perhaps the most important factor contributing to the perception that terrorist use of biological, chemical or even nuclear weapons might become a normal, or at least a less than exceptional, threat in the near future. The effect was strengthened further by worries surrounding the approaching millennium change. These worries were not only focused on the risk of large scale computer system failures which might paralyze major societal services such as hospitals, land and air traffic controls, electric grids, stock exchanges, and so on. In the United States in particular, analysts and policy-makers were concerned that apocalyptic cults might see the millennium change as the perfect moment to help bring about Armageddon. More pragmatic but equally dangerous might be the motivation for other terrorist groups to make use of large millennial celebrations such as in New York's Times Square, in order to mount an attack that might injure or kill a large number of people, while it would certainly gain worldwide media attention. These fears did not materialize. On December 31 1999 the clock struck twelve at various intervals all around the world without any terrorist attacks happening. This outcome, in its turn, fed the notion that the millennium fears had been a hype.<sup>71</sup> Two weeks before, however, the American authorities had arrested an Algerian by the name of Ahmed Ressaym while he was trying to enter the United States from Canada.<sup>72</sup> In the back of his rental car they discovered nitroglycerine, an ingredient for conventional bomb-making. During the following weeks, they mounted an intensive and geographically extended investigation probing possible targets, accomplices and sponsors, to no avail. In May 2000 President Clinton publicly stated that Osama Bin Laden had been involved in a scheme to plant explosives in the US in December 1999; a scheme that had been foiled with the help of a number of friendly intelligence services.<sup>73</sup>

- 
- 71) There were no sensitive computer breakdowns either, but this must be attributed to the anti-millennium bug campaign that involved an army of computer experts all around the world.
- 72) For example, see John F. Burns and Craig Pyes, "US Bomb Plot is Linked to Algerian Terrorists based in France," *International Herald Tribune*, January 3 2000, p. 3; Lorraine Adams and David A. Vise, "Border Arrests Yield Little Calm," in: *Washington Post*, January 10 2000, p. A3, for more details.
- 73) Lee Hockstader, "Jordanians Arrest 13 Suspected of Planning Attacks on Americans," in: *Washington Post*, December 16 1999; David Vise, "US Probe Ties Bomb Plot to Bin Laden Group," in: *Washington Post*, February 21 2000, p. A01; Charles Babington, "Clinton Acknowledges Terrorist Plot," in: *Washington Post*, May 17 2000.

*Predictions, 1995 – present*

As we have seen, participants in the earlier public debate on terrorist use of non-conventional, particularly nuclear, weapons held quite varying opinions on the immediacy of the threat, and even on the likelihood of it materializing. Only a few authors went so far as to speculate about a date on which to expect the first nuclear terrorist attack – ranging from any time now (Beres) to within the next two decades (Schelling).

Generally speaking, the mood of the recent public debate is gloomier, or more alarmist, than before. Even traditionally sober-minded authors such as Walter Laqueur show increasing concern. He fears that “terrorism is becoming the substitute for the great wars of the 1800s and early 1900s. Proliferation of the weapons of mass destruction does not mean that most terrorist groups are likely to use them in the foreseeable future, but some almost certainly will, in spite of all the reasons militating against it.”<sup>74</sup>

The focus of worries, however, has changed somewhat. During the last five years or so, concerns about nuclear terrorism, which had declined strongly during the early 1990s, have resurged. Yet most authors argue that the *production* of nuclear weapons by terrorists is still very unlikely for some time to come. In that respect, the debate has actually become less rather than more pessimistic in comparison with the 1970s and 1980s. Theft or purchase of nuclear weapons is still considered a serious possibility by many. And many are convinced that, with regard to terrorist use of biological or chemical weapons, there is no period of grace left as far as technical capabilities are concerned.

By implication, the major impediment is motivational. Some argue that this impediment is very powerful and continues to make unconventional terrorism “by no means inevitable or likely to become prevalent.”<sup>75</sup> Some, on the other hand, make light of motivational impediments and conclude that future use of such weapons is inevitable, *because of* their easy availability.<sup>76</sup> Others, however, see a general erosion of constraints, motivational and technical, “lending strong support to the widespread consensus among analysts that the likelihood of terrorist use of CB agents in the future is both real and growing.”<sup>77</sup>

---

74) W. Laqueur, “Postmodern Terrorism,” in: *Foreign Affairs*, 75 (5), September/October 1996, p. 34. See also Laqueur (1999), p. 225.

75) Joseph Pilat, “Prospects for NBC Terrorism after Tokyo,” in: Roberts (1997), pp. 13-15.

76) As does the Harvard scholar and specialist in military economics Martin Shubik; Shubik (1997), p. 399.

77) For example, Ron Purver, “Understanding Past Non-Use of CBW by Terrorists,” in: Roberts (1997), p. 73. Also Falkenrath, Newman and Thayer (1998), pp. 213, 214.

One of the preoccupations of the opinion-leaders is with trends. Many notice changes in the character of terrorism. With the emergence of new types of terrorists, the dominant line of reasoning goes, terrorism is becoming more lethal than before. Previously, most terrorists wanted public attention. But now, it is argued, an increasing number want to kill indiscriminately and on a large scale.<sup>78</sup> This development might lower the threshold for using biological or chemical or even nuclear weapons – although mass murder can well be perpetrated with conventional means.

Some authors (and the American administration) have been fascinated with the nearing of the millennial change, particularly in combination with the emergence in the United States of a sad motley of extremist right-wing Christian Patriots and white supremacists dabbling in biological or chemical weapons production and suffering from “pre-millennial tension.”<sup>79</sup> Such authors, with the Aum attack in the back of their minds, have warned that apocalyptic activists might perpetrate terrorist attacks with chemical, biological or nuclear means in order to make sure that the year 2000 would witness the end of the world as we know it.<sup>80</sup> Of course, this specific combination of timing and motive has now to all intents and purposes passed into history – although technically, the precise moment of the millennial change is January 1 2001 and true believers may fix a new, “credible” date.

Finally, prominent authors conclude that, for the time being, terrorist use of unconventional weapons remains a “low probability-major consequences” type of risk, even though some acknowledged that it had become less difficult than before for terrorists to obtain or produce chemical or biological weapons for genocidal purposes.<sup>81</sup> A dissenting but still relatively optimistic observation on this score has been made by the British scholar Joseph Pilat. In a scholarly polemic with Richard Falkenrath, he has written that “the phenomena that will need to be addressed by governments are more likely to have a higher probability and a far lower impact,” arguing that the most likely actions will be “nuisance threats and hoaxes, or abortive or inconsequential incidents.”<sup>82</sup>

---

78) This is the main argument in Hoffman (1997).

79) The term is used by Jessica Stern (1999), p. 71. On Christian Patriots and white supremacists, see also Brian Levin, “The Patriot Movement,” and Brent Smith and Kelly Damphousse, “Two Decades of Terror: Characteristics, Trends, and Prospects for the Future of Terrorism in America,” both in: Kushner (1998), pp. 97-154.

80) Thus Laqueur (Sept./Oct. 1996), pp. 32, 33.

81) See the articles by Falkenrath, Pilat and Stern in *Survival*, 41 (3), autumn 1998.

82) Pilat (1998), p. 172.



### 3 Technical capabilities and opportunities

Recent books and articles evaluating the technical aspects of potential terrorist use of non-conventional weapons make confusing reading. Part of the explanation for this must be sought in elements such as the professional background of the authors and the sometimes esoteric quality of technical evaluations, which have been mentioned already in connection with the earlier debate. In addition, while most attention was previously focused on the risks of nuclear terrorism, the issue of the use of chemical and biological weapons by terrorists has recently been complicating evaluations considerably, primarily because there are so many chemical and biological agents, with so many divergent qualities. Some are relatively easy to obtain and weaponize, others are not. Some are lethal, others “merely” incapacitating. Some are difficult to handle, others are not. Some decay very quickly, others may stay active for decades. In theory, terrorists have a broad selection from which to choose.

Contrary to the earlier debate, there is now virtual unanimity that *production of nuclear explosives* would be so difficult for terrorist groups as to be extremely unlikely. Nuclear terrorism is believed by a number of analysts to be possible mainly if terrorists manage to *steal* or *buy* nuclear weapons or if they are provided with such weapons by rogue states. About *chemical and biological weapons*, however, diverging opinions are put forward in the current debate. In the survey of recent contribu-

tions dealing with capabilities presented below, most attention will be focused on these.

What technical risk perceptions emerge from current literature and what are they based upon? Analysis of the answers will again be organized along two broad themes: according to the authors (1) where can terrorists obtain the necessary knowledge; and (2) how can terrorists obtain the necessary hardware?

### *Obtaining knowledge*

With the benefit of hindsight, one may conclude that fears about the easy accessibility of scientific and technical knowledge on the production of nuclear explosives have been exaggerated. Still, it stands to reason that the body of accessible relevant data – not just on nuclear but also on chemical and biological weapons production – has only grown since the early 1970s. Scientific and technical knowledge on the production and effects of poisonous chemicals or the breeding of pathogens for pharmaceutical use (for instance, the development of vaccines) are already being taught at universities all over the world. Some potentially relevant techniques such as gene manipulation may still be relatively esoteric but are now deemed likely to become vulgarized quickly.<sup>83</sup> Such knowledge and skills have beneficial civilian applications that are widely accepted.<sup>84</sup> They cannot be brought under a waterproof control system preventing their misuse, however, in spite of the various inspection systems under the international non-proliferation regime. The recent rise of the Internet as a distributor of relevant knowledge compounds the situation still further.

In the early 1990s Jessica Stern tested whether knowledge about poisons and poisoning is easy to come by. She placed a mock order with a publisher of poison manuals and was promptly and unquestioningly served.<sup>85</sup> In the same article, Stern took care to explain why she considered the genocidal use by terrorists of chemical agents to be highly unlikely. Anthony Fainberg has given names of publishers (Paladin Press, Delta Press) and titles (*The Poisoners' Handbook and Assorted Nasties*) of such cookery books. According to him, they give “at least rudimentary advice on

---

83) Genetic engineering is a typical dual-use technology. Foxell (1999), pp. 109-116 focuses on experiments by the elite of biological weapons producers in the former Soviet Union, Iraq and South Africa. On vulgarization of the technology in general, see: CBACI/Lawrence Livermore (1999), Panel 4: “Lone Operators and Mass Casualties,” where it is claimed that “Today, 12-15,000 high schools offer instruction in genetic manipulation.”

84) Taylor (1996): “[...] There are over 1,300 biotechnology companies in the US and about 580 in Europe; 25 years ago there were none. Moreover, many less-developed countries, including Iraq, have their own biotechnology studies [...]”

85) 85 Stern (1993), pp. 396-400; her account is both chilling and humoristic. See also Stern (1999), pp. 50, 51.

how to manufacture some chemical and biological agents and how to disperse them.”<sup>86</sup> The potential terrorist intending to stay alive while committing mass murder on others may, of course, consider rudimentary advice insufficient for his purposes. According to some authors, however, detailed sensitive information can also be had without many problems. Thus, Bruce Hoffman writes: “Today [...] the means and methods of terrorism can be easily obtained at bookstores, from mail-order publishers, on CD-Rom, or even on the Internet. Relying on such commercially published or readily accessible bomb-making manuals and operational guides to poisons, assassinations, *and chemical and biological weapons* fabrication, the ‘amateur’ terrorist can be just as deadly and destructive as his more ‘professional’ counterpart.”<sup>87</sup> Walter Laqueur even states that the finished product can be commercially ordered: “Now, mail-order catalogs tempt militants with readily available, far cheaper, *unconventional as well as conventional* weapons.”<sup>88</sup> Unlike Stern and Fainberg, neither Hoffman nor Laqueur are specific about their sources, which lends their alarming argument a somewhat elusive character. The same is true for similar statements about the accessibility of weapons production data by other authors. It makes it difficult to obtain trustworthy evaluations of the quality of the information thus allegedly provided. Apart from that, as has been argued in connection with the earlier debate, designing a nuclear, chemical or biological weapon on the drawing board is not identical to producing and effectively delivering one – even if the design transcends a “rudimentary” level. The distinction is important.

