1 Introduction: the Opportunities For Nuclear Terrorism

On 20 March 1995, members of the Aum Shinrikyo cult released a lethal nerve agent, sarin, on the Tokyo underground. The attack killed 12 people and injured over 5,000 others, and was the first major sub-state use of a weapon of mass destruction. Although terrorism using non-conventional weaponry had been the subject of academic and governmental discussion for twenty years prior to the attack, the events in Tokyo gave new impetus to this debate. Aum’s actions broke a norm, that terrorists almost invariably limit their attacks to conventional means, and, given the derivative nature of many terrorist tactics, it thus increased the likelihood that there will be further attacks using weapons of mass destruction.

This book concentrates almost entirely on just one part of non-conventional terrorism, nuclear terrorism. Nuclear weapons possess a unique destructive force and still, eight years after the end of the Cold War, remain unsurpassed in their power as a tool towards political legitimacy and in their ability to capture the attention of a wide audience. Furthermore, in the wake of the collapse of the former Soviet Union, the opportunities for rogue states and sub-state actors to acquire fissile material have risen exponentially. Since 1989, the proliferation of the means to acquire weapons of mass destruction has become one of the foremost global issues for the future. As the change has been the greatest in nuclear, rather than chemical or biological, weapons, it is they that are most deserving of renewed study.

Nuclear terrorism covers a broad spectrum, from low-level incidents of threats involving radioactive material through attacks on reactors to a terrorist nuclear bomb. There have been several terrorist attacks on reactors, such as the ETA rocket assault on Lemoniz in northern Spain;¹ and the possibility of sabotage or a siege and hostage situation developing at a facility remains, particularly from single-issue anti-nuclear groups. In most cases, the latter form of terrorism is aimed at highlighting security and safety failures at facilities, and for

G. Cameron, Nuclear Terrorism
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that purpose, such actions will continue to be a possibility. However, where the objective is to embarrass the government or to gain leverage for a group, then other varieties of nuclear terrorism have become increasingly likely as the feasibility of acquiring fissile material has increased. The result has been that ‘the threat of terrorist use of weapons of mass destruction has never been greater; and at the same time, it is never going to be less than it is right now.’

NUCLEAR PROLIFERATION

Easier access to fissile material is largely a result of the collapse of the former Soviet Union and the growth of nuclear trafficking that has stemmed from it. FBI chief Louis Freeh has described the situation as ‘the greatest long-term threat to the security of the US’ and Graham Allison, former Assistant Secretary of Defense, has stated that ‘Russia is a state in revolution…This revolution is shredding the fabric of a command and control society, in a state that houses a superpower nuclear arsenal and a superpower nuclear enterprise.’ Russia, too, acknowledges the danger. As early as 1989, then chairman of the KGB, Vladimir Kryuchkov, said:

The threat of nuclear terrorism is for us very dangerous. The fact is that on the globe several tons of enriched uranium has disappeared from sites where it was produced and stored.

While nuclear weapons remain under tight military supervision, there may have been at least one case where a fissile material component of a weapon was stolen and then recovered. There is also a huge quantity of nuclear materials, dispersed throughout Russia, that is far less secure. One estimate puts the Russian inventory at 150 metric tonnes of weapons-grade plutonium, 1,000 metric tonnes of enriched uranium, and at Chelyabinsk alone about 685,000 cubic metres of radioactive waste. Others put the figures higher, at 165 tonnes of separated weapons-usable plutonium and 1,100 to 1,300 tonnes of highly enriched uranium. However, no one really knows what quantities are involved because, during the Cold War, Soviet facilities were set production targets. When they exceeded these, material was kept aside rather than declared, so as to compensate for any shortfalls in subsequent targets. Keeping an accurate record of existing stocks was therefore not a priority. Furthermore, material was counted in rouble