



CHAPTER 8

Bioterrorism

As scenarios of nuclear terrorism proliferate, the subject risks lapsing into stereotypes and clichés. The very familiarity of this subject informs Douglas Preston and Lincoln Child's 2012 thriller *Gideon's Corpse*, which opens with a nuclear physicist named Chalker apparently going berserk and taking his family as hostages. In the resulting shoot-out, Chalker is killed and it is then discovered that his body is highly radioactive. Pathology slides into conspiracy when abandoned bomb-making equipment is discovered in a New York warehouse along with a burnt map of Washington, DC and indications of an imminent attack in that city. Further evidence is uncovered on Chalker's computer of his conversion to radical Islam. In short, clear signs emerge of a conspiracy to detonate a nuclear device in the nation's capital. This news leaks, with predictable waves of panic spreading across American cities. The novel plays constantly with the reader's expectations, at one point swinging us towards organized crime, at another towards an extremist American cult.

The ultimate complication in *Gideon's Corpse* is that virtually all of the "evidence" proves to be bogus, an elaborate false-flag construct exploiting the reader's expectations of this scenario to hide another even more serious conspiracy to seize a tablet of smallpox virus from the US biological research centre at Fort Detrick and drop it on Saudi Arabia. The plotters are a small clique of top intelligence officers, whose fervent nationalism is leading them into pre-emptive action against their perceived cultural and economic enemy. As the mastermind declares, "the very survival of our country is in the balance" (402). A further

meta-fictional twist comes when the protagonist discovers that this scenario was originally devised as an outline for a novel to be called *Operation Corpse*. *Gideon's Corpse* thus exploits to the full the familiarity of nuclear terrorism scenarios, but uses this to frame its inner subject of biological attack. In common with many other thrillers, it follows a countdown narrative sequence to a climax where the actual plot is thwarted just in the nick of time. The main symbolism of the narrative, however, is to show how the nuclear scenario enfolds the biological one and the novel ultimately reveals prime movers of the conspiracy to be high-placed members of the US security establishment.

Although bioterrorism may seem to fall outside the scope of the present study, since the 1990s it has repeatedly been twinned with the nuclear threat in public debate. Biological weaponry in fiction, like the history of radioactivity, dates back to the turn of the nineteenth century with narratives from H. G. Wells and Jack London.¹ By the 1970s, the theme had become incorporated into Cold War issues like the production of biological weapons. In Stephen King's *The Stand* (1978), a weaponized influenza virus called Project Blue is accidentally released from a secret military facility. In Frank Herbert's *The White Plague* (1982), an Irish molecular biologist devises a virus fatal to women in revenge for his family being killed by a terrorist bomb. By the 1990s, fears of biological attack, like those focused on nuclear weapons, were being fuelled by reports of material entering the black market after the collapse of the Soviet Union. In 1999, Secretary of State for Defence William S. Cohen was warning of the dangers from biological weapons in the "grave new world" of modern terrorism, "a world in which traditional notions of deterrence and counter-response no longer apply" (Cohen 1999). More recently, Graham Allison drew the following comparison: "Nuclear terrorism is a preventable catastrophe, and the reason it's preventable is because the material to make a nuclear bomb can't be made by terrorists. But in the bio case — oh, my God! Can I prevent terrorists from getting into their hands anthrax or other pathogens? No! Even our best efforts can't do that" (Hylton 2011).

As if to substantiate Cohen's warning, that same year Robin Cook published *Vector*, a novel clearly designed as a warning about the heightened threat from bioterrorism. The opening chapter anticipates the anthrax letters case of 2001 in describing the infection by mail of a New York rug salesman, used as a test case by an emigre Russian researcher in biological warfare.² Disillusioned with America's failure to match up to

his expectations, the latter has formed an alliance with a white supremacist organization called the People's Aryan Army, who plans to release anthrax in a central federal building. One of the leaders sees the plan as a realization of his favourite novel, predicting: "It's going to be like the *Turner Diaries* coming true" (60).³ In fact, Cook awkwardly combines the factor of expertise with ideology in an alliance so forced that we constantly expect the conspiracy to be given away by the sheer incompetence of its members. The novel concerns itself primarily with the fact that bioterrorism is simply not on the radar of the medical investigators, an absence which *Vector* is clearly designed to rectify.

Biological attacks are intrinsically different from those examined in earlier chapters in that they could involve the use of weapons ranging from sprays to small bottles, almost impossible to identify. And as Richard Preston has pointed out, "one of the terrible things about a terrorist biological attack is that there would be a time lag before the recognition dawned of what had happened" (Weikersheimer 520). Apart from the problems of detection, the writer James Abel was motivated to begin his novels on biological threats when he realized how easily bio-weapons could be made: "The technology has become so inexpensive that people can do terrible things in their basements that once required laboratories that would have cost thousands or hundreds of thousands of dollars to equip" (Rubinstein 2015). With *White Plague* (2015), Abel (a pen-name of Bob Reiss) began his series of novels centring on the bioterror specialist Joe Rush with an account of the discovery in the Arctic of a submarine infected with a deadly virus originating from Russia.

The gradual shift in public perceptions of the threat from bioterrorism was examined in 2000 by the biosecurity specialist Michael J. Osterholm, whose *Living Terrors* uses hypothetical scenarios—in effect mini-narratives—to dramatize the different dangers involved. Thus the chapter called "The Invisible Man" describes a "lone wolf" attack by an individual who scatters anthrax spores from a crop duster over a city stadium. The title deliberately echoes that of H. G. Wells' 1897 novel about a scientist planning a "reign of terror", but Osterholm makes the point that such a dream has become increasingly easy to realize by 2000. The latter's example is of a pathological loner with expertise gained in the army Medical Corps, in other words one of the most difficult figures to spot, and also one who could use the increasingly available equipment to realize his plan. Incorporating allusions to actual cases of planned or attempted bioterrorism since the 1980s, *Living Terrors* includes other

scenarios of the deliberate contamination of food, the participation of a former Soviet researcher in a conspiracy, and activities by white supremacists. In the chapter called “Tools of the Trade”, Osterholm’s ironic target is the Soviet secrecy about mass-producing smallpox virus and the narrative describes how easily a biotechnician can smuggle vials into the USA, make contact with an unnamed group which pays him for his expertise, and finally prepare his device for use in a Chicago shopping mall, disguised as a thermostat box. He takes particular pride in his aerosol, “which could transform the small amount of fluid into a gaseous material that would permeate all seven floors of the mall with millions of ‘infectious hits’ in a matter of hours” (98–99). The Russian’s relish is not ideological as much as technical, the satisfaction of having created a successful device.

Throughout *Living Terrors*, Osterholm demonstrates the complete lack of preparedness on the part of the US authorities. Indeed, Osterholm’s most substantial quotation from a fictional work is taken from an explanation of bombings in *The Turner Diaries*, discussed above in Chapter 2, to the effect that “the real value of our attacks today lies in the psychological impact, not in the immediate casualties” (quoted 56). The importance of *Living Terrors* lies in its use of scenarios which were fleshed out in subsequent novels and in its use of popular culture to explore the biological threats. Osterholm cites the 1995 film *Outbreak* and Tom Clancy’s 1996 novel *Executive Orders* not to criticize the sensationalizing of bioterror, but rather to underline the need for decisive leadership in the case of such attacks.⁴

In his 2014 study *Pandemic Influenza in Fiction*, Charles De Paolo proposes a sub-genre of bioterrorism fiction whose motive is “utilitarian rather than aesthetic” in that the writers use their scenarios to “test the authenticity, and estimate the probability, of a natural occurrence or an attack” (6). Throughout the present study, I have avoided this kind of separation between the aesthetic and the sociopolitical in that every writer considered in their own way makes an intervention in the broad ongoing debate over terrorism and exactly the sort of tests of institutional resources identified by De Paolo plays an integral part in the drama of these narratives. Not surprisingly, we shall see that the majority of the writers examined in this chapter have medical backgrounds, some even including “M.D.” after their names on their title pages.