During the 1990s the fear was frequently expressed that rogue states or terrorists might be able to hire former Soviet weapons designers and engineers to provide them with the necessary knowledge and skills.<sup>89</sup> In order to counter this risk, the United States and a number of its allies set up programs to ensure a proper living standard and interesting civilian work for these specialists, who, after the demise of the Soviet Union, saw their previous prestige and their incomes dwindle. Whether it is because of the integrity of the specialists concerned, because of the redeployment programs, because of a lack of financially rewarding offers from non-state actors or because information on the subject is effectively being kept from the media, public expressions of concern regarding hired heads and hands recently seem to have abated somewhat. No instances have been publicly reported in which it has been established with certainty that terrorists had succeeded in employing specialists from the former Soviet Union in connection with programs to produce unconventional

---

86) Fainberg, “Debating Policy Priorities and Implications,” in: Roberts (1997), p. 82.

87) Hoffman (1997), p. 50; my italics. See also Chalk (1999), pp. 157, 158.

88) Laqueur (1996), p. 28; my italics.

89) For example, Stern (1999), p. 49.

weapons.<sup>90</sup> This need not be a reason for undiluted optimism. “Transfers” may have been made without the media, or for that matter the intelligence services, noticing. Moreover, interested terrorists may not need specialized help from abroad at all. If they limit their ambitions to producing low-tech chemical or even biological agents and imperfect delivery systems, help from compatriots with an ordinary chemistry or microbiology degree may suffice, according to many analysts. Attacks perpetrated with such weapons, the reasoning goes, may well have a disproportionately terrifying effect, even if the actual number of victims remains low.

#### *Obtaining hardware*

Basically, there are three ways for terrorists to obtain biological, chemical, nuclear or radiological weapons: to make them; to buy them or steal them from existing stocks; or to find a state sponsor that builds and donates them.

(a) *Production.* In the earlier debate on the procurement issue, much attention was devoted to the question of whether terrorists would be able to produce nuclear weapons. By the end of the 1980s something nearing a consensus had emerged: that although terrorist production of nuclear explosives could not be ruled out entirely, it should be considered highly unlikely.<sup>91</sup> The major problem, the argument ran, would be for terrorists to obtain fissile material in sufficient quantities,<sup>92</sup> but the construction of the conventional part of a nuclear explosive would also be a technically demanding challenge. Many parts of the explosive, not just the nuclear core material, would be subject to national or international export regimes as would be many of the instruments needed in the production process. Specialists would have to be hired from outside the group. The entire process would take rather a long time, and it would be very costly. As a consequence, terrorist efforts to produce a nuclear bomb were likely to be detected sooner or later. And after all, why should terrorists be able to succeed where highly eager rogue states such as North Korea and Iraq had spent years without (fully) getting there, and a state like Pakistan, with its large and well-

---

90) Foxell (1999), p. 116 gives a list of recruiting efforts by *states* (particularly Iran), some of which were reported to have been successful.

91) See Allison and Falkenrath (1996), *passim*, for a strongly dissenting view.

92) In most literature, it is stated as a rule of fist that about 6 kilograms of plutonium 239 (Pu 239) or about 25 kilograms of highly enriched uranium (containing more than 80% of U 235) would meet the minimum core requirements for a “standard” explosive. Smaller quantities may be sufficient for highly advanced designs, generally considered to be beyond terrorist production capabilities. The same goes for the production of fusion weapons.

educated intellectual and technical elite and its considerable financial sources, had succeeded only after decades of hard work?<sup>93</sup>

Since the early 1990s, public attention has been focused on the question of whether terrorists would be able to produce chemical and biological weapons. A modicum of agreement has been reached. Authors concur that, by and large, ingredients for chemical or biological weapons are easy and inexpensive to come by.<sup>94</sup> Weaponizing them would be much cheaper than clandestine nuclear weapons production. A variety of chemicals suitable as a (component for) poison can be obtained at an ordinary drugstore or chemist shop or a provider of agricultural fertilizer, or in nature, while pathogens may be ordered under the cover of pharmaceutical research, or even collected in the field, from diseased humans or animals. Production may take place unobtrusively. The necessary laboratory equipment may be set up in an ordinary house or garage. Export controls and the international non-proliferation regime are considered to be an important impediment to terrorists with nuclear plans, but at present, at least, this does not equally apply to clandestine chemical or biological arms production. It is widely felt that, depending on the choice of pathogen, breeding a stock from biological material for weaponizing purposes does not require great expertise. The production of more advanced agents such as genetically modified pathogens, however, still requires specialists according to most authors, although with the recent spectacular development of biotechnology such specialists are likely to become more "common." As one gloomy suggestion has it: "What would require the skills of a Nobel Prize winner in one decade will become common laboratory practice in the next."<sup>95</sup> In addition to basic production, terrorists would have to overcome problems of preservation and of effective dispersion of their unconventional material under adverse environmental conditions.

The latter hurdles may be steep indeed for terrorists to take, especially if they aim to kill on a large scale. In order to reach massive results, the most logical ap-

---

93) Kamp (1995), p. 214.

94) Few authors present even a very broad outline of technical requirements. A useful general survey is to be found in Falkenrath, Newman and Thayer (1998), pp. 97-159. They point out that they have left out sensitive details on purpose, but claim that a "focused, competent researcher with access to a good library" may well fill in those gaps. The website of the Federation of American Scientists (FAS) provides good general surveys on biological, chemical and nuclear weapons production entitled "bombs for beginners" at <[www.fas.org/nuke/intro/index.html](http://www.fas.org/nuke/intro/index.html)>. Through the FAS web, it is also possible to download the Office of Technology Assessment's 1993 study *Proliferation of Weapons of Mass Destruction: Assessing the Risks*, OTA-ISC-559, Washington DC: US Government Printing Office, August 1993. Purvis (1995) shows how a very small number of specialists had already explored these or similar technical arguments for some time, without, however, making a noticeable impact on the public debate on terrorism with unconventional weapons.

95) Shubik (1997), p. 405, quoting M. Dando, an expert on biotechnology and biowarfare.

proach for a terrorist group would be to disseminate agents in large but closed crowded spaces such as airport terminals, underground stations, domed sport stadiums, or large sealed office buildings with a central air-conditioning system. Generally speaking, chemical or biological agents would be at their most effective in such areas if they could be dispersed as aerosols. Specialists disagree on the level of expertise needed for effective aerosolization. According to many, aerosolization of many usable agents still requires specific technological skills.<sup>96</sup>

If, on the other hand, terrorists are interested in unconventional weapons in order to threaten and frighten and cause havoc in society rather than actually kill many people, the dissemination problem arguably becomes less pressing.

*(b) Buying or stealing.* As we have seen, a number of credible stories exist on the clandestine diversion of large amounts of relevant nuclear material during the Cold War period. These diversions, however, were commissioned by a state rather than a non-state actor. Most of this material, it must be assumed, was used in Israel's clandestine nuclear weapons program. Since the end of the Cold War, credible stories have multiplied about the easy accessibility of unconventional materials and weapons in the former Soviet Union.<sup>97</sup> During the early 1990s in particular, incidents of smuggling of nuclear materials were widely covered in the Western media. Most of the seized material, however, proved to be of little or no use for weapons production.

In Russia, nuclear weapons and nuclear material (weapons-grade uranium or plutonium, or "merely" radioactive waste) are reported to be lying about by the tons<sup>98</sup> in sheds secured by simple chain locks and guarded by underpaid or unpaid soldiers or even pensioners. A similar critical situation is reported to exist with regard to Russia's chemical stockpiles. In spite of this, there have been no confirmed reports of the diversion of nuclear or chemical weapons from Russian storage facilities.<sup>99</sup> Concerns have been raised about the possibility of Russian organized crime groups buying material from corrupt or starving members of the military and selling nuclear, chemical or biological materials or off-the-shelf weapons at a huge profit.<sup>100</sup>

---

96) For example, Stern (1999), pp. 51-54.

97) For example, Stern (1999), pp. 9, 89-92; Allison and Falkenrath (1996), pp. 11-12.

98) CSIS Report (1996), pp. 19, 20. Also: Venter (1999), *passim*.

99) Jonathan Tucker in Roberts (1997), pp. 97, 103. Also Blackwood (1999), pp. 94, 95. Under the CWC, Russia has a commitment to destroy these stocks. Implementation is proceeding very slowly due to a number of problems, concisely explained by Blackwood.

100) For detailed and authoritative studies, see *The Nuclear Black Market: Report of the Global Organized Crime Project* (Washington DC: Center for Strategic and International Studies, 1996); and *Russian Organized Crime: Report of the Global Organized Crime Project* (Washington DC: Center for Strategic and International Studies, 1997). See also Allison and Falkenrath (1996) for an exceptionally pessimistic

At the same time, very little hard evidence has been brought forward publicly to substantiate these fears. The situation may be best illustrated by two quotes from a special report on Russian Organized Crime (ROC) published by the Center of Strategic and International Studies (CSIS) in Washington. The report states: "In at least one [sic] instance, military criminals in Russia have been associated directly with the theft of fissile materials and appear to have played roles in the diversion of military chemical stockpiles. There has been wholesale diversion of Russian weaponry, below the level of weapons of mass destruction, to Western and other sources, generating huge profits for corrupt Russian military officers."<sup>101</sup> According to the same report, however, "The world media have paid a great deal of attention to the possible link between ROC groups and the theft and smuggling of nuclear materials. No evidence has been uncovered to link any of the prominent ROC groups with this activity. Knowledgeable sources, however, have indicated that lower-level organized criminals have sought to facilitate such thefts and transfers on an ad hoc opportunistic basis."<sup>102</sup>

All of this suggests that members of the big organized crime groups have not been all that interested in stealing and selling unconventional, specifically nuclear, materials or off-the-shelf weapons. As they must be considered quite capable of setting up such a racket, the reason for their virtual abstinence may be that they have concluded that the market is not profitable enough, which in its turn says something about the putative demand side.

A final variant under the heading of theft or purchase that has been considered in the public debate is the risk of failing (rogue) states losing their unconventional weapons to irresponsible third parties. Regimes in states with proliferation programs, the argument goes, may be ousted from power, or at least lose effective grip on certain parts of their territory. As a consequence, rebel leaders, warlords, terrorists or common criminals may get hold of weapons from unconventional arsenals that are no longer guarded by the state that installed them. North Korea, Iraq, and even China have been mentioned as potential cases.<sup>103</sup> In a similar context, it has been pointed out that the governments of South Africa and Russia already some time ago appeared to have lost full control, or even sight of the biological weapons development programs in their countries. The implication is that official declarations to the effect that these programs have been effectively terminated ought not to be trusted.

---

evaluation. For a dissenting view "erring" on the optimistic side, see Kamp (1995), pp. 216, 217, who argues that Russian nuclear elite troops are unlikely to violate their code of honor by selling weapons or leaving them unguarded.

101) CSIS Report (1997), p. 32.

102) CSIS Report (1997), p. 36.

103) CBACI/Lawrence Livermore (1999), Panel 5: "States and Terror."

In a worst-case scenario, former employees might be continuing weapons production as an unchecked private enterprise.

(c) *State sponsorship.* There is little doubt that in the past “rogue states” such as Iran, Iraq, Libya, Syria and North Korea supported terrorist groups by providing them with financial and other material help, training in the use of conventional arms, and a safe haven. A relative newcomer to this group is Sudan. The same countries, with the exception of Sudan, have demonstrated a persistent interest in achieving a national capability to produce unconventional weapons. Over recent decades, their relations with Western countries and in particular with the United States have been strongly antagonistic.