As soon as 9/11 had taken place, rumours began to emerge of a biological dimension and within a month of those attacks letters were sent to media personalities and US senators containing anthrax spores with covering notes purporting to be from Islamists.⁵ Five deaths followed and a number of infections and in the subsequent investigation suspicion initially fell (wrongly) on Steven Hatfill, a researcher at the US biological warfare facility in Fort Detrick, Maryland. Coincidentally, the FBI discovered that Hatfill had written a novel called *Emergence* (copyrighted in 1998 but unpublished) about a biological attack by terrorists. The narrative opens in a South African base in Antarctica, where researchers fall victim to a bubonic virus, an outbreak investigated by the US Centres for Disease Control and Prevention (CDC). Years later, a Palestinian cancer specialist with backing from Iraq produces a culture of this virus and manages to infect the White House, himself falling victim to the infection.⁶

LONE-WOLF ATTACKS

The anthrax letters plot had been anticipated by a novel describing just such a lone-wolf biological attack. Partly through its historical detail, the medical journalist Richard Preston's *The Cobra Event* (1997) played an important role in broadening popular awareness of bioterrorism and even helped shape government policy on bioterrorism after being read by Bill Clinton.⁷ The novel frames its subject within the history of research into biological weapons in the Cold War and after, describing how a disease control specialist is brought in to investigate a number of mysterious deaths in New York. She discovers that the latter have been caused by biological "bombs" discharging an artificial virus which attacks the central nervous system. Early chapters describing the secret germ warfare facilities of Iraq raise the possibility that an attack of Middle Eastern origin is taking place, until it is finally revealed to be the work of a disenchanted biologist dismissed from a New Jersey company covertly manufacturing a deadly virus. The novel dramatizes with powerful immediacy the progress of the first infection as a New York teenager goes into a fatal seizure after trying to consume her own body. The narrative thus resembles that of a whodunnit, with the difference that there is no investigative procedure to follow. Accordingly, the investigation involves the establishment of necessary strategies to find the perpetrator.

Preston delays revealing the identity of the biologist until the mid-point of the novel, and even then, he is simply referred to as “Archimedes” or the “Wanderer”. Although he is a sole agent, his experiments are woven into the broader discourse of weaponry. His dream is of using his designer virus, his “biological rocket”, for worldwide assault: “He imagined brainpox turning New York City into a hot bioreactor, a simmering cauldron of amplifying virus. From there brainpox would amplify itself outward along invisible lines, following airline routes, spanning the globe. New York was the seed bioreactor, the cooker that would start the other cities going” (199). The designation of the virus suggests that it is at once a pathological symptom as well as a weapon. His fantasy extrapolates the experimental method grotesquely, but Preston does not concern himself with motivation. Instead, his novel is concerned to establish a notional possibility quite distinct from the older model of state-led hostility, which is why Preston carefully punctuates his account with expository passages and analogies drawn from actual cases, such as the 1995 sarin attack on the Tokyo subway.⁸ *The Cobra Event* takes place mostly within New York, though the biologist makes one excursion to Washington, DC. In the denouement, when he is preparing his “biological detonators” for their major use, he is tracked down and killed in the New York subway, a location which reflects the novel’s preoccupation with systems. As Nicholas King has argued, the novel reflects a new post-Cold War perception of space as being disturbingly hybrid for the bioterrorist since “global networks of transportation, trade, and information allow him to secretly acquire or construct, and rapidly and efficiently disseminate, his weapons of mass destruction to American cities” (King 2002, 75).

As she contemplates New York, the medical officer in *The Cobra Event* deploys one of the novel’s central tropes:

Austen thought of a city as a colony of cells. The cells were people. Individually the cells lived for a while and were programmed to die, but replaced themselves with their progeny, and the organism continued its existence. The organism grew, changed, and reacted, adapting to the biological conditions of life on the planet. Austen’s patient for the moment, was the city of New York. (35–36)⁹

The passage highlights the fluidity of the key term. “Cell” could signify on the organic micro-level and then shift progressively in scale from a human body through subgroup up to a metropolis, as here.

Behind this term lurks the sinister question of agency. It is one thing to argue that human organisms have been programmed to die, but quite another to consider that a biological agent has been programmed to kill other humans.

Preston's lone-wolf narrative appears to be repeated in Gary Birken's *Plague* (2002), where a technician at a Long Island hospital deliberately infects a number of patients with botulism, bubonic plague, and other viruses. Pathologically determined to outwit the authorities, this figure is driven by a desire to demonstrate his own ingenuity, at whatever expense. As his plan approaches fruition he reflects: "his plan to poison children using cholera was an extraordinary one. Born from genius, he was unconditionally committed to its success" (69).¹⁰ His motivation is clear, as is his identity, thanks to the enterprising investigation of a hospital resident. For most of the narrative, she has to struggle against the institutional conservatism of the hospital authorities, until the perpetrator is finally revealed and pursued by the FBI. Discrepancies persist, however, like the scale of the man's finances, and the resident reflects: "it seems like everything ended almost as it had been scripted" (260). And that is exactly what has happened. A French millionaire executive has stage-managed the whole plot in order to capitalize on the demand for countermeasures which would follow the outbreaks of illness engineered by his stooge. Unfortunately, the novel itself seems to stage-manage this revelation since the businessman has been up to now a remote background figure.

In the works discussed so far, the identities and practices of terrorists are constantly being re-examined. In *I Am Pilgrim* (2013) by the expatriate British screenwriter Terry Hayes, the narrator, who is a former CIA recalled to service, discovers a plot by a young Saudi man known as the Saracen to launch a smallpox attack on the USA. Trained in medicine and with plenty of media savvy, the latter constructs a virus which he plans to release on America, and the more the narrator learns about him, the more he senses a historical symbolism in the conspiracy:

I saw the future and I knew that the day of the fundamentalist and fanatic had passed. In their wake, a new generation was emerging and the man with the smallpox – highly educated and adept with technology – was probably the first. The cave-dwellers with their bomb belts and passenger planes converted into missiles looked like dial-up. This man was broadband. (4)¹¹

In a closely plotted narrative, Hayes gives the Saracen a double traumatic source for the bitterness which leads him to attack the USA: witnessing the execution of his father in Jeddah and losing his wife in an Israeli attack on Gaza. His lone-wolf plan is to displace his grief onto the USA through an attack which would be irresistible. Drawing on his skills as a biochemist, the Saracen finds all his necessary materials on the Internet and devises what Hayes, rather awkwardly for a devout Moslem, describes as the “Holy Grail of all bio-terror weapons” (279), namely a smallpox virus designed to break through any antidote. He verifies this virus in a remote Afghan location, using kidnapped foreigners as guinea pigs, but the latter’s deaths are spotted by an American satellite. Hayes traces out the Saracen’s tortuous progress through a sequence of locations including Syria, Afghanistan and Germany, hinting that in every place he would find local support for his plan. Despite this, the novel gains much of its force by contrasting the Saracen’s single-minded plan with its massive potential consequences. No less than 10,000 vials of virus are relabelled as benign medicine, and Hayes guides the reader through a sample dosage being administered, continuing: “no matter the age of the patient or the site of the injection, once the virus was in somebody’s body – and, with an intramuscular injection, there would be no misses – that person could not be saved. They could be described, totally accurately, as a zombie – one of the walking dead” (690–91). It is the ultimate invasion masked as a therapeutic act, one which can never fail and which would doom the population to inevitable death.

The Saracen’s antagonist is an agent given the field name Pilgrim, as if the action is playing itself out between two faiths, and the narrator combines two roles here: to retrace the Saracen’s actions in retrospect and to establish in the reader’s mind the immediacy of the bio-threat. In the course of the latter—and we shall see below that he is not alone in doing so—Hayes references Operation Dark Winter, the 2001 US exercise in simulating a biological attack. The scenario functions as a speculative outline for the Saracen’s underlying plot and is summarized as follows: “Dark Winter postulated a smallpox attack on the United States in which one infected person entered a shopping mall in Oklahoma City. It then plotted the spread of the disease and projected the number of casualties. Thirteen days after the sole infector entered the mall. The virus had spread to twenty-five states, infected hundreds of thousands of people, killed one third of them, overwhelmed the health-care system, sent the economy into free fall and led to a more or less total collapse in social order” (313–14).¹²

Multiply the infection points by 10,000 and the likely end result is a total wipeout of the US population. Through such passages, Hayes underscores the crucial importance of pre-empting the Saracen. Once bogus medicines start being administered, his plan would have succeeded.

Partly to avoid spreading panic and partly because the nuclear threat is more familiar, the US authorities use as a cover story for their countermeasures that they are supposedly hunting for someone who has been trying to obtain a nuclear trigger. It is a measure of how familiar the nuclear subject has become that it should be promoted as less alarming than a biological attack.

HUMAN WEAPONS

After analysing *The Cobra Event* and public references to bioterror since the 1990s, Philipp Sarasin has argued that the anthrax letters played to a deep cultural narrative, intensified since 9/11: “the phantasm of the enemy as a microbe, a parasite, a partially or completely invisible pest that must be exterminated” (Sarasin 8). Where Preston evokes the scenario of attack from a lone scientist, the epidemiologist Chris Holmes presents the case of an organized Islamist conspiracy in *The Medusa Strain* (2002), where one of the leaders declares: “we must wage war in secret” (22–23). Biological weapons offer the ultimate secrecy since they are invisible and only detectable by their results. The six Al-Qaeda agents who fly to the USA are literally human weapons, unwittingly carrying contagion in their bodies. In this respect, the novel contrasts with Brad Taylor’s grafting of suicide bombing onto biological attack in *The Widow’s Strike* (2017), where a Chechen widow is persuaded to carry her infection from a deadly virus to the USA. Her handler tells her: “You will become a weapon unlike any other the earth has ever seen” (258).¹³ In *The Medusa Strain*, once the American authorities realize that their strain of anthrax is laboratory-produced, an official explains how easy the process can be, through an analogy with traditional weaponry: “you coat the DNA onto microscopic pellets then fire them into the target cells” (131). Holmes plays on the slippage in terms like “cell” to move between biological and political processes. When the agent Achmed unexpectedly recovers from his illness, he has to be killed by a member of a sleeper Islamist cell to protect the secrecy of the operation. Throughout the novel, the body functions as a holistic emblem on a micro- and macro-scale. As the organisms of individual victims

are assaulted by the microbes, they lapse into coma, often fatal. As the death count rises, the fate of the whole body politic becomes called into question and it falls to the president and his wife to set the example of participating in the countermeasures. The resulting struggle between contagion and health is even given a mythical dimension in that the malignant anthrax is named the “Medusa Strain” and its benign opposite, the “Perseus Factor”.

Characters who have converted themselves into human weapons play a leading role in Lawrence W. Gold’s *Deadly Passage* (2013), which begins innocently with a doctor taking his family for a boating holiday around the Caribbean. Encountering a boat adrift, they find its cabin covered in blood and its two young passengers—American brother and sister—seriously ill. As the brother’s illness comes to a head, Gold engages with a problem common to bioterrorism narratives, namely how much detail to give of what are by definition unfamiliar diseases. Here, we are given a close-up of the brother’s symptoms, unlocated because they are happening all over his body:

Gentle red spots swelled turgid with anger, then filled with droplets – tiny blisters that putrefied into grotesque grey-white pus-filled pimples. The vile pimples grew tense with pus, erupted like a volcano, and scabbed over with raw red skin below. Foul secretions oozed from open ulcers, and spread the dreaded disease. It was smallpox. (92)

The inference in the stark final statement compounds the mystery of the boat and raises it to a higher level. How can someone be suffering from a disease supposedly eradicated in the 1970s? By not limiting itself to the bounds of the individual body, the description implicitly spreads its reference outwards towards an epidemic.

The doctor gradually discovers that the brother was a pathologically shy boy, a state which changed into anger when their father, a university professor, died soon after being arrested by Homeland Security for working with an Al-Qaeda suspect. The novel never clarifies this accusation, but presumably it was valid because the brother uses Al-Qaeda connections to have smallpox virus shipped to Cuba where the two deliberately infect themselves, planning to land in Miami and spread the disease across the USA in revenge for their father’s death. The plan is consistent with a terrorist agenda since the very name of smallpox

“evokes terror” and “strikes at the deep-rooted human fear of being invaded and destroyed” (200). This drama is played out in miniature within the claustrophobic confines of the boat, and Gold presents the disturbing case of two young Americans performing the virtually suicidal act of self-infection in a gesture of hostility towards the USA. In the event, both survive and the boat docks in Florida under safe quarantine conditions.

A different perspective on infection strategy is depicted in Jennifer Ruff’s *Only Wrong Once* (2017), which concerns an ISIS plan to introduce a new deadly virus to the USA through carriers, intentional and unwitting. All four carriers enter the country with ease because they possess US citizenship. An elaborate bluff operation is set up where the plan is to bomb the subways of Chicago, Philadelphia and Boston, but with enough information released through web “chatter” that the federal authorities can arrest the culprits before they can plant their bombs. The real conspiracy is to plant contagious carriers in football grounds to maximize impact and to bring the nation’s life to a halt once the infection takes hold. Kareem, the radicalized microbiologist spearheading the action, reflects early in the novel on the ambiguities of his virus: “possessing a weapon and being properly afraid to use it was the whole point of nuclear bombs” (23). In contrast, the use of bio-weapons was unnervingly easy, but once he has carried out his first trial infection, Kareem develops a sense of being caught up in his project like one of his own experimental rats, with his own imminent death inevitable, without any compensating faith in martyrdom. It is a convenient feature of his virus that contagion only emerges with the onset of symptoms. So, although he visits restaurants and a movie house the day before his planned football match, he does not spread the virus. Also, even more conveniently, his cousin is covertly infected but has a uniquely strong immunity system and so ultimately turns from a threat into a national asset when the authorities use him to develop an antidote to the virus. This epilogue underscores the successful collaboration between the different agencies within the novel which thwarted the conspiracy.

Like the works discussed above, the 2005 novel *Pandemic* by Canadian Daniel Kalla describes an Islamist conspiracy to infect the USA with a deadly virus through human carriers. One striking difference here, however, is the global reach of the narrative, which opens in China and extends to Cairo, the World Health Organization headquarters in

Geneva, Washington, DC and Vancouver, among other locations. Once cases of a dangerous new illness are reported, the investigative process swings into action, featuring an American lecturer in epidemiology seconded to the WHO and the new Director of Counter-Bioterrorism for Homeland Security. Although the novel dramatizes the institutional processes of contagion management, these have political implications in that the USA is foregrounded as the main target and as the world leader in combating the spread of the virus. Throughout the narrative, the 2003 SARS epidemic functions as a serial analogy with the new illness which is emerging and it was the coincidence of the *New York Times* running a 2005 article on pandemics which helped gain acceptance for Kalla's title (Gessell 2014).¹⁴

The narrative opens in secret biological facility in China, where two mysterious Malays have bribed their way into a ward containing a casualty of the new virus. Strange in itself, their visit becomes extraordinary when one man fills five test tubes with the patient's infected blood and the other removes the latter's protective hood, then stoops "forward and without hesitating place his mouth over the open end of the [breathing] tube and suck from it like a snorkel" (8). Apparently suicidal, this act flies in the face of all the medical procedures enforcing separation and tacitly sets the man apart from the rest of humanity. It is only later revealed that the blood has been taken to a secret laboratory in Somalia, where the virus has been prepared for use. Kalla fleshes out the characterization of one of the carriers, an Egyptian woman who has lost both her baby and her husband in an Afghanistan bombing. Reduced by these tragedies to despair, she finds consolation in rationalizing her fate as God's will. Far from a callous ideologue, when infected and sent to a busy London hotel, she is horrified when a mother brings her two daughters into the elevator and covers her mouth as she coughs, "desperate to keep the bloody virus-soaked sputum from the two little girls" (114). In vain however, because the virus spreads fatally. Indeed, a cynical CIA officer remarks of Al-Qaeda that "those fanatics multiply like bacteria into their own 'cells'" (85). The logic of that analogy is to force together counter-terrorism and epidemic control so that they become interdependent. Despite the cases in Washington, New York and Chicago, the spread of the virus is halted and the terrorist group annihilated.