According to the US State Department, however, several of these states have reduced or even ceased their active support to terrorists for quite some time now (this is specifically true of Syria, Libya and North Korea), although they are still willing to harbor fugitive terrorists. The Department notices several developments towards “responsible” behavior. In April 1999 Libya delivered up for trial in the Netherlands two Libyan nationals accused of complicity in blowing up a PanAm airline carrier over the Scottish town of Lockerbie in 1988. Over the past few years, the Syrian leadership has seemingly distanced itself somewhat from its previously rejectionist policy concerning the Middle East “peace process,” while there is some hope in Washington that President Hafiz al Asad’s son and successor, Bashir al Asad, who took over power in early summer 2000, will be willing and able to pursue a more pro-Western line of policy. In Iran, modernizing politicians have been gaining ground in a succession of elections. The leaderships of North and South Korea are on speaking terms for the first time in their relatively short but troubled history.

All in all, these developments lead even the US State Department to the conclusion that the role of rogue states as sponsors of international terrorism is on the decline. It is all the more remarkable that a related concern – that of rogue states providing terrorist groups with weapons of mass destruction – is still very much an issue in the debate today. Part of the explanation may be that concerns about the proliferation ambitions of the regimes ruling Iran, Iraq, Libya and North Korea have not abated. Thus Jessica Stern concludes, rather out of the blue, after an incisive evaluation of Iraq’s remaining unconventional potential: “Despite having been defeated in the Gulf War and being monitored by UNSCOM, Iraq remains capable of supplying terrorists with weapons of mass destruction.”<sup>104</sup> She seems to consider this conclusion self-evident, as she does not explain why Iraq would supply such weapons, and to whom exactly.

---

104) Stern (1999), pp. 107-127, cit. p. 127.

A few years ago another thought-provoking variant was added to the risk evaluations by the US administration: that of a terrorist organization sponsoring a sympathetic government to help it produce unconventional weapons. In August 1998, the US air force performed strikes against an industrial complex in Sudan. According to the US government, the installation was being used for the production of chemical weapons, possibly on behalf of Bin Laden's Al-Qaida organization. The Sudanese government protested vehemently against the attack, stating that the demolished building had been a pharmaceutical plant. Many international commentators tended to give credit to the Sudanese explanation while American scholars also expressed doubts.<sup>105</sup> The American administration stuck to its version. In its 1998 *Annual Survey of Global Terrorism*, the US State Department began its paragraph on rogue states with a large section on the financial support for proliferation purposes given by Osama Bin Laden to the Sudanese regime.<sup>106</sup>

In the public debate regarding the relationship between rogue states, terrorists and unconventional weapons, there are, broadly speaking, two schools of thought. One group of analysts argues that because (a) rogue states have supported international terrorism and because (b) rogue states are bent on obtaining a national production capacity for unconventional weapons, *ergo* the leaderships of these states must be presumed willing to provide their terrorist protégés with chemical, biological or even nuclear weapons. The argument goes that the rogue states would thus be able to strike fearful blows at mightier enemies without risking retaliation: their enemies would know what hit them, but not who hit them. The terrorists would act as the rogue's phantom catspaw.<sup>107</sup>

Adherents of the second school of thought argue that this scenario does not add up. Rogue state regimes may be vicious through and through, but they are also very much concerned with their own survival. They would never be so foolish as to abandon their exclusive hold on unconventional weapons to a group of people they cannot completely control.<sup>108</sup> Against the catspaw theory it has been argued that rogue states cannot be certain that their patronage of an ostentatiously "terrorist" attack on a common enemy would remain a secret. Their enraged victim would actually be likely to find out and take commensurate revenge.<sup>109</sup>

---

105) Stern (1998), pp. 178, 179.

106) The paragraph was even enlivened by a photograph of their favorite villain. For the full text (and the photograph) see <<http://www.state.gov/www/global/terrorism/1998Report/sponsor.html>>.

107) For example, Hoffman in Lesser (1999), p. 15.

108) Kamp (1995), pp. 215, 216; P. Bowring, "'Rogue' States are Overrated," in: *International Herald Tribune*, Tuesday June 6 2000, p. 9.

109) Laqueur (January 1996), p. 20.

*A concrete example: the instructive case of Aum*

Naturally, the ways in which the Aum sect tried to realize its ambitions to produce a biological, chemical and even nuclear arsenal have been the subject of scrutiny by the participants in our debate, as they might provide lessons on obtaining relevant knowledge and hardware by non-state actors. Generally speaking, the earlier comments were the most alarmist in tone, as observers were shocked to realize that Aum had indeed been setting up its own professionally equipped laboratories, manned by a reasonably well-educated and well-trained staff, and had managed to procure both biological breeding material and precursors for chemical weapons. Its procurement activities for intellectual manpower and for hardware had, moreover, been international rather than limited to Japan; indeed, foraging had taken place in Russia and certain African countries as well.<sup>110</sup> The laboratory activities had been focused on chemical and biological approaches. Aum's leader, Shoko Asahara, had a particular interest in sarin, but also in tabun, hydrogen cyanide, as well as in biological agents such as anthrax, botulism, cholera, Q fever and the Ebola virus. Aum representatives were even reported to have attempted to buy nuclear hardware in Russia.<sup>111</sup> In early comments, the fear was frequently expressed that the attack on the Tokyo metro might set an evil example, and that copycat actions would soon follow and multiply.

Soon, however, it became clear that for all its efforts, the sect had not been able to achieve truly genocidal potential. It was reported that its attempts to produce biological weapons had to all intents and purposes been ineffective. It had done better in the chemical field, but results had been disappointing even there. The self-made sarin used in the metro attack proved to be of inferior quality, while the perpetrators obviously had not mastered the finer details of effective distribution. Various causes were put forward for this lack of success, one of them being that the sect had been spreading its financial and especially its intellectual capital too thinly by focusing on too many programs at once, and another, that the Tokyo attack had been prepared in haste. In any case, the thesis that biological or chemical weapons production can be performed easily and at low cost by relative amateurs in a barn, kitchen or bathroom, was discredited somewhat by the findings concerning Aum. Meanwhile, copycat actions did not occur. Opinion-leaders in the public debate on terrorism began to emphasize the relative lack of success of the metro attack.<sup>112</sup>

---

110) See Kaplan and Marshall (1997); Lifton (1999) and Olson (1999).

111) Thompson (1999), p. 252.

112) For example, the CBACI/Lawrence Livermore Conference Report (1999), Panel 1; or Pilat in Roberts (1997), pp. 2-4.

Gradually, indeed, the opposite perspective gained the upper hand. Some commentators argued that the attack might actually have a discouraging effect on terrorists with unconventional ambitions.



## 4 Motives and applications

---

The recent public debate on possible or plausible motives for terrorists to use unconventional weapons continues to be dominated by some of the characteristics that were typical of earlier analyses. Participants have very little concrete data upon which to base their evaluations. In fact, they have only one solid example: the attempt by Aum to poison the Tokyo metro with sarin. Aum's ideology will be discussed below in connection with aggressive apocalyptic beliefs.

This general scarcity of data may explain why, by and large, many authors spend more attention and space on the relatively concrete technical questions than on motives when they try to determine what the future holds in store, and also why some indulge in speculations about incentives.

As far as attention to motives goes, two main strains of argumentation may still be discerned: (1) terrorists will use unconventional means in order to strengthen their argument and draw public attention that they cannot gain otherwise; or (2) terrorists will use unconventional means because they want to kill on a massive scale. Why they should want to do this has been the subject of sometimes amazingly fanciful speculations. Authors, for that matter, frequently mention both – and additional – possibilities, virtually leaving the choice to their reading public. A third line of reasoning fits in more closely with theories on asymmetrical warfare.

### *Drawing public attention*

Several well-known authors claim that the general public has become desensitized to violence and that, as a consequence, terrorists who want public attention may feel the need to resort to exceptional means in order to get their message across. Strikingly, none of these authors present serious proof of this hypothesis. Thus, Bruce Hoffman, after noting that terrorism has become more lethal during the last decade, interprets the Rand/St Andrews database statistics like the ancient seers used to read the livers of sacrificial animals when he explains: “A number of reasons account for terrorism’s increased lethality. First, there *appears* to be a pattern that *suggests* that *at least some* terrorists have come to believe that attention is no longer as readily obtained as it once was. To their minds, both the public and the media have become increasingly inured or desensitized to the continuing spiral of terrorist violence.”<sup>113</sup> Hoffman’s argument is strangely at odds with a perfectly convincing chapter in his own *Inside Terrorism* dealing with the symbiotic relationship between terrorism and the media. In this chapter, Hoffman presents numerous examples of the professional effectiveness with which terrorists have manipulated the media in order to make them provide cost-free, extensive coverage of their actions and motivations.<sup>114</sup> If terrorists are such sophisticated handlers of the press, why would they need extreme violence to reach the front page and keep public attention? While Hoffman writes of terrorists’ *perceptions* of public indifference, others consider that indifference to be a self-evident matter of fact. Thus the CBACI/Lawrence Livermore conference report: “Society as a whole is becoming desensitized to violence, which *may* drive terrorists toward greater levels of violence, including WMD, to draw attention to their cause.”<sup>115</sup> Here, an unsubstantiated thesis (has the “general public” really become insensitive to violence?) is followed by a speculative and tentative conclusion (there obviously is no abundance in evidence that terrorists have become more violent in order to stay in the picture).

Finally, yet another type of argument has been made concerning the relationship between terrorist violence and public attention: that terrorist attacks with biological, chemical or nuclear means, even if resulting in a low number of casualties, would have a disproportionate impact on the general public, “shaking the nation’s

---

113) Hoffman in Lesser *et al.* (1999), p. 13; my italics.

114) Hoffman (1998), pp. 131-155.

115) CBACI/Lawrence Livermore Conference Report (1999), Panel 3; my italics.

trust and confidence in its government to its core.”<sup>116</sup> The aim, then, would not just be to get public attention, but to undermine public trust in the government of a state – a classic terrorist motive, and convincing as far as theory goes.<sup>117</sup> Unconventional means would not be used for mass destruction in this scenario but to cause major societal and political unrest.

*Killing indiscriminately on a massive scale*

In recent literature, however, the most prominent explanation for the potential wish of terrorists to use biological, chemical or nuclear weapons has been that such groups want to kill indiscriminately on a massive scale. Generally speaking, a genocidal ambition has been associated with the contemporary surge of extremist religious groups, especially but not solely of Islamic nature; and also with the emergence of apocalyptic groups, Christian or otherwise, on the eve of the millennium change. In addition, other extremist groups have been mentioned, for instance, radical defenders of animal rights and the environment, and the socially and mentally isolated remnants of nationalistic or ethnic groups.

Many authors broaching the issue of religious terrorism argue that religious extremists think in black and white, in terms of good and evil, and believe in a divine imperative for true believers to exterminate the “enemies of God.” Moreover, authors often lump together possible terrorist motives in various religions. As a consequence, their explanations are frequently shallow. In general, they only sparsely refer to statements on motives made by religious extremists themselves, and even less to the work of specialists on various forms of religious extremism who are trained to interpret properly the statements of, for instance, radical Islamic leaders, which may be less than transparent to the average Western observer.<sup>118</sup>

Bruce Hoffman is characteristic of this approach when he writes: “For the religious terrorist, violence is a sacramental or divine duty, executed in direct response to some theological demand or imperative and justified by scripture.”<sup>119</sup> Hoffman closely relates religious-inspired terrorism with the potential use of weap-

---

116) Frank Cilluffo, Deputy Director, Global Organized Crime Project and Co-Director of the Terrorism Task Force of the Center for Strategic and International Studies in Washington, during a Congressional Hearing on Weapons of Mass Destruction, Terrorism, and US Preparedness, on October 2 1998; <<http://www.csis.org/hill/ts100298.html>>. For a similar argument see Falkenrath (1998), p. 50.

117) See, for example, Martha Crenshaw in Reich (1998), pp. 18, 19.

118) The Dutch Islamologist J.J.G. Jansen has translated and extensively annotated a seminal pamphlet explaining the creed of Sadat’s assassins; see Jansen (1986). See also his *Dual Nature* (1997).

119) Hoffman in Lesser *et al.* (1999), p. 20.

ons of mass destruction, again using the Rand/St Andrews database as his source of inspiration. He reminds his readers of the dramatic increase in the number of religiously inspired terrorist incidents over the past thirty years or so, and stipulates a causal relationship between this phenomenon and the increase in lethality *per* terrorist attack. On this basis he amazingly concludes: “Where the secular terrorist sees violence primarily as a means to an end, the religious terrorist arguably tends to view violence as an end in itself.”<sup>120</sup> He then combines this opinion with the easier accessibility of the knowledge and hardware needed to produce chemical or biological weapons, to conclude rather cautiously all of a sudden “this combination of motive, opportunity and capability implicit in religious justifications of violence could launch terrorism on a trajectory towards higher levels of lethality and destruction, *perhaps* employing WMD.”<sup>121</sup> Interestingly, in his *Inside Terrorism*, Hoffman has written a better-considered chapter on religion and terrorism in which he does quote radical religious spokespeople in some detail; these quotes, while certainly aggressive in nature, do not substantiate Hoffman’s generalization about the propensity of religious terrorists to violence *for violence’s sake*. It is noteworthy, in addition, that Hoffman spends most of this chapter on domestic American religious extremism.<sup>122</sup>

A similarly generalist line of reasoning is followed by Brian Jenkins. He argues that, historically, interviews and police interrogations have demonstrated that terrorists did not use violence lightly, irrationally or indiscriminately. He goes on to say, however: “moving into the realm of religious fanaticism, there are those who see God as the only constituent. Whether that god speaks through the mouth of some angry sheikh, extremist rabbi, fundamentalist preacher, or mad guru in Tokyo, if he says that it is permissible to kill indiscriminately, then the constraints of conventional morality fall away.”<sup>123</sup> This may be true (in Western eyes, at least), but it hardly explains the real murderous drive behind religious extremist attacks. Jenkins rightly emphasizes that a need to kill on a massive scale can be effectively met with relatively simple conventional means.

Jessica Stern in her *The Ultimate Terrorists* is extremely brief. “Religiously motivated terrorists might decide,” she writes, “to use WMD, particularly biological agents, in the belief that they were *emulating God*.”<sup>124</sup> Interestingly, she quotes from the Old Testament rather than the Koran to indicate a biblical justification (or, at least, precedent) for spreading the plague amongst non-believers.

---

120) Hoffman (1997), p. 49.

121) Hoffman (1997), p. 51; my italics.

122) Hoffman (1998), pp. 87-129, especially pp. 105-120.

123) Jenkins in Roberts (1997), p. 48.

124) Stern (1999), p. 70; her italics.

Walter Laqueur is sketchy in a different way. In his *The New Terrorism*, he spends two chapters on motivations, trying to explain religious incentives behind terrorism by describing a variety of radical religious groups in past and present and exploring matters such as the religious legitimacy of suicide actions. He rightly points out that religious extremism, rather than a single driving force, may well be mixed with ethnic or nationalistic frustrations. His approach is, however, anecdotal and rather than going to the source and analysing, for instance, statements made by Osama Bin Laden, Omar Abdel Rahman, Yigal Amir or, for that matter, Shoko Asahara and others directly connected with religious terrorism, and rather than consulting writings of specialists on religion, he quotes from Dostoevsky, Zola and H.G. Wells.

#### *Radical Islamic terrorism*

In short, the public debate suffers from a shortage of sound information concerning possible motives behind religious terrorism, and specifically the alleged urge to kill on a massive scale. Generally speaking, this is even true of references to radical Islam, by far the most prominent aspect of religious terrorism broached in the public debate. One of the exceptions to this rule is an article by Magnus Ranstorp,<sup>125</sup> which does offer some insights into sources. Referring to such sources, Ranstorp briefly explains the principles of the Islamic *jihad*, or Holy War. According to him, *jihad* is largely defensive and reactive in character, “fought against perceived aggressors, tyrants, and ‘wayward Muslims.’ In its most violent form, it is justified as a means of last resort to prevent the extinction of the distinctive identity of the Islamic community against the forces of secularism and modernism.” Ranstorp highlights the role of the clergy and spiritual leaders in blessing and thus catalyzing terrorist actions. He argues that even if religious terrorists may claim an excessive number of casualties, they rarely work indiscriminately. “Targets are almost always symbolic and carefully selected to cause maximum psychological trauma to the enemy and boost the religious credentials of the terrorist group among their own followers.” Ranstorp finally advocates more understanding of the “inner logic” of religious terrorism “in order to undermine their breeding ground and strength as they are here to stay. At present,” he adds, “it is doubtful that the US or any Western government are adequately prepared to meet this challenge.”

By and large, experts touching on radical Islamic motivations for terrorism tend to be slack in presenting their sources and, more important, tend to skip over several

---

125) Ranstorp (1996). Ranstorp is Deputy Director of the Center for the Study of Terrorism and Political Violence of the University of St Andrews in Scotland.

central tenets of radical Islam.<sup>126</sup> Yet these sources and tenets are not difficult to trace in open literature and on the Internet – a medium that experts refer to all the time when they write about technical capabilities of terrorists. They have been described and analyzed by journalists and scholars of fame, including Americans.<sup>127</sup> A compact presentation is attempted here:

1 Particularly relevant in connection with spectacular terrorist attacks of the last two decades has been the perception that Islamic law or *shariah* has to be upheld in countries under Islamic rule. Islamic rulers have to live by this law themselves and have to see to it that their people do as well. Islamic rulers who break this holy rule, according to radical Muslims, commit the deadly sin of apostasy. It is the duty of true believers to execute the offender. This was a major motive behind the assassination of Egypt's President Anwar Sadat in 1981. It is noteworthy that the motivation behind the assassination of Israel's Prime Minister Rabin in 1995 was exactly the same. Rabin's assassin, the radical orthodox Yigal Amir, claimed to have executed Rabin because he had broken Jewish law (*halacha*) and committed apostasy by endeavoring to make peace with the Palestinians.<sup>128</sup> Both cases, moreover, are interesting in that they are examples of very precise and discriminate terrorist attacks in the name of religion. They were aimed to kill, but not to kill on a massive scale or indiscriminately.

2 Another issue, or rather grievance, central to the mind of radical Muslims, is the presence and political influence of foreign infidels in the holy places of Islam. The three most important holy places are Mecca, Medina and Jerusalem. Islamic leaders who allow such a presence are apostates and deserve the death sentence. Infidels who try to impose their influence on the holy places need to be fought by fire and sword. Apostates and infidels, in short, need to be countered by *jihad*. And terrorism is *jihad* too.

---

126) On the views and actions of the perpetrators of the World Trade Center bombing, see, for example, Andrew C. McCarthy, *Prosecuting the New York Sheikh*, <[http://www.ict.org.il/articles/abdel\\_rahman.htm](http://www.ict.org.il/articles/abdel_rahman.htm)>; on the views of Osama Bin Laden, see his *fatwa* of February 1998, with clear references to the American presence both on the Arab Peninsula and American support for Israel, <<http://www.emergency.com/bladen98.htm>>; or his interview with ABC News Correspondent John Miller, May 28 1998, <[http://abcnews.go.com/sections/world/dailynews/terror\\_980609.html](http://abcnews.go.com/sections/world/dailynews/terror_980609.html)>.

127) For example, Jansen (1986) explains the ideology of Sadat's murderers; see also Rapoport in Reich (1998) on the Neglected Duty of *jihad*; Jansen (1997) presents backgrounds to the world of Omar Abdul Rahman; Lewis (1998), explains Osama Bin Laden's *fatwa*; Kramer explains the moral logic of Hizballah in Reich (1998); and Simon and Benjamin (2000), pp. 67-69 present a short, well-informed survey of the issues.

128) Karpin and Friedman (1998), especially pp. 105-109.

These tenets go a long way towards explaining the terrorist attacks ascribed to the inspiration by the Egyptian religious teacher sheikh Omar Abdul Rahman or the expatriate Saudi maecenas of terror Osama Bin Laden, who between the two of them are supposed to have been the main instigators of radical Islamic terrorist attacks over the last decade. Abdul Rahman, who in his native country had already been implicated on the spiritual side in the preparations for the assassination of President Sadat, emigrated to the United States after narrowly escaping conviction for his part in that terrorist act. In his new country of residence he encountered no problems settling as an Islamic religious leader.<sup>129</sup> Advocating the “execution” of a renegade leader or helping a Holy War against infidels occupying Islamic land, however, is quite different from inspiring murderous terrorist attacks in a country where Muslims are a relatively small minority. Reportedly, the American support for Israel has been a central factor in the sheikh’s considerations.<sup>130</sup> In his view – and that of many Muslims – Israel is occupying Islamic land, including the holy city of Jerusalem.<sup>131</sup> Therefore a *jihad* against Israel and its powerful supporters is called for. In this asymmetrical struggle, where the righteous unfortunately are not nearly as well-armed as their enemies, all means are allowed to weaken these enemies and reach the “sacred end.”

Even more than the Egyptian sheikh (who is now imprisoned in the United States), Osama Bin Laden has become the incarnation of radical Islamic terrorism in the United States. Larry Johnson, former employee of the US State Department, has given a description that appears to be typical of official American thinking: “Think of Osama as a white supremacist Christian. He’s full of hatred, and he’s full of religion, and that’s what’s driving him.”<sup>132</sup> This description uncovers half the truth at most. It obviously does not explain Bin Laden’s terrorist philosophy. The United States government is convinced that Bin Laden has masterminded the terrorist attacks in Dahrhan, Nairobi and Dar es Salaam. Many Americans have become convinced that Bin Laden is waging a Holy War against the United States. Bin Laden

---

129) Cooley (1999), pp. 86, 87, 235, 236, relates how during the 1980s the sheikh assisted the CIA in various ways in connection with the *jihad* against the Russian invaders in Afghanistan, which was heartily and materially supported by Washington. This may explain Abdul Rahman’s ease with obtaining a residential permit. More on the CIA and Abdul Rahman below.

130) The attackers of the WTC wrote a letter to the *New York Times* explaining their action. The newspaper’s editors complied with the authorities’ request not to publish the contents. A summary was given, however, by Alison Mitchell, “Letter Explained Motive in Bombing, Officials Now Say,” in: *New York Times*, March 28 1993.

131) Note that the reverse is true in the eyes of nationalistic orthodox Jews, who claim that the Palestinians have no right to live on the land of Judea and Samaria, given to the Jewish people by God.