CELLS

Within the discourse of terrorism, the term “cell” usually denotes a self-contained group of secret agents working for a larger cause. The present context literalizes this concept so that a bioterrorist attack on a nation—the USA—can be played out in miniature as a biological attack on individual bodies. This trope of the cell working on multiple levels of meaning is central to Jeffrey Anderson’s *Sleeper Cell* (2005), which touches on the nature of nanobots, sub-miniature constructs famously described in Michael Crichton’s *Prey* (2002), where a facility engaged in secret military research inadvertently releases nanoparticles into the Nevada desert. *Sleeper Cell* traces out the tortuous investigation of mysterious deaths occurring in Los Angeles. The symptoms resemble smallpox, but not quite, and from an early stage in the narrative, the whole issue of biological weapons is debated. Insisting that the exposure process for the latter is impossibly difficult, one official insists categorically that “the only true weapon of mass destruction is a nuclear weapon” (34). However, the reassurance comes prematurely as the death count steadily rises and then the Pentagon computer is hacked into and a message received declaring in part that “the epidemic in Los Angeles is Allah’s warning of the coming plague. He will unleash the nanodeath on the infidels. His nanomachines cannot be stopped until they have destroyed every American man, woman, and child” (64). The message is chilling from its medium, in that the most secure computer network has been hacked, and also in its suggestion of yet another form of weapon which has scarcely been conceptualized. A biological attack is clearly taking place; the computer warning itself constitutes a kind of cyberattack, but the content of the latter suggests yet another variation which counter-terrorism officials can scarcely put into words. While the nature of bioterrorism is debated throughout the novel, Anderson reveals the disturbing new possibility through an epigraph between sections which states: “molecular manufacturing raises the possibility of horrifically effective weapons” (233), such as miniature toxins, arms invisible to radar and remote activation through embedded computers.¹⁵

In the course of the novel, the nature of the attack is discussed at every level. We are told at one point that there are “huge cells” (118) of Islamists in Indonesia, where the computer message originated. This is revised into a domestic “sleeper cell” (119) and then multiplied into

the general “possibility of cells” (133), as an official tells the president. Coincidentally, in the same year when Anderson’s novel was published, a TV serial drama was shown also called *Sleeper Cell* concerning an Islamist group planning to attack Los Angeles with anthrax.¹⁶ Unusually, the FBI protagonist was a practising Moslem, used to debate the whole relation between Islam and terrorism. In the words of the screenwriters, “we were incredibly frustrated by the half-baked, wishy-washy (to quote Charlie Brown) attempts to deal with themes of terrorism and counter-terrorism in the context of popular-culture” (Reiff and Voris 2011). In the series, the cell targets a shopping mall and mounts its attack with the help of a white supremacist group.¹⁷

Where the TV series dramatizes the laborious attempts by the FBI to infiltrate an agent into the cell, Anderson skilfully manipulates the reader’s uncertainty throughout his novel. Early in the action, one conspirator is described receiving a “vial”; later a different conspirator opens a vial and removes part of its contents, but then he contacts the FBI, which suggests that he is a double agent.¹⁸ Because the terrorists possess sophisticated surveillance facilities, it seems that this duplicity has been discovered and that the “traitor” has been infected, thereby turned into a “guided missile” (208) and dispatched to New York. When the authorities locate a sample of the biological agent apparently being used, they find carbon nanotubes embedded in the blood cells. And so it seems as if the feared nanoweapon is being used, but once again this is a false lead because the samples have been interfered with in order to confuse the investigation. Nothing is what it seems and signs emerge that the conspiracy has been several years in the planning with different kinds of input from sources around the USA. The main biological agent is described at one point as a “stealth virus” (251) triggering infections within the organism, but working in tandem with an electronic virus designed by a Saudi American to hack into the Pentagon. Although the main biological attacks fail, there is an exceptionally high death rate and the novel concludes with the political ritual of the president commemorating over 21,000 deaths and denouncing the “diabolical scheme involving germ warfare the likes of which the world has never known” (321). In its wake, he announces a new, comprehensive counter-terrorism policy, whose measures are designed to block any recurrence of the conspiracy described in the novel.¹⁹

Anderson dramatizes a double bio- and cyberattack virtually impossible to detect, hence its label as a “stealth” weapon. Paul D. Ellner takes a different tack in embedding conspiracy in the heart of the American landscape. In his 2010 novel *And Evil Shall Come*, the urgency to demonstrate that bioterrorism is a clear and present danger leads him to posit the existence of a secret plant in the heart of Nebraska. This location, disguised as a US army camp, is discovered by a local reporter, who learns that the plant has been running for two years and is manufacturing biological weapons for Al-Qaeda. The novel’s unlikely premise is that such a base could be established containing six former Soviet biological warfare specialists without the authorities suspecting anything. The action carries a clear global dimension in that the camp has been constructed with financial backing from the Japanese Yakuza and its true function is revealed when US investigators discover the wreck of a helicopter in the Amazon jungle where Al-Qaeda has been testing the weapons on a local tribe. The journalist Kate Morrison’s investigation of the conspiracy proceeds with ease and results in her both landing a scoop and helping to forestall an anthrax attack on Washington, DC, for which a grateful president awards her the Medal of Freedom.

So far the novel appears to be following the thriller paradigm in showing how an enterprising journalist could help thwart a terrorist attack. However, the novel does not end there. A conspirator declares: “We are planning an even greater attack on the American infidels” (186). No less than two further attacks take place. In the first of these devices carrying anthrax explode in a New York motor show and infections rapidly spread throughout the city and the death toll rises to the thousands. The result is summarized as follows: “The effects of the anthrax attack were stultifying on American life. The stock market fell precipitously. A pall of fear and uncertainty hung over the nation [...] The response of the United States Government to biological attacks was slowly becoming organized” (233–34). The problem here lies in the disconnect between the flat prose summary and the national disaster it refers to; nor does the novel devote anything like adequate space to describing this crisis. No sooner has the anthrax attack waned, than we are given yet another attack, this time when a miniature nuclear device is planted in Grand Central Station. The bomb is found and defused, but by this point, the reader has been subjected to narrative overkill. Yet again, conspiracy connects nuclear and biological weaponry.

DOMESTIC THREATS

After surveying the bioterrorist threat and US countermeasures, the immunologist William R. Clark concludes that “when we think of individuals and bioterrorism, we are really talking about domestic terrorism” (179). We have seen, however, that a number of novels locate the sources of their bio-conspiracies in the middle or far east, usually with some input from state resources. Other writers have placed their conspiracies within the USA, organized for financial gain or in protest against the government’s supposed betrayal of patriotic values.

Even before 9/11, the threat of bioterrorism was assimilated into the thriller paradigm in Robert Ludlum’s *The Hades Factor* (2000), where a US-based pharmaceutical company has discovered a rare and deadly virus in Peru, together with its only known antidote. They develop both in a secret laboratory and covertly test the virus on guinea pigs during the Iraq war, but three Americans exposed to the virus die in the USA. During the investigation which supplies the spine to the novel, the protagonist discovers that the pharmaceutical CEO has planned to release the virus, cause a pandemic and then pocket billions from their monopoly of the antidote. In the climax to the novel the latter charges the president with exactly *his* actions: of preparing a “monstrous secret plan” (420) to infect soldiers from both sides in the Gulf War with a deadly virus. Although the plot is foiled, the novel demonstrates the easy collusion between the conspirators and key members of the military and political establishment. The virus itself remains mostly in the background.

Where *The Hades Factor* capitalizes on reports from the 1990s that Saddam Hussein had used US-manufactured biological weapons against American troops, Randolph Harrison’s *By Dawn’s Early Light* (2001) follows a more direct patriotic agenda indicated in the use of the US national anthem in its title. The novel describes a series of attacks by a Middle Eastern group who initially plant sarin in an airliner, then place anthrax and smallpox devices in the USA, culminating in a suitcase nuke fortuitously discovered and neutralized in New York.²⁰ Harrison began his novel immediately before 9/11, completed it after those events, and dedicated his narrative to the victims and first responders. In his pre-ample he gives a historical outline of the emergence of Asymmetrical Warfare and explains that terrorism in the novel starts its main activity in Central Illinois and then “will grow exponentially, dispersing outwards, engulfing other parts of the country” (xxi).²¹ The conspirators include

Islamists, a Russian bomb maker, army deserters, white nationalists and even members of the American Mafia. However, the gangster boss in Chicago realizes that ultimately national interests come first and captures key members. After it is discovered that the group has been drawing support from Saddam Hussein and Muammar Gaddafi, and the death toll has exceeded 32,000, the US president declares war on Libya and Iraq. These countries are neutralized and the novel concludes with the USA through the United Nations setting up a “Multi-National Terrorist Strike Force” (391), with the US playing the leading role. Harrison initially introduces a range of conspirators, many domestic, but then in the course of the novel simplifies their identity down to specific hostile nations.

Science Fiction author Greg Bear sets up quite different oppositions between conspirators and counter-terrorist institutions in his 2005 novel *Quantico*, which pays extended tribute to the FBI training facility named in its title.²² Set in the near future, the novel takes its bearings from the Oklahoma City bombing, 9/11, and the anthrax mailings which followed. Like Harrison, Bear straddles domestic and external enemies, his own conspiracy presenting an unlikely alliance between white supremacists and Islamists sharing a common cause in anti-Semitism. When a domestic bomb-making factory is discovered, an FBI agent jokingly wonders if its owner has been reading *The Turner Diaries*, which inspired Timothy McVeigh. The novel’s speculative premise is summarized as follows: “*what if the runts and monsters get hold of things worse than fertilizer bombs – worse than atom bombs?*” (368: italics in original).²³ The threat level is ratcheted up to major biological attack, whose extent is glimpsed in a test exposure in a small Ohio town. Having raised the threat, Bear devotes most of his novel to the technical procedures of the counter-terrorism agents. In that respect, the novel is an exercise in reassurance. As he explains in the interview, he hoped the novel would “provide some emotional catharsis for all we’ve been through, for all we’ve put up with, for all the anger and the angst America has gone through in the last six years” (Christensen 2007).

Where a number of writers focus on the body as the site for attack, former physician Michael Palmer takes a more explicit political target in opening his 2011 novel *A Heartbeat Away* during a State of the Union address by the president. As the latter speaks, events like the following take place: “California Senator Arlene Cogan opened up a purse that she had stowed beneath her chair. Instantly, a thin, white mist wafted out from within it, covering her heavily made-up face like a steam bath.

Within seconds, Cogan and those nearest to her began to cough – and cough vehemently” (12). Here and elsewhere in the Capitol chamber, a clear representation of the nation in miniature, a glass vial has burst, releasing a fatal nerve gas known as WRX 3883. It is revealed that the latter was designed in a secret government project following 9/11 to create a substance which would sap the will of terrorism suspects and lead them to confess the truth. The experiment has failed and belatedly been cancelled by the president because it might prove impossible to control.

Holmes leaves us in no doubt about the nature of the bio-attack, whereas the identity of the aggressors remains a mystery throughout *A Heartbeat Away*. An electronic message pops up on the president’s teleprompter claiming that the attack comes from a group known as “Genesis”, which has a track record of killing FBI agents, destroying a San Diego museum and other acts. Their agents are described intermittently as black-clad, super-efficient operatives, whose membership includes one South African and a number of Latinos. As the narrative unfolds, they come to resemble a Christian fundamentalist group using the book of Genesis to pattern their operations, then left-wingers demanding the repeal of the Patriot Act, and finally a secret international cartel motivated by financial profit. Palmer constantly suggests that Genesis is an organization shadowing and often anticipating federal security measures, so that their identity is far less important than their capacity to manipulate the latter, even to the extent of involving the vice-president and speaker of the house in their conspiracy.

The novel’s protagonist is Griffin Rhodes, a virologist participating in the original government project, framed for the theft of vials of the virus and brought back into action to find an antidote. His efforts constitute the main narrative strand of the novel, the second asking whether the president will be able to keep control of the unfolding situation. The suspense arising from the first can only be maintained by avoiding any description of the complex logistics involved in using the Capitol as a place of confinement for the hundreds exposed to the virus. Instead, the novel assembles a tortuous series of action sequences where the malign skill of Genesis is shown to be far more evident than their motivation. Possibly Palmer attempts to show that even the highest members of the administration are vulnerable to complicity and that the fate of the nation lies with the president. Kennedy’s handling of the Cuban missile crisis is an explicit analogy.

The threat from ultra-right organizations is central to Michael Palmer's *Resistant* (2014), which dramatizes the phenomenon of "black biology", where private organizations research and produce new substances. A right-wing group called the Society of One Hundred Neighbours has developed a highly contagious agent known as the Doomsday Germ, which consumes flesh from within and which is being used to blackmail the government to abandon welfare measures. At one point an antibiotic specialist gives the following Darwinian interpretation of bacteria, declaring them to be the "ultimate warriors". He continues: "these are soldiers going to war without a conscience and without fear. In the battle for survival, they are the most powerful threat mankind will ever face" (31). What the scientist ducks in his explanation is the issue of agency, as do later comparisons with Attila and Hitler. The novel concerns itself with a super-microbe which gets out of control and thus risks becoming unusable by the Neighbours.

As the scientist's overstatement quoted above suggests, the individual body has once again become the site of conflict and at the same time a representation in miniature of the nation. The Neighbours resemble similar groups noted in Nelson DeMille's *Wild Fire* (Chapter 2), Richard Marcinko's *Violence of Action* (Chapter 3), and William S. Cohen's *Blink of an Eye* (Chapter 4). Palmer foregrounds them throughout the novel by opening virtually every chapter with an epigraph from their anti-New Deal ideologue, who attacks government welfare and asserts the need for the will to triumph. In practice, the novel's action narrows down to a race between the government and the Neighbours over who can develop the antidote first. Although an individual dies near the opening of the novel in an episode clearly designed to dramatize the emerging threat, the microbe remains a notional danger throughout the novel, which follows the thriller paradigm in its action sequences.