132) Larry Johnson in an interview with Jim Lehrer, August 20 1998, <[http://www.pbs.org/newshour/bb/military/july-dec98/binladen\\_8-20.html](http://www.pbs.org/newshour/bb/military/july-dec98/binladen_8-20.html)>.

himself has indicated that he wishes to force the Americans to withdraw their military presence from Islamic countries. He holds the American troops in Saudi Arabia, close to the holy cities of Mecca and Medina, in special abomination. He accuses the Saudi monarchy, which has invited the American troops, of apostasy. In addition, Osama Bin Laden considers American support for Israel a cause for *jihād*. And finally, he sharply criticized international sanctions against Iraq. From an ideological point of view, it is not overwhelmingly relevant whether Bin Laden personally has masterminded or financed the attacks in Nairobi and Dar es Salaam in August 1998. It is relevant, however, that the attacks have been claimed by an organization calling itself the Islamic Army for the Liberation of the Holy Sites. The bombings were not indiscriminate. The symbolism of the targets – American embassies – was clear. Yet the ruthlessness with which the attackers knowingly took the risk that, in order to get their absolutist message across, they would kill or maim many co-religionists who would just happen to pass by the buildings as the charges exploded, places these attacks in a different category from the assassinations of Sadat and Rabin. Part of the explanation may be that the attackers consider themselves at war; sacrifices must be made in order to gain victory. Part of the explanation may also be that at least a number of the attackers had an “Afghan” background. Their experiences during the fighting in Afghanistan may explain their callousness.<sup>133</sup>

A few words, finally, on religious terrorism and weapons of mass destruction in connection with the Arab-Israeli conflict. That conflict has been one of the most bitter and virulent sources of international terrorism in the recent past and quite possibly for some time to come. Today, it is certainly a central focus of radical Islamic and radical Jewish orthodox terrorism. Yet the possible terrorist use of unconventional weapons by Palestinians or Israelis has hardly been seriously considered in our public debate, and for good reasons. Radical Islamic activists, as we have seen, target their own leadership if it does not live up to their strict interpretations of God’s demands. This is an important fact of life in the Palestinian-Israeli “peace process.” The Palestinian Hamas movement is firmly convinced that the West Bank, the Gaza Strip, Israel proper and first and foremost the holy city of Jerusalem should all be under Islamic (more specifically Palestinian Islamic) rule. They consider the present Israeli rule an abomination in the eyes of God. This fundamentalist position brings Hamas into conflict not only with the Israeli authorities, but also with the official Palestinian leadership under Yasser Arafat, who after nearly a lifetime of fierce resistance to Israel has opted for a policy of compromise and territorial settlement. It is of vital interest to Hamas that the negotiations of Arafat and his Israeli counterparts do not result in a final settlement leaving the Palestinians (far) less than the entire area of the former Mandate of Palestine. This is why, in the recent past,

---

133) More about “Afghans” below, under the heading Terrorists on the Brink.

apparent progress in the negotiations has almost invariably led to terrorist attacks perpetrated by Hamas members, which were intended to spoil any potentially viable compromise. Those attacks have been aimed mainly at Israeli targets, but the Palestinian leadership rightly fears Islamic terrorism as well. Once again, the perceptions of radical Muslims and nationalist Jewish-orthodox activists merge perfectly: the latter also believe in the indivisibility of their God-given homeland. As history has already shown, when diplomatic successes are in the air, radical Jewish terrorist attacks aimed at spoiling those successes are to be reckoned with as well, and their rage may hit Jewish as well as Palestinian victims. Because of their absolutist views, it makes sense to hypothesize that both orthodox Jewish and radical Islamic Palestinian terrorists might resort to massive violence if they believe that their divine heritage is about to be effectively bargained away in exchange for a peace that they do not want. Indeed, civil war may follow the reaching of a final settlement based on territorial compromise. However, it is highly unlikely that religiously motivated terrorists from either side will use unconventional weapons under those circumstances. Territorially, their putative field of action is small. Jewish Israelis and Palestinians<sup>134</sup> are close neighbors virtually everywhere – even if they are not on speaking terms. Terrorists using weapons of mass destruction would risk killing their own people collectively, and laying waste to the land that God destined them to rule and cultivate. Religious fanatics they may be, and massive killers they may become, but arguably they have too much to lose to turn to such desperate means to achieve their divine right.<sup>135</sup>

#### *Apocalyptic terrorism*

During the latter half of the 1990s the public debate has picked up the theme of aggressive apocalyptic beliefs as a possible driving force behind terrorism with unconventional means. Obviously, the Aum attack on the Tokyo metro of early 1995 was grist to the mill of the millennium watchers. Data from official sources remain scarce, even though the perpetrators of the attack have been arrested, as has Aum's leader, Asahara. The Japanese judicial system, however, does not excel in expedient settlements. Although some verdicts have been pronounced (including two death sentences, one in 1999, one in 2000; the convicted have appealed), preparations for

---

134) I include Arab Israelis in this term.

135) On the other hand, it cannot be excluded. The WMD Terrorist Chronology Database of the Center for Non-proliferation Studies at Monterey (California) mentions several reported attempts by Hamas to obtain "chemical agents." How serious a threat this would mean would depend on the specifics of these agents; Cameron *et al.* (2000), pp. 168, 170.

the trial of Shoko Asahara may take another fifteen years.<sup>136</sup> Meanwhile, official information even on this case remains scarce. There is, however, good unofficial material.<sup>137</sup> Central to the philosophy of the Aum sect was the belief that the end of the world was near, that it would come in the form of a Third World War which would bring total destruction by means of nuclear, chemical and biological weapons. This Armageddon would usher in a new, better age in which the Aum leadership would take over power. The sect's leaders were not convinced that the end would come spontaneously. They therefore invested large sums of money in order to produce their organization's own arsenal of unconventional weapons. Armed with these, they hoped to help history along. In March 1995 they spectacularly tried – and failed, at least according to their own standards.<sup>138</sup> The attack, however, definitely put the spotlights on the subject of apocalyptic terrorism. Reference to the attack was widely made in the public debate, although its technical aspects were discussed much more widely than its motives.

Apocalyptic beliefs can be found in various religions – Christian, Jewish, Islamic, Buddhist and others. They have a tendency to intensify around dates invested with a special meaning such as the change of a century, or a millennium.<sup>139</sup> These special dates obviously differ according to the eras used by various religions. The year 2000 technically speaking was a Christian date to expect the end of the world. Most believers await the end passively, either in fear or hope, and show no tendency to turn to violence to force events. The Aum leadership had composed its creed by eclectically adopting tenets from Buddhism, Shamanism, Hinduism and yoga, but also borrowing Christian ideas about the end of time.<sup>140</sup> Its violent activism was exceptional, but not unique.

In this context it is noteworthy that apocalyptic beliefs have also fallen on fertile ground in certain small but highly violent extremist circles in the United States, where white supremacist views are paired with reactionary interpretations of Christianity and a hatred of the official authorities – the climate, in fact, in which Timothy McVeigh, the perpetrator of the bombing attack on the Alfred P. Murray

---

136) George Nishiyama, "Japan Cult 'Murder Machine' Sentenced to Death," *Reuters* (Tokyo), Thursday June 29 2000.

137) See, for example, Thompson (1999), who refers to transcripts of the Aum radio talks where Asahara explained his views about the end of the world in early 1995; see also Kaplan and Marshall (1997).

138) Another interpretation of the attack is that the sect's leadership was aiming to kill as many policemen as possible in order to forestall raids against cult facilities; thus Olson (1999), p. 516.

139) A learned and highly readable analysis of millenarianism in its many forms is to be found in Thompson (1999).

140) Until September 1999, Aum maintained its own website, on which the imprisoned leader, Shoko Asahara, was depicted as Christ on the cross.

Federal Building in Oklahoma City, felt at home.<sup>141</sup> These same circles have shown an unwholesome interest in chemical and biological weapons, although their capabilities do not seem to match this interest very well.<sup>142</sup> American participants in the public debate, in particular, tend to have these domestic groups in mind even when they discuss international terrorism.

The approaching millennium change prompted domestic American intelligence and security services to be on extra alert for terrorist attacks. In late 1999, the Federal Bureau of Investigation completed "Project Megiddo," a "strategic assessment of the potential for domestic terrorism in the United States undertaken in anticipation of or response to the arrival of the new millennium," scanning apocalyptic beliefs and groups that might be inspired to violent actions by them. The assessment's final analysis was hardly resounding: "while making specific predictions is extremely difficult, acts of violence in commemoration of the millennium are just as likely to occur as not."<sup>143</sup> This caution was apparently justified by events: nothing much happened when the New Year arrived. In the United States, security measures covering official buildings, officials and their families, as well as areas where large public celebrations were to take place, may have prevented serious mayhem, but if so this was not reported publicly, with the exception of the arrest of Ahmed Ressam. Interestingly, the Megiddo Report (or at least the public version of it) did not even mention the possibility of attacks with unconventional weapons.

### *Terrorists on the brink*

Even more possibilities have been explored in the recent debate, which in one way or the other emphasized the societal marginality of terrorists as a motive for clutching at unconventional weapons. It has been argued rather tentatively that the remnants of some of the familiar groups such as the Japanese Red Army or the ETA, feeling that they no longer have anything to lose, might use unconventional weapons to take away part of the ingrate world they wanted to improve in the grave with them. It is, of course, difficult to predict how idealistic and aggressive people living in total mental and social isolation and feeling rejected by those they wanted to

---

141) More on violent American apocalyptic groups can be found in Lifton (1999).

142) Falkenrath (1998), p. 51.

143) Dubbed the Megiddo Project after the Israeli "hill of Megiddo," or Armageddon, the designated spot of God's final battle with evil. The public version can be downloaded from <<http://www.fbi.gov/library/megiddo/publicmegiddo.pdf>>.

“help” might act when they feel cornered.<sup>144</sup> The rejuvenated hard core of the ETA, for one, is on the warpath again. There is no denying its murderous intent. Nevertheless, during their terrible summer 2000 campaign, ETA terrorists have stuck to old and trusted ways and the numbers of fatalities are counted in tens rather than hundreds. They have been alternating indiscriminate explosions to instill general fear, with precision killings aimed at softening the resistance of Basque businessmen to pay “contributions” to the terrorist organization. They have been using old-fashioned means, mainly conventional car bombs exploded by remote control. There is no sign of a change to massive indiscriminate killing and the use of unconventional means – yet. But then, the number of ETA sympathizers is not as small as the authorities might like.

As has already been discussed in a little detail with regard to the Israeli-Palestinian conflict, many authors addressing the general possibility of irredentist nationalistic or ethnic groups using unconventional weapons have expressed doubts, mostly because by using these weapons terrorist nationalists would be (massively) killing their own people along with their rivals.<sup>145</sup> In addition, they might be turning their own longed-for independent state into a barren desert for decades if not ages to come.<sup>146</sup> The fear that all-consuming ethnic hatred might inspire indiscriminate killing has also, however, been expressed.<sup>147</sup>

A particularly dangerous category of terrorists “on the brink” is that of the so-called Afghans. The epithet refers to Islamic veterans of the extremely violent conflicts in Afghanistan and to people who would like to emulate these veterans’ radical Islamic belief, their stamina under duress, and their extreme callousness acquired through terrible personal experiences.<sup>148</sup> After the fighting was more or less over in Afghanistan, these veterans, often mentally traumatized beyond return to “normal” civilian life, went elsewhere to fight for the just cause – or perhaps also for the money. It is believed that many of them are on Osama Bin Laden’s payroll. It has

---

144) For example, A. Bandura, “Mechanisms of Moral Disengagement,” in: Reich (1998), pp. 161-191 for an analysis of this issue.

145) For example, Laqueur (1999), p. 230.

146) Foxell (1999), pp. 112, 113 notes that research is being done on biologically specific elements in human blood that may be used in the production of chemical or biological weapons that kill selectively by race and ethnicity. Such an infernal invention would break down the present impediment. At the moment, at least, it is difficult to imagine such weapons would work effectively, if only because in many areas, ages of cohabitation of different and now warring ethnic groups have produced substantial blending between such groups. Ethnic differences may in many cases be as much a mental as a physical condition. See also: Nathalie Angier, “Do Races Differ? Not Really, DNA Shows,” in: *New York Times*, August 22 2000.

147) Jenkins in Roberts (1997), pp. 49, 50.

148) That is to say that they are not necessarily Afghans by nationality, but may come from any number of Islamic countries.

been established that “Afghans” have been involved in the gruesome attacks on the World Trade Center in New York and on the American embassies in Nairobi and Dar es Salaam. This may go part of the way towards explaining the demonstrated disregard for the deaths of thousands, including in the latter cases numerous Muslims, as a consequence of these attacks.

To end on a rather fantastic note, a group deeply distrusted by the *eminence grise* of terrorist studies, Walter Laqueur (and others): defenders of animal life and the environment. Laqueur points at the documented aggressiveness against humans of some of these misanthropic nature lovers, ascribes to them the technical capabilities to cause mass destruction by unconventional means, and muses: “It seems only a matter of time until an individual, or a small group on the fringes of the ecomilitants, reaches the conclusion that the crimes against the spotted owl and the red fox, against the water and the air, are such that mankind does not deserve to survive.” If, in their perception, the end of the world has come near because of the reckless ways in which mankind has been dealing with mother earth and all creatures inhabiting her, Laqueur elaborates, the animal rights people may strike. “Ironically, the fear of impending disaster, plus the increased availability of weapons of mass destruction, may precipitate a terrorist-orchestrated disaster.”<sup>149</sup> Well, who can tell? Recently, a notable exploit of the Animal Liberation Front in the US has been mailing envelopes containing razor blades laced with rat poison to more than 80 medical researchers working in the vivisection industry in Canada and the United States.<sup>150</sup> No (physical) casualties have been reported. It is justified to characterize this action as extremely vicious, even murderous; yet it was discriminate. What is more, it would be preposterous to categorize poisoned razor blades as weapons of mass destruction. Such attacks belong to the school of Catherine de’ Medici, not to that of Shoko Asahara.