In *Containment* (2017), Hank Parker chooses a different avenue of attack, speculating on the possibility of terrorists using an engineered virus to attack the food chain, in this case through rural Pennsylvania. As usual with these narratives, Parker describes in detail a fatality, which establishes the urgency of the subject. Then cut to a secret state-of-the-art biological laboratory, where a scientist is breeding ticks carry their virus into the countryside and thus create an epidemic. He has named himself Doctor Vector to play out the role of a "comic-book villain" (10) and has turned to ticks partly for their sheer capacity for survival.²⁴ Here, Parker plays to the stereotype of the wicked scientist, but offsets

the character with precise details of his experiments which emerge as all too possible. The novel assembles a montage of casualties alternating with attempts by biodefence specialists at a local facility to pinpoint the spreading infection. The discontinuity between these early episodes puts the reader in apposition analogous to that of the medical investigators in that, like them, we are struggling to connect events and understand the villain's plan, which revolves around a zoonotic virus transferable from animals to humans. As the casualties mount, so does the need for quarantine measures like the mass slaughter of livestock and cordoning off a section of the state. The mismanagement of the latter process and the authorities' failure to disclose the extent of the danger facing the population brings about a crisis of management in Washington and the subject escalates from local one to a question of national survival.

At about this point in the action, the narrative shifts location. Clear hints have been thrown out that Doctor Vector is working with an agent probably from the Middle East, who carries some of his virus to the Philippines, again probably to link up with a local Islamist group. The logic is clear for the investigators to pursue the suspect since the biological danger has become global: "the most remote places on earth were now readily accessible to visitors from far away, and those visitors didn't arrive alone. They brought diseases" (269). However, in moving the action to the Philippines the domestic drama is left behind in favour of an action sequence where Doctor Vector is confronted and his identity finally revealed as a fellow bioterrorist official embittered by the death of his wife in a London terrorist attack. His grief has pathologically transformed him into a would-be suicide bomber as he plans to release his virus on the anniversary of 9/11. Not only does he fail, but ironically he dies from an infection caused by one of his own cherished ticks.

ACROSS DIFFERENT GENRES

Broadly speaking, we have seen novelists drawing most repeatedly on the conventions of the thriller genre in their depictions of bioterrorism. However, in a number of cases writers turn to genres as diverse as the Gothic, crime mystery and postmodern expressionism. In the first example, Jonathan Maberry's *Patient Zero* (2009), like Benjamin Percy's *Red Moon*, discussed in the introduction, grafts Gothic themes onto the subject of terrorism, in this case zombies. A wicked trio of a charismatic Islamist, his beautiful wife who happens to be a bio-scientist, and

an American businessman bent on extortion have perfected a plague virus which can be transmitted through designer zombies with enhanced aggression and which could result in a global pandemic. Maberry manages to negotiate the reader's presumed scepticism by writing it into the narrative. Thus, the counter-terrorist hero, a Baltimore policeman named Joe Ledger, is attacked by a terrorist he is sure he has killed, only to discover that the latter has become a "walker" who can only be killed at the spine or brain stem. The science of the pathogens which create these figures is carefully paced through a series of shocks to Ledger, who realizes early that "this went beyond religious fundamentalism or political extremism" (117).²⁵ The conspiracy is being investigated by a secret government organization called the Department of Military Sciences (DMS), whose members, like Ledger, find that their enemies actually challenge the resources of language in verbalizing the threat.

Maberry avoids giving any extended descriptions of these creatures and that way avoids the visual clichés of shambling automata from horror movies. What gives force to his zombies—a term very rarely used in the novel—is their unpredictability. They inhabit the interstices of the text in that apparently normal humans can transform within an instant into deadly predators. In that sense, they represent the ultimate demonization of terrorists in being indistinguishable from normal humans. Their transformation is usually instant and signalled visually in their bared teeth. They lope, make animal sounds, and, once changed, turn into embodiments of appetite. The ultimate paranoia in the novel is that not even children are exempt from this process, which is signalled by the personal pronoun shifting into the neuter "it". Although the term is a total understatement, every "walker" is another human weapon, infected with a deadly virus which is transmitted through the act of biting.

Two major confrontations take place in Baltimore warehouses involving multiple deaths but also a number of discrepancies which make the DMS suspect that those situations have mounted an elaborate deception to distract them from the main assault which is being mounted by the Islamist leader who enters New York in disguise. At the same time, the businessman realizes that he has been deceived by his fellow conspirators whose aim has always been jihad. Maberry signals this moment of realization through the familiar image of quite a different attack: "The phone fell from his hands as the black reality of apocalypse bloomed like a mushroom cloud" (344). The analogy tacitly reminds the reader of a threat even worse than that expressed through Cold War iconography,

that of a worldwide pandemic. It constitutes a form of attack without a single source point and without any known limit to casualties. The ultimate confrontation plays itself out in traditional thriller fashion at an iconic national site—the Freedom Bell in Pennsylvania. In the resulting battle, multiple deaths follow including the Islamist leaders, but the First Lady’s life is saved—at the expense, however, of the bell which is broken beyond repair.

It is a measure of how far bioterrorism had become a public subject by 2011 that Michael Harvey attempts to weave it into his detective novel *We All Fall Down* (2011). A light bulb falls on the Chicago subway system, apparently releasing a deadly pathogen. A number of suspicious deaths follow and the private eye protagonist uncovers evidence that the substance has been made in a secret laboratory and released deliberately. The conspiracy he uncovers involves Homeland Security agents, the local Mafia, street gangs and even a member of the mayor’s office.

As the deaths multiply, the authorities erect a quarantine fence around key areas of the city:

They waited until dark to bring in the fences. Workers dressed in NBC [nuclear, biological, chemical] suits unloaded trucks and took crowbars to crates. They dug posts and unrolled lengths of steel mesh. Two layers of fencing went up, with twenty yards of space in between. Each was topped with a double strand of concertina wire, the outer fence also covered over with sheets of reinforced wood so no one could see in. Or out. (163)

It is a key moment in the novel and should be a major political event in the nation, when fences are erected to divide a major American city. The description gains its force from focusing on the physical process rather than the identity of those erecting the fences, who remain an anonymous “them”. Although there is a brief paragraph describing the hysterical reactions of some citizens, the basic method of the novel makes it impossible for Harvey to dramatize this event. The main narrative medium is of sequences of street-wise dialogue where the protagonist is trying to elicit information. For a crime novel revolving around the complexities of conspiracy this would work fine, but here it has the effect of flattening out the biological subject into just another crime. In his Author’s Note Harvey cites his sources and pointedly stresses the plausibility of the biological threat, but the repeated dialogue dramas keep the focus on local immediacy.²⁶ The passage quoted above is one of the few visual

sequences in the novel and the drama of secretly using a subway train to dispose of the mounting number of corpses is only glanced at. It is ultimately implausible that such an outbreak could remain a Chicago issue and not a matter of national emergency.

A problem in *We All Fall Down* thus emerges as a disproportion between the confinement of an urban crime narrative and the unavoidable scale of any bioterrorist event. In our last example from this section, Richard Powers narrates the experimental musical speculations of his protagonist against the paranoid background of the post-9/11 security state. *Orfeo* (2014) took its cue partly from the case of Steve Kurtz, an artist working with genetically modified material, who was arrested by the FBI and charged with terrorism. Powers' protagonist is an elderly composer called Peter Els, who has been experimenting with DNA to explore possible connections between genes and music. When his dog suffers a stroke he calls the emergency services, who discover his domestic biological laboratory. Shortly afterwards, Els witnesses agents wearing hazmat tunics stripping his house bare of such equipment and from that point on through most of the novel's present Els is a fugitive spectator of how the media transform him into the "deranged Pennsylvania terrorist" (244). Casual web searches turn up information on biological weapons production, further adding to Els' presumption of guilt. Performing the role of interrogator at one point, a friend asks "*Are you a terrorist?*", but his answer is noncommittal: "He looked away. *Oh probably*" (143; italics in original). Els falls victim to a congruence Powers has pointed out in the "profile of the rogue figure – the terrorist [...] that solitary figure that's so familiar to us as a figure of fear, resembles in some very palpable way the artistic profile" (Hicks 2014). In that respect, Els becomes stigmatized by a conservative impetus in the culture, reinforced by fears of terrorism, described by Kathryn Hume as a tendency to contain the new and experimental within known categories (Hume 2017).

Circumstances play fantastically around Els's situation. Even his home residence takes on a transposed guilt by being near that of "Jihad Jane", i.e. Colleen LaRose, who pleaded guilty to terrorism charges in 2011. Despite the fact that he did not construct a single weapon, Els is accused in the media of having caused fatalities in Alabama and he fantasizes repeatedly about the FBI's capacity to monitor every transaction he makes. A hyper-consciousness of what Powers calls "big data" dogs every step that Els takes. In that respect he functions as a victim of data retrieval because, as Powers puts it, "if you simply get *enough* data, you

don't actually have to get causation anymore [...] Correlation – if you simply acquire enough data, you're going to get indicting correlations, and that's all you need" (Hicks 2014). Powers constantly sets the complex musical speculations of his protagonist against an equally complex background of heated public debate about terrorism where intense fears flesh out hypothetical cases like that of Els.

SPATIAL AND HISTORICAL EXTENSIONS

While the action in the majority of novels discussed here plays itself out within the USA, Richard P. Wenzel's *Labyrinth of Terror* (2010) takes place mainly in London though its two protagonists are American, and it also gives substantial identities to its conspirators. A mysterious series of post-operative deaths take place at King's Hospital (fictitious) and are investigated by two visiting American specialists, who discover that they have been caused by enhanced pathogens, in other words by designed viruses, which in turn suggests design and intent. The ground has been laid for this discovery by Jake, the American epidemiologist, who at a conference on infection control delivers a presentation on antibiotic resistance and the grim epidemics which might follow. Not surprisingly, this meets with a hostile reception, whereupon he has to "say only that he was giving a worst-case scenario" (47). The conference audience here functions as a surrogate for Wenzel's readership as he gradually establishes the credibility of his subject. Once done, the Americans pair up with an MI5 officer, and in this respect, Wenzel has stated that he was consciously departing from the usual pattern of medical thrillers in the "critical role of both an epidemiologist and a microbiologist in solving the 'who done it.' Usually the standard sleuths are detectives" (Lyle 2010).

Three different areas of expertise are thus combined in the search for the infection's source and suspicion falls on Maria Kontos, a microbiologist with an unknown background, whose apartment proves to contain a secret biological laboratory. When MI5 agents stake out this address, suspicions are further confirmed when they disappear. Just as the investigation develops impetus, Wenzel fleshes out the background of this figure as originating in Palestine. She is also living with her sister, a toxicologist, and also with a mysterious Kurd harbouring a passionate hatred of Iraqis, who is operating within an international terrorist network, glimpsed through agents in Belgium and Germany. The sisters' plan is

to avenge their family's displacement by releasing a virus at an Israeli convention in London and the novel follows the twists and turns of the investigation right up to the denouement where the plan almost succeeds. One sister dies, the other survives to find refuge back in Palestine. The object lesson built into the intrigue is the crying need for biosecurity measures.²⁷

Many of the novels discussed in this volume take their bearings from the Cold War. However, Tim Downs' *Plague Maker* (2006) extends its historical trajectory right back to World War II. The event which opens the narrative concerns a man apparently shot dead in New York, who has been infested with fleas. A specialist points out to the detective protagonist that the infestation is constructed, partly because it consists of oriental fleas notorious for carrying bubonic plague. A news report on this brings into contact with the investigator a Chinese character called Li, who performs the role of moral protagonist and co-investigator, and who reveals the historical spread of the novel's back-story. After the Japanese invasion of Manchuria, a secret research facility called Unit 731 was established to develop biological weapons, some of which were tested on the local populous, including Li's wife, who succumbed to the plague. Hence the first revenge motif of the novel: Li's pursuit of the Japanese scientist responsible for this act. The latter, named Matsushita, has his own revenge motive again taking bearings from history. During the 1940s, Unit 731 planned to bomb California with plague-infested fleas but the plan was forestalled when the war ended. Later in Hiroshima Matsushita's family is killed in the bombing. Vowing to wreak revenge through the original plan, he joins the Soviet Biopreparat, where a particularly virulent form of pneumonic plague is developed. Following the collapse of the Soviet Union, Matsushita transfers his skills to Al-Qaeda, who supply his financial backing.

Even in summary, the sequence is complex and Downs is clearly trying to construct a narrative spanning the complex legacies of the last world war, Hiroshima, the Cold War, and American intervention in the Middle East. The logic of historical evolution pulls against the only statement about contemporary terrorism made by one character, that since the 1990s "terrorist organizations began to operate independently, without any responsibility to anyone. Modern terrorists don't take hostages; they don't negotiate; they don't make demands. They just kill" (160). It gradually emerges that Matsushita's plan is to ship special containers from Syria to New York and release them during a July 4th

firework display. A major twist occurs in the denouement when he discovers that his backers have secretly packed the freighter with explosive, which “will have the force of a small nuclear bomb” (321) and which will destroy much of the harbour and the Statue of Liberty. The freighter is destroyed before it can approach the city, but the project fails partly from a dispute over strategy between Matsushita’s epidemic by stealth and his backers’ desire for immediate and visible destruction.

Finally, we turn to novels which multiply the mode of attack. Although Jerry Johnson’s *Seven* (2016) bills itself as a “novel of bioterrorism”, the latter is by no means the only kind of attack described. The villain and first narrator is Robert Smithson, a postgraduate student of biochemistry, who vows revenge on the Bush administration after his father is killed by a car bomb in Iraq. He keeps a meticulous diary of his actions with a final end point in view when his journal would be discovered and the record set straight. Taking the book of Exodus as a strategy handbook, he plans to visit a series of seven plagues on the administration, which are publicized through messages at every point. Thus his first act is to set fire to the congressional car-park in Washington airport with the accompanying message declaring: “JUST AS GOD BROUGHT THUNDER AND LIGHTNING AND FIRE AGAINST THE EGYPTIANS TO HELP FREE THE ISRAELITES FROM SLAVERY, THE SAME PLAGUE HAS BEEN BROUGHT AGAINST THE VEHICLES OF THOSE THAT SUPPORT THE WAR” (31: capitals in original). The message sets a keynote for Smithson’s whole plan, where he adopts a fantasy role of the deity in bringing about the end of the Iraq war and supposedly liberating the American people. As the novel progresses his pathology becomes more and more evident in him seeing himself as God’s agent.

Pitted against Smithson is the leader of an FBI team who eventually identifies the perpetrator and confronts him at Waco Lake, a deliberate echo of the Branch Davidian sect. Sequences centring on Peterson alternate with those of Smithson, charting the process of the latter’s plans and their detection. The alternation invites comparison, which reveals parallels of the situation (they both suffer bereavements) and a common hostility to the then current administration. The action escalates from fire to smallpox virus used to contaminate Halloween masks modelled on Donald Rumsfeld, who himself is infected but not fatally.²⁸ After a number of deaths, Smithson turns to dynamite and triggers an avalanche in which Dick Cheney is “assassinated”, an

awkward intervention in history. Then follow an attempt to kill members of the Bush family in a Texas football stadium, a scenario explicitly drawn from Tom Clancy, and finally an attempt to blow up the spillway at Waco Lake, also unsuccessful. In effect, Smithson functions as a composite domestic terrorist, deluded by a religious motivation and unbelievably resourceful. Not only can he change identities with ease; he also knows where to lay his hands on smallpox virus, semtex explosive and—more importantly—how to devise weapons to use these materials. It remains unclear whether Johnson devised the narrative as a retrospective satire on the War on Terror. Certainly by dating his action in 2006 during the Iraq War, he has chosen a subject increasingly distanced from the reader's present. Although Smithson plans his own "mini version of 9/11" (153), the narrative focus falls increasingly not on his actions but on his megalomania. Personal pathology replaces any kind of political motivation in his case.