This glaring discrepancy between fact and fear is illustrative of a structural problem with the public debate: the overly elastic use of the term “weapons of mass destruction.”<sup>151</sup> All too frequently, any biological, chemical, nuclear or radiological agent is thrown into this box, while only a limited number of them have the potency of producing massive destruction (including massive loss of human life). On the other hand, there are quite a number of conventional weapons that, judging by their capabilities, should be but are not called weapons of mass destruction. This loose use of the definition has been confusing and misleading, and has contributed to the creation of a climate of fear.

---

149) Laqueur (1999), pp. 207, 208.

150) Cameron *et al.* (2000), p. 172.

151) See Cameron *et al.* (2000) for a lucid elaboration of the theme; also Bremer Maerli (2000) and Sokolski (2000), pp. 210, 211.

### **Policy recommendations**

Many participants in the debate have crowned their analyses and hypotheses with suggestions for policy-makers. A brief summary of such recommendations is presented here. Two main categories, both heavily focused on technical fixes, may be discerned. This is not surprising in view of the fact that, as we have seen, the risk analyses were also heavily concentrated on real, putative, or possible future *technical capabilities* of terrorists. A similar line has, in fact, been followed by the Clinton administration, which has invested heavily in technical measures and organizational improvements in its counterterrorist drive.

### *Technical fixes*

*Firstly*, a generally voiced recommendation is the further strengthening of the international non-proliferation regime, more particularly its safeguards and export control aspects. In line with this approach, authors recommend that the Western industrialized countries invest more, both financially and in the guise of policy support, in Russian arms reduction programs and the occupational resettlement of Russia's unconventional arms production specialists into properly paid civilian jobs.<sup>152</sup>

*Secondly*, on the level of national disaster management, many complain about a lack of preparedness of numerous services likely to be called upon for help once an unconventional terrorist attack has taken place. This criticism is frankly voiced by authors from the United States, but would be equally valid for many other countries. They argue that civil servants, medical staff or the armies of volunteers (fire brigades, for instance) who will be among the first to have to react to a calamity, are lacking in awareness, essential information about chemical and biological agents, and generally in training. It is also noted that there are not nearly enough effective shelters or protection and antidotes against unconventional attacks. Another focus of criticism is the disastrous compartmentalization of intelligence and police services. Such services, if allowed to continue in their old ways, are expected to withhold vital information from each other because of historically grown conflicts over competence. Decompartmentalization and training in coordination and cooperation are emphatically called for, especially, again, by US authors.

All these suggestions are eminently sensible, although some of them are reactive rather than preventive, and some of them are very costly. They are, of course, not tailor-made for counterterrorism. They would be equally useful in the case of attacks by rogue states or accidents with, for instance, nuclear reactors (core meltdowns in particular) or large chemical factories, or spotting the epidemical outbreak of a new disease or an old disease that has grown immune to traditional antidotes. In other words, the possibility of unconventional terrorism is only one of a number of reasons to pursue the advocated policies.

While these general measures would present impediments to unconventional terrorism, they would be far from foolproof. If terrorists are willing to make do with relatively simple ingredients and delivery means, they might well be able to avoid the safeguards and export control systems of the international non-proliferation regime, especially with regard to chemical or biological means. Several participants in the public debate have rightly emphasized that the National Missile Defense propagated by a strong lobby in the United States will not work against terrorists

---

152) Parrish and Robinson (2000), *passim*, for more details on these programs.

transporting their chemical or biological agents in a suitcase and delivering them through the doctored exhaust of a truck or the air-conditioning system of large office buildings. In short, technical approaches make sense, but their effectiveness might be limited.

### *Improved intelligence*

Sometimes another recommendation is made by participants in the public debate: improve intelligence. This could be done not so much by spending more money but by effecting a refinement in focus by emphatically including investigating incentives and motives. Unlike the previous policy approaches, good intelligence is a very precise weapon against terrorism, and, equally important, it can prevent attacks. Of course, intelligence has been thrown into the battle and probably with considerable effect. Its successes may seldom reach the public eye. Intelligence is a discrete profession. Unfortunately, its failures are much more likely to attract public attention than its achievements.<sup>153</sup>

Still, however unfair this may be, there is cause to wonder about the efficacy of intelligence services, certainly as far as United States services are concerned. In several important instances they seem to have demonstrated a stunning lack of acuteness and empathy. As we have seen, in the 1980s Omar Abdul Rahman was welcomed into the United States. He even maintained close contacts with the CIA. In fact, that may have been the main reason for the ease with which this controversial dignitary could enter the country. In 1993 he turned against his hosts by instigating the attack against the WTC. They were taken by surprise. In addition, in 1995 high-ranking officials of United States intelligence services had to admit before Congress that they had not spotted the Aum sect before the attack on the Tokyo metro. Even to sympathetic observers, these mistakes seem incomprehensible. Abdul Rahman had a very bad reputation with Egyptian security. Was that not known to the CIA or did the authorities wilfully disregard it because the Egyptian sheikh came in handy in the short term? Or was there a fatal lack of communication between different securities agencies? Some authors and policy-makers have called the Aum sect “obscure.” Indeed, by modern standards its views may be called obscurantist, but obscure the sect was not. It did not try to hide its existence; in fact, it was at times recruiting new converts aggressively. It had tens of thousands of adherents, mainly in Japan and Russia but also in the United States. It was organized along clear hierarchical lines. It was very well backed financially. It maintained its own radio station, on which its

---

153) See, for example, Michael J. Sniffen, “FBI Intelligence Efforts have Risen Sharply,” in: *Washington Post*, August 28 2000, p. A 02.

views were elaborated on a regular basis. How could Japanese security or, for that matter, foreign intelligence agents including the Americans overlook or misinterpret all this information? Although the sect has now lost its profitable status as a religious organization, it has not been outlawed and is at present led by someone who was already a promising member in February 1995. It has never admitted involvement in the Tokyo attack, let alone expressed any apologies. Indeed, it has insistently complained about harassment by the police and unfair treatment by the media. In September 1999 it shut down its English website, explaining that “the AUM Shinrikyo (the use of this name is suspended) will rest for a while.” In January 2000 it changed its name from Aum to Aleph. It is to be hoped that these measures do not protect the infamous organization from hawk-like scrutiny of its activities and ideological evolution.

If the cause of these intelligence lapses seems to have been a lack of attention or empathy (or lack of communication between security agencies), sometimes the problem has been an overdose of zeal. This was the case in the US security services’ reaction to the arrest of Ahmed Ressam on the Canadian-American border in late 1999. After Ressam had been caught because of the alertness of the local customs officials, an army of intelligence officers descended upon the homes of numerous Muslims living in the United States to question them, oh so politely but at six o’clock in the morning.<sup>154</sup> The search reportedly led to very little extra information but left an unpleasant impression of discrimination. In the case of Abdul Rahman, US intelligence ignored a fairly obvious and highly lethal danger. In the case of chasing Ahmed Ressam’s accomplices, officers offensively went looking for a putative needle in a very large haystack.<sup>155</sup> Both approaches seem off the mark.

The two cases noted above seem to suggest that US intelligence should include incentives, motives and their seriousness in its investigations more strongly than it appears to have done until now. Possibly, the same goes for intelligence services elsewhere.

---

154) Adams and Vise, in: *Washington Post*, January 10 2000, p. A3.

155) Actually, these actions apparently fit in a pattern of random distrust of Arabs, including Arab-Americans. See various communiqués of the American-Arab Anti-Discrimination Committee (ADC), at <media@adc.org>, for example that of December 23 1999, “Arab-Americans Urge Caution over Y2K Fears,” or January 11 2000, “For Arab-Americans, a Joyless New Year,” by Hussein Ibish.



## 5 Conclusions

### The contents of the debate

---

Four questions were raised in the public debate on terrorism and unconventional weapons: (1) are terrorist organizations technically able to obtain and use chemical, biological or nuclear weapons?; (2) what motives might bring them to use such weapons?; (3) in what ways might they apply them?; and (4) how likely is it that attacks with massive effects by terrorists using unconventional weapons will occur in the near future?

### *Capabilities*

As we have seen, opinion-leaders dominating the public debate have not reached unanimity in their answers by a long chalk. Yet broader trends of thought have become visible. Most authors would agree that chemical weapons would be a terrorist's first choice because such weapons are relatively easier to come by and handle. Second would come certain biological weapons, while a choice for nuclear explosives would be the least likely. As we have seen, the technical debate was relatively

clear-cut in the 1970s because it was entirely focused on nuclear means. By the early 1990s, consideration of chemical and biological means confused the debate, although it contributed to phasing out worries about terrorists becoming nuclear weapons producers. Many opinion-leaders would, moreover, agree that a choice for conventional means continues to seem the most rational, the most “economical,” even for terrorists who want to kill on a massive scale.

#### *Motives and applications*

Both in the earlier and the recent public debate, two main lines of reasoning may be discerned with regard to motives and applications. The first argument starts from the assumption that terrorists want public attention. Arguably, attacks with unconventional weapons would guarantee such attention. The elaboration of this argument, however, that the general public has become desensitized to violence and that, as a consequence, extreme impulses are needed to break through this indifference should be discarded. This hypothesis has not been supported by solid research. Moreover, a number of compelling arguments go against it, for instance the agility with which terrorists have been able to manipulate the press in order to bring their messages across.

The second argument, which has grown more prominent over time, posits that terrorists will use unconventional weapons because they want to kill on a large scale. Two arguments have been brought against this hypothesis: (a) there is a rich choice of “simple” conventional means to kill on a massive scale, so why would terrorists select the hardest route; and (b) it is not as easy as popularly assumed to reach massive effects with unconventional weapons. Nuclear explosives obviously would be effective, but they appear to be the least likely of unconventional means to be used by terrorists.

Why terrorists should want to kill on a massive scale has been insufficiently explored. Religious fanaticism, including aggressive forms of apocalyptic beliefs, has been mentioned most often, but rarely elaborated properly. Only very recently does a change for the better seem to have begun. Ethnic hatred has been explored as a motive, and rejected by most. Extreme social and mental isolation of potential perpetrators has been discussed in considerable detail, for instance with regard to the so-called Afghans. Finally, use of weapons of mass destruction may be interpreted according to some as a form of asymmetrical warfare. Several attacks by radical Islamic terrorists have been put forward as evidence. It should be noted that none of these indicated a desire to kill *at random*.

### *Predictions*

Prominent participants in the debate have argued that, technically, the clock has already struck twelve for terrorist use of biological or chemical weapons. Yet most would agree that such use remains a “low probability-catastrophic consequences” type of risk, especially if it is assumed to be aimed at mass destruction. It is considered relatively more likely that terrorists – whether armed or pretending to be armed with unconventional means – may threaten to use chemical, biological or radiological devices in order to cause societal disruption or to press home blackmail attempts.

### **The quality of the debate**

During the past twenty-five years a rather small group of well-versed, intelligent and committed opinion-leaders have made many sensible and thought-provoking contributions in the discussions about terrorism with unconventional means. An evaluation must nevertheless conclude that the overall quality of the debate has been disappointing, for two reasons mainly.

### *Qualifications and simplifications*

Firstly, too many authors have fallen into the technology trap. Many have based their risk assessments, consciously or half-consciously, on the presumptions that: (1) there are no serious impediments to terrorist use of unconventional weapons of mass destruction; and (2) that what is technically possible will inexorably happen, and on a relatively wide scale at that. Only very recently have countercurrents become more visible. An equally serious problem has been that few of the participants in the debate are actually qualified to make solid analyses of the technical aspects involved. The complexity of these aspects is considerable. Dissecting relevant technical elements and assessing how they would contribute to an increased risk of unconventional terrorism would require the participation of specialists with a variety of scientific backgrounds, but such participation has been rare. Yet many opinion-leaders, even though they were relying on second- or third-hand information and assessments (or even thinner data), still presented quite outspoken and moreover alarmist predictions. A perfunctory, far too broad use of the term Weapons of Mass

Destruction (or for short WMD) has aggravated the alarmist effect.<sup>156</sup> On this score, too, a change for the better is just beginning to take shape.

It is, secondly, all the more regrettable that opinion-leaders have given so little attention to motives even though most of them are relatively better-trained to analyze this side of the issue and would not have insuperable difficulty integrating into their assessments the analyses provided to them by specialists on, for instance, the views of radical branches of various religions, social psychologists or psychiatrists.

Opinion-leaders ought to discern between the likely, the feasible, the unlikely, and the horror story. In fact, they have all too often focused on worst-case scenarios and put horror stories in one box with likely developments.

United States policy-makers have not publicly expressed more attention for motivational issues than most opinion-leaders; in fact probably even less. Important representatives of the US intelligence community have repeatedly and bluntly stated that terrorist use of unconventional weapons of mass destruction is quite possible and becoming more likely.<sup>157</sup> Very large sums of public money have been spent on counterterrorist policies based on this assumption. Yet the same policy experts have by and large failed to present convincing analyses of the putative motives behind such attacks. Rather, they have speculated about “blind hatred” and a desire to commit “violence for violence’s sake.”

In sum, in the United States in particular, many officials and quite a number of opinion-leaders participating in the public debate on terrorism with unconventional means have contributed to the creation of a climate of ill-defined fear. Arguably, it ought to be their responsibility to effect the opposite: a climate favorable to rational decision-making. Terrorists, needless to say, like the present atmosphere: it multiplies the effectiveness of their actions.

### *Parameters*

---

156) Oddly enough, the Chronology on Incidents Involving Sub-National Actors and Chemical Weapons of the Center for Non-proliferation Studies at the Monterey Institute of International Studies maintains the term WMD in its title, even though most of the covered incidents evidently do not fall under the definition. The database managers explain that they use the term weapons of mass destruction for any chemical, biological or radiological means or agent even if these cannot kill on a massive scale, *because it has become common language*. See Cameron *et al.* (2000), p. 161. The argument does not hold water. That the term has become common language does not make it less inaccurate or misleading. Rat poison or hydrochloric acid or tear gas just are not WMD any more than bullets or, for that matter, machetes.

157) For example, Cameron (2000), p. 162.

It is remarkable how this fright fits in with the general parameters of the debate. One obvious element has been the attention for terrorism in general. This attention was especially intensive during the 1970s, when in the Far and Middle East as well as in Europe spectacular actions by terrorist groups demanded the attention of the general public and policy-makers alike, and again during the second half of the 1990s, with its life-devouring attacks in the United States, Africa, Saudi Arabia and South Asia.

Less directly but still clearly related and of great importance has been a cyclical interest in nuclear, chemical and biological arms races or attempts at arms control and reductions. The Gulf Wars in particular, which demonstrated how real the (threat of) use of unconventional weapons has become, have made this a pressing theme.

The third, perhaps somewhat evasive but very influential, parameter has been a concern with the darker sides of rapid technological progress. This concern appears to be particularly pronounced in the United States, which, of course, prides itself in being the world's technological front runner. People living in modern societies realize how vulnerable they have become through their ubiquitous dependence on high technology. If power stations fail, modern life grinds to a halt. The Internet has opened up enormous possibilities for communication, but also for a range of criminal activities with highly disruptive potential. Bioscience and DNA research will improve the quality of living by, for instance, facilitating agricultural production or stimulating pharmaceutical innovations, but they may also produce genetical monsters, stimulate unhealthy dreams about master races, and help produce new generations of ethnically precise biological weapons. And so on.

In short, in modern societies at the end of the old millennium and the beginning of the new, widespread wealth and health have combined paradoxically with an increasing sense of personal, physical vulnerability.

*In conclusion: The Shepherd Boy who Cried Wolf?*

The debate on terrorism with unconventional means as it developed during the past twenty-five years has produced thoughtful and stimulating arguments and perspectives, yet its overall effect, whether intentional or not, has been one of panic-mongering. It has been insufficiently emphasized that an effective terrorist attack with a weapon of mass destruction (in the true sense of the word) should be treated as a scenario of very serious consequences but very low probability.<sup>158</sup> Terrorist use of not (exceptionally) lethal chemical or biological means is arguably more likely,

---

158) This criticism does not apply to the highly instructive *First Annual Report* (1999) which was submitted to President Clinton and the US Congress in December 1999.

but will have less serious consequences. Hoaxes threatening the use of unconventional means have become quite commonplace in the US and reportedly in some European countries as well. High-school boys in the US have sent letters with anthrax threats to their teachers hoping to avoid a difficult test by causing a school closure. The debate would gain in clarity and positive effects on public opinion and possibly policy-making if this sort of threat, which arguably has not much more than nuisance value, is not categorized under the heading of (threatened) use of weapons of mass destruction.

By focusing on the general vulnerability of modern societies and by blurring analyses of the potential of various unconventional agents, opinion-leaders have emphasized a suggestion of imminent disaster. In the long run, this is bad for public attention. One is reminded of Aesop's fable, *The Shepherd Boy who Cried Wolf*.

It is also bad for policy. Policy-makers may have their own reasons to embroider the dangers, to make them appear more widespread and incomprehensible than they in all likelihood are, as we have seen happening in the United States. Their proclaimed concerns, unfortunately, have not always improved their perspicacity. The past decade has witnessed a small number of spectacular terrorist incidents like the attacks on the WTC and the Tokyo metro that were perpetrated with the express intent to kill as many people as possible. Intelligence specialists apparently have failed to notice these major disasters-in-the-making (or to take effective countermeasures if they did), although arguably they should have been aware of the perpetrators' existence and known their horrible intentions.

The arguments of American opinion-leaders and the points of view of American policy-makers and intelligence organizations are of intrinsic interest but also of practical importance to their European counterparts. Frank exchanges of views on the analysis of terrorist threats – including threats with unconventional means – and the conceptualization and implementation of counterterrorist policies should strengthen transatlantic security cooperation. This desired effect, however, may not come about smoothly, as recent experiences on a related issue have demonstrated. Major controversies arose in the late 1990s between the United States and the vast majority of European countries concerning the treatment of rogue states. In American eyes, European countries preferred their narrow-minded economic opportunities over shared security interests. In European eyes, the Americans wasted good opportunities for constructive dialogue by their uncompromising attitude towards states such as Iran and Cuba. These disagreements led the US Congress to take unilateral measures against European countries who refused to dance to the American tune. The overall result was transatlantic tension rather than the taming of rogues.<sup>159</sup>

---

159) M. van Leeuwen, *EU and US: Security Relations and the New Transatlantic Agenda. Two Case Studies* (The Hague: Clingendael, January 1999), <[www.clingendael.nl](http://www.clingendael.nl)>.

Obviously, similar transatlantic confrontations over counterterrorism should be avoided. Open-mindedness will be required on both sides. A strong and well-argued European input may help US policy-makers and other opinion-leaders to weigh different points of view and to reign in a certain tendency to project national fears and perceptions onto their friends and allies. They should keep in mind that Europe – sadly enough – has gained at least as much practical experience with terrorism and counterterrorism as the United States.



## Annex I: Literature before 1995

- 
- Beres, L.R., *Terrorism and Global Security: The Nuclear Threat*, Westview Special Studies in National and International Terrorism (Boulder CO: Westview, 1979).
- Janke, P., "Nuclear Terrorism," in: *Defence Yearbook 1977/78* (London: Brassey's, 1977), pp. 103-112.
- Jansen, J.J.G., *The Neglected Duty: The Creed of Sadat's Assassins and Islamic Resurgence in the Middle East* (London: MacMillan, 1986).
- Jenkins, B.M. "Will Terrorists Go Nuclear?," in: *Orbis*, 29 (3), fall 1985, pp. 507-515.
- Leventhal, P. and Y. Alexander (eds), *Preventing Nuclear Terrorism: The Report and Papers of the International Task Force on Prevention of Nuclear Terrorism*, a Nuclear Control Institute Book (Lexington MA/Toronto: Lexington Books/D.C. Heath and Co, 1987). More specifically *The Task Force Report*, pp. 7-50, and Chapter 2, "What Factors Influence Whether Terrorists Go Nuclear?," pp. 89-164 with contributions by: Post, J.M., "Prospects for Nuclear Terrorism: Psychological Motivations and Constraints;" Kellen, K., "The Potential for Nuclear Terrorism: A Discussion;" Beres, L.R., "Preventing Nuclear Terrorism: Responses to Terrorist Grievances;" and Sterling, C., "Responses to Terrorist Grievances: Another Perspective."

- Schelling, T. C., "Thinking about Nuclear Terrorism," in: *International Security*, 6 (4), spring 1982, pp. 61-77.
- Spiers, E.M., *Chemical and Biological Weapons* (London: MacMillan, 1994).
- Stern, J.E., "Will Terrorists Turn to Poison?," in: *Orbis*, 37 (3), summer 1993, pp. 393-410.

## Annex II: Literature after 1995

### Monographs:

---

- Alibek, K. with S. Handelman, *Biohazard* (London Hutchinson, 1999).
- Cooley, J.K., *Unholy Wars: Afghanistan, America and International Terrorism* (London and Sterling VA: Pluto Press, 1999).
- Falkenrath, R.A., Newman, R.D. and Thayer, B.A., *America's Achilles Heel: Nuclear, Biological and Chemical Terrorism and Covert Attack* (Cambridge MA and London: MIT Press, 1998).
- Guelke, A., *The Age of Terrorism and the International Political System* (London: I.B. Tauris, 1998 (first edition 1995)).
- Hoffman, B., *Inside Terrorism* (London: Victor Gollancz, 1998).
- Jansen, J.J.G.: *The Dual Nature of Islamic Fundamentalism* (London: Hurst, 1997).
- Kaplan, David E. and Andrew Marshall: *The Cult at the End of the World: The Incredible Story of Aum* (London/Sydney: Arrow Books/Random House, 1997).
- Karpin, M. and Friedman, I., *Murder in the Name of God: The Plot to Kill Yitzhak Rabin* (London: Granta Books, 1998).
- Kushner, H.W. (ed.), *The Future of Terrorism: Violence in the New Millennium* (London and New Delhi: Thousand Oaks, 1998).

- Laqueur, W., *The New Terrorism: Fanaticism and the Arms of Mass Destruction* (New York, Oxford: Oxford University Press, 1999).
- Lesser, I.O., Hoffman, B., Arquilla, J., Ronfeldt, D. and Zanini, M., *Countering the New Terrorism* (Santa Monica and Washington DC: Rand, 1999).
- Lifton, R.J., *Destroying the World to Save It: Aum Shinrikyo, Apocalyptic Violence, and the New Global Terrorism* (New York: Metropolitan Books, 1999).
- Purvis, Ron, *Chemical and Biological Terrorism: The Threat According to the Open Literature*, no publisher mentioned, June 1995, <http://www.newscientist.com/nsplus/insight/bioterrorism/allfall.html>.
- Reich, W. (ed.), *Origins of Terrorism: Psychologies, Ideologies, Theologies, States of Mind* (Washington DC: Woodrow Wilson Center Press, 1998 (first published in 1990)).
- Roberts, B. (ed.), *Terrorism with Chemical and Biological Weapons: Calibrating Risks and Responses* (Alexandria VA: Chemical and Biological Arms Control Institute, 1997).
- Stern, J., *The Ultimate Terrorists* (Cambridge MA and London: Harvard University Press, 1999).
- Thompson, D., *The End of Time: Faith and Fear in the Shadow of the Millennium* (London/Sydney: Vintage/Random House, 1999).

#### Articles:

- Allison, Graham T. and Richard A. Falkenrath, "Kampf gegen die Nuklearverbreitung," in: *Internationale Politik*, 51 (1), January 1996, pp. 11-18.
- Blackwood, Milton E. Jr., "Arsenic and Old Weapons: Chemical Weapons Disposal in Russia," in: *The Non-proliferation Review*, spring-summer 1999, pp. 89-97.
- Bremer Maerli, M., "Relearning the ABCs: Terrorists and 'Weapons of Mass Destruction'," in: *The Non-proliferation Review*, 7 (2), summer 2000, pp. 108-119.
- Cameron, G., "WMD Terrorism in the United States: The Threats and Possible Countermeasures," in: *The Non-proliferation Review*, 7 (1), spring 2000, pp. 162-179.
- Cameron, G; Pate, J.; McCauley, D. and DeFazio, L., "1999 WMD Terrorism Chronology: Incidents Involving Sub-National Actors and Chemical, Biological, Radiological, and Nuclear Materials," in: *The Non-proliferation Review*, 7 (2), summer 2000, pp. 157-174.
- Chalk, P., "The Evolving Dynamic of Terrorism in the 1990s," in: *Australian Journal of International Affairs*, 53 (2), July 1999, pp. 151-167.

- Davis, Christopher J., "Nuclear Blindness: An Overview of the Biological Weapons Programs of the Former Soviet Union and Iraq," in: *Emerging Infectious Diseases*, 5 (4), July-August 1999, pp. 509-512.
- Falkenrath, R.A., "Confronting Nuclear, Biological and Chemical Terrorism," in: *Survival*, 40 (3), autumn 1998, pp. 43-65.
- Foxell, J.W., "Trends in Bio-Terrorism: Two Generations of Potential Weapons," in: *Journal of Contingencies and Crisis Management*, 7 (2), June 1999, pp. 102-118.
- Graeves, Rebecca K., "Russia's Biological Weapons Threat," in: *Orbis*, summer 1999, pp. 479-492.
- Hoffman, Bruce, "Terrorism and WMD: Some Preliminary Hypotheses," in: *The Non-proliferation Review*, 4 (3), spring-summer 1997, pp. 45-53.
- Kamp, K.-H., "Nuklearterrorismus: hysterische Sorge oder reale Gefahr?," in: *Aussenpolitik*, 46 (3), third quarter 1995, pp. 211-219.
- Kamp, K.-H., "Nuclear Terrorism is not the Core Problem," in: *Survival*, 40 (4), winter 1998-1999, pp.168-171.
- Laqueur, W., "Neue Waffen in falschen Händen," in: *Internationale Politik*, (51) 1, January 1996, pp. 19-22.
- Laqueur, W., "Postmodern Terrorism," in: *Foreign Affairs*, 75 (5), September/October 1996, pp. 24-36.
- Lewis, B., "Licence to Kill: Usama Bin Ladin's Declaration of Jihad," in: *Foreign Affairs*, 77 (6), November/December 1998, pp. 14-19.
- Olson, Kyle B., "AUM Shinrikyo: Once and Future Threat?," in: *Emerging Infectious Diseases*, 5 (4), July-August 1999, pp. 513-516.
- Parrish, S. and Robinson, T., "Efforts to Strengthen Export Control and Combat Illicit Trafficking and Brain Drain," in: *The Non-proliferation Review*, 7 (1), spring 2000, pp. 112-124.
- Pilat, J.F., "Apocalypse Now – or Never?," in: *Survival*, 40 (3), autumn 1998, pp. 171-175.
- Ranstorp, M., "Terrorism in the Name of Religion," in: *Journal of International Affairs*, 50 (1), summer 1996, pp. 4-62.
- Shubik, M., "Terrorism, Technology, and the Socioeconomics of Death," in: *Comparative Strategy*, 16 (4), October-December 1997, pp. 399-414.
- Simon, S. and Benjamin, D., "America and the New Terrorism," in: *Survival*, 42 (1), spring 2000, pp. 59-75.
- Sokolski, H., "Rethinking Bio-Chemical Dangers," in: *Orbis*, 44 (2), spring 2000, pp. 207-218.
- Stern, J., "Apocalypse Never, but the Threat Is Real," in: *Survival*, 40 (3), autumn 1998, pp. 176-179.
- Taylor, Robert, "All Fall Down," in: *New Scientist*, May 11 1996.

Venter, A.J., "Soviet Nuclear Legacy Poses Deadly Threat," in: *Jane's Intelligence Review*, October 1999, pp. 12-16.

**Reports:**

*First Annual Report of the Advisory Panel to Assess Domestic Response Capabilities for Terrorism Involving Weapons of Mass Destruction*, Rand Corporation, December 15 1999, <http://www.rand.org/organization/nsrd/terrpanel>.

*Russian Organized Crime: Report of the Global Organized Crime Project* (Washington DC: Center for Strategic and International Studies, 1997).

The "New Terrorism": Does It Exist? How Real Are the Risks of Mass Casualty Attacks?, Report of a Conference co-sponsored by the Chemical and Biological Arms Control Institute (CBACI) and the Center for Global Security Research Lawrence Livermore National Laboratories (Henceforth CBACI/Lawrence Livermore, 1999), <http://www.cbaci.org/Newterrorism.htm>.

*The Nuclear Black Market: Report of the Global Organized Crime Project* (Washington DC: Center for Strategic and International Studies, 1996).

## Clingendael Publications

---

*Early Warning and Conflict Prevention; Limitations and Possibilities*, Klaas van Walraven (ed.), Kluwer Law International, 1998, 204 p. Price: DFL 105,- ISBN 90 411 1064 X

*The Clausewitzian Dictum and the Future of Western Military Strategy*, Gert de Nooy (ed.) Kluwer Law International, 1997, 192 p. Price: DFL 85,- ISBN 90 411 0455 0

*The Role of European Ground and Air Forces after the Cold War*, Gert de Nooy (ed.), Kluwer Law International, 1997, 227 p. Price: DFL 95,- ISBN 90 411 0397 X

*The United Nations and NATO in Former Yugoslavia, 1991-1996: limits to diplomacy and force*, by D.A. Leurdijk, Den Haag: Atlantische Commissie en Instituut Clingendael, 1997, 152 p. Price: DFL 20,- ISBN 90 73329 07 8

*Cooperative Security, the OCSE, and its Code of Conduct*, Gert de Nooy (ed.), Kluwer Law International: The Hague, 1996, 158 p. Price: DFL 95,- ISBN 90 411 0316 3

*Selective Engagement. American foreign policy at the turn of the century*, Marianne van Leeuwen, Auke Venema, (eds.), Gelderland offset: Nijmegen, 1996, 137 p. Price: DFL 15,- ISBN 90 73329 06 x

*Between Development and Destruction. An Enquiry into the Causes of Conflict in Post-Colonial States*, Luc van de Goor, Kumar Rupesinghe, Paul Sciarone (eds.), MacMillan Press Ltd: Hampshire, 1996, 376 p. Price: DFL 50,65 ISBN 0 333 65038 7

*The Role of European Naval Forces after the Cold War*, Gert de Nooy (ed.), Kluwer Law International: The Hague, 1996, 204 p. Price: DFL 95,- ISBN 90 411 0227 2

*A UN Rapid Deployment Brigade; strengthening the capacity for quick response*, Dick A. Leurdijk (ed.), 1995, 95 p. Price: DFL 25,- ISBN 90 5031 045 1

*The Future of the International Nuclear Non-Proliferation Regime*, Marianne van Leeuwen (ed.), Martinus Nijhoff Publishers: Dordrecht, 1995, 326 p. Price: DFL 140,- ISBN 0 7923 3433 7

*Restructuring Armed Forces in East and West*, Jan G. Siccama & Theo van den Doel (eds.), Westview Press: Boulder, 1994, 141 p. Price: DFL 40,- ISBN 0 8133 2476 9

*Central Europe: The New Allies? The Road from Visegrad to Brussels*, by Theo van den Doel, Westview Press: Boulder, 1993, 126 p. Price: DFL 40,- ISBN 0 8133 8844 9

*Americans and the Palestinian Question; The US public debate on Palestinian nationhood, 1973-1988*, by M. van Leeuwen, Rodopi: Amsterdam, 1993, 545 p. Price: DFL 165,- ISBN 90 5183 533 7 (CIP)

*The Disintegration of Yugoslavia*, Yearbook of European Studies 5, M. van den Heuvel and J.G. Siccama (eds.), Rodopi: Amsterdam, 1992, 218 p. Price: DFL 35,- ISBN 90 5183 353 9 (paper)

*Peace or Human Rights? The Dilemma of Humanitarian Intervention*, by Barend ter Haar, August 2000, 82 p. Price: DFL 15,- ISBN 90-5031-076-1

*The Pretence of Peace-keeping. ECOMOG, West Africa and Liberia (1990-1998)*, by Klaas van Walraven, November 1999, 131 p. Price: DFL 15,- ISBN 90 5031 074-5

*Conflict Prevention in the OSCE. An assessment of capacities*, by J. Cohen, October 1999, 150 p. Price: DFL 15,- ISBN 90 5031 073 7

*'Europe' on the Threshold of the 21st Century. Five Scenarios*, by H.H.J. Labohm, J.Q.Th. Rood, A. van Staden, December 1998, 58 p. Price: DFL 10,- ISBN 90 5031 069 9

*Building Blocks for Peace. Civil-Military Interaction in Restoring Fractured Societies*, by Dick Zandee, September 1998, 79 p. Price: DFL 10,- ISBN 90 5031 067 2

*Political-military Cooperation in an Enlarging Europe*, by G.C. de Nooy, A. van Staden, M. Wohlfeld, May 1997, 43 p. Price: DFL 10,- ISBN 90 5031 059 1

*The WEU's Role in Crisis Prevention and Management*, by Wlodzimierz Aniol, January 1997, 37 p. Price: DFL 10,- ISBN 90 5031 056 7

*Mapping Central Europe*, by Elena Zamfirescu, May 1996, 76 p. Price: DFL 10,- ISBN 90 5031 050 8

*Towards a Military Core Group in Europe?*, by G.C. de Nooy, March 1995, 31 p. Price: DFL 10,- ISBN 90 5031 043 5

*Adversaries All Around? (Re)Nationalization of Security and Defence Policies in Central and Eastern Europe*, by Pál Dunay, January 1994, 69 p. Price: DFL 10,- ISBN 90 5031 037 0 (Research Study)

*Through the backdoor; PLO-US contacts, 1974-1988*, by Marianne van Leeuwen, August 1992, 40 p. Price: DFL 10,- ISBN 90 5031 028 1 (Research Study)

*The political debate over a bill of rights for South Africa*, by Henk Botha, August 1992, 54 p. Price: DFL 10,- ISBN 90 5031 029 (Policy Study)

*Nationalism and political change in post-communist Europe*, by André W.M. Gerrits, April 1992, 44 p. Price: DFL 10,- (Research Study)

*The Break-up of Yugoslavia: Threats and Challenges*, by Radovan Vukadinovic, February 1992, 39 p. Price: DFL 10,- (SOLD OUT)

*Changing Hearts? The Bush administration, American public opinion, and the Arab-Israeli conflict*, by Marianne van Leeuwen, November 1991, 40 p. Price: DFL 10,- (Research Study)

Clingendael Publications can be ordered at:  
Netherlands Institute of International Relations *Clingendael*  
Research Department, Clingendael 7  
P.O. Box 93080, 2509 AB The Hague  
Phonenumber # - 31 - 70 - 3746-605/606/622/636  
Telefax # - 31 - 70 - 3746667  
E-mail: [research@clingendael.nl](mailto:research@clingendael.nl)  
Website: <http://www.clingendael.nl>