The computer journalist Barry Venton's 2003 study of cyberterrorism, *Black Ice*, mounts a double polemic against continuing indifference to cyber-security and the persistence of perceptions of terrorist action modelled on the previous century. To dramatize the urgency of the issue, he introduces his study with a fictional account, italicized to distinguish it from the rest of the text, of an operation in the Pacific North-West of the USA involving four decentralized Al-Qaeda cells. The attack has been two years in the planning and involves a Saudi American coordinator, Middle Eastern operatives and US citizens. Venton's scenario is multiple, starting when the conspirators hijack a number of fuel trucks, detonating one at a gas communication point and others at electricity substations. At the same time hired Russian hackers attack other control systems, an improvised EMP bomb is detonated in Seattle and then two suicide bombers lead a truck to a building housing an Internet headquarters. A further detonation follows:

The face of the building is ripped into shreds, exposing its skeleton. Glass shatters, sending razor-edged shards slicing through the air. Metal and steel melt and bend in the 1,700-degree inferno. However, mistaken for the smoke and debris of the blasts is a sinister white substance that hangs ominously in the air like a genie released from its bottle. The true nature of the substance will remain unknown for days until dozens of survivors begin arriving at the hospitals complaining of flu-like symptoms and strange, dark lesions on their skin. (12: italics in original)²⁹

The substance is none other than anthrax spores, though its effect only gradually becomes apparent. The immediate result of the attack is a series of major power outages and disruptions to the water supply.

The narrative present in the passage just quoted reminds us that this is a hypothesis, as is Verton's second scenario later in his volume of an attack by releasing a smallpox virus (named Dark Winter after the 2001 counter-terrorism exercise noted earlier in this chapter), but in both cases he has combined allusions to security exercise with details from actual news stories. The factual precision of his description above prioritizes accuracy over the drama of eye-witness accounts. He has a point to make and does it by conflating different forms of attack into a single operation. This is surely the worst of worst-case scenarios. At the end of his opening narrative, Verton grimly underlines his two main lessons that "*this is the face of the new terrorism*" (15) and that "*America's national security depends upon its economic security*" (16: italics in original). And yet again we see the continuing dialogue between fiction and news reports as yet further scenarios are hypothesized of terrorist attack.

In the novels just considered, bioterrorism is repeatedly compared with its nuclear counterpart. Richard Preston has stressed how, in contrast with the devastation brought by nuclear detonations, "a biological weapon leaves buildings untouched". In the sense of leaving the infrastructure untouched, these are therefore "green weapons" (Weikersheimer). Chris Holmes shifts the perspective round to that of the victims by insisting that biological weapons are worse than bombs because they extend their casualties way beyond the limits of blast areas (Holmes 2003). An alternative focus might fall on production. Dennis Meredith, for example, has explained the purpose behind his 2013 novel *The Rainbow Virus*, where a lone-wolf biologist steals deadly viruses from Fort Detrick, as follows: "I [...] hope it makes them recognize the fact that creating a bioweapon is far easier than building a nuclear bomb" (Meredith 2013b). His statement loses some of his force from the fact that in the novels discussed here the vast majority focus on nuclear weapons either stolen or bought on the black market, very rarely ones constructed in situ. Some commentators focus on the impact of the injuries which could be sustained. Thus we are told: "Like a nuclear bomb, the biological weapon threatens such a spectacle of horror — skin boiling

with smallpox pustules, eyes blackened with anthrax lesions, the rotting bodies of bubonic plagues — that it can seem the province of fantasy or nightmare or, worse, political manipulation” (Hylton).³⁰ The rhetoric of comparison here follows a strategy used by many of the writers examined here, of hinting at a dimension worse than the reader can imagine. These novels thus position themselves variously according to different generic conventions, approaching thrillers or action narratives, but sometimes suspending the fiction at critical points to take bearings from current news reports.

Introducing *Germ Wars*, her 2017 study of bioterrorism, Melanie Armstrong declares that biosecurity “naturalizes the fears that have long sustained the national security state” (8), by identifying health with security. Shifting her terms of reference slightly, we could certainly argue that bioterrorism narratives strengthen the relation of an individual victim with the American nation by identifying the former’s fate with that of the collective body politic. Hence when writers like Jeffrey Anderson play on the different meanings to the term “cell”, they are inviting the reader to speculate on the relation of local political groups to the nation through a body-nation metaphor which demonizes terrorists as alien organisms. Biological weapons are often described along parallel lines to nuclear devices in their provenance, transportation (frequently on container vessels), disposition (in being smuggled into the USA), and even, as Hylton does above, in the injuries they cause. But it is in their size and effect that they increase the reader’s anxiety over national vulnerability. Just as suitcase nukes diminish in dimension but not in effect, and furthermore challenge detection through their appearance as backpacks or suitcases, so the biological weapon reduces the size even down to a single vial which could be carried in a conspirator’s pocket. Furthermore, the latter’s effect, in contrast with all too visible spectacle of a nuclear blast, represents the ultimate weapon in taking its invisible course from victim to victim, only perceptible when these victims’ fates have been sealed. The ongoing public debate over vulnerability to both nuclear and biological attack overlap constantly and bioterrorism is frequently used as a means of examining the scale of a possible nuclear attack and the nature (most frequently the limitations) of institutional countermeasures.

NOTES

1. H. G. Wells' 1895 story "The Stolen Bacillus" describes an attempt to poison the drinking water of London; Jack London's "The Unparalleled Invasion" (1910) describes the subjugation of China by biological weapons.
2. Cook's approximate model for this character, acknowledged in the novel, was Ken Alibek, a former researcher in the Soviet biological warfare facility who emigrated to the USA in 1992 and described his work in *Biohazard* (1999).
3. Apart from an Author's Note on bioterrorism, Cook includes a brief bibliography citing Richard Preston among others. Cook's white supremacists are loosely based on the Aryan Republican Army, active up to the mid-1990s. *The Turner Diaries* is discussed in Chapter 2.
4. *Outbreak* was based on Richard Preston's nonfictional work *The Hot Zone* (1995), concerning an Ebola outbreak in a small California town. *Executive Orders* also focuses on Ebola, used in an Iran-backed attack. Osterholm several times cites the security specialist Jessica Stern, whose relation to the film *The Peacemaker* is examined in Chapter 2.
5. For a discussion of this case, v. Vargo 165–211. Lewis M. Weinstein's novel *Case Closed* (2009) dramatizes these events. The anthrax letters case inspired Alex Kava's *Exposed* (2008), where a lone-wolf attack takes place spreading the Ebola virus. The perpetrator is a bioterrorism specialist who attempts to disguise his actions through resemblances with infected letters, the Unabomber Ted Kaczinski, the Chicago Tylenol murders of 1982, and other domestic cases.
6. "Hatfill's novel depicts bioterrorist attack," *CNN* (August 14, 2002), <http://edition.cnn.com/2002/US/08/14/hatfill.novel/>; "Emergence (1998)," *Bio Terror Bible* (August 14, 2002), <https://sites.google.com/site/bioterrorbible/books/emergence-1998/>.
7. The novel made a big impression on Clinton, who recommended it to the then Speaker of the House Newt Gingrich and incorporated it into counter-terrorism planning in 1998: Sarasin, 108–13. Clinton later recorded: "Everything I heard confirmed that we were not prepared for bio-attacks" (*My Life*, 789). Although *The Cobra Event* predated *Living Terrors*, Osterholm only cites Preston's non-fictional articles, collected in *Panic in Level 4* (2008). Preston gave testimony to the Congressional Hearing on Biological Weapons in 1998.
8. During the composition of the novel, Preston conducted interviews at the FBI academy in Quantico. Following an explicit analogy with the Tokyo group, he describes the deaths in the novel as trail runs for the biologist's main attack, which he is preparing to launch at the end of the novel.

9. For a detailed analysis of the novel, v. Sarasin, 81–100.
10. In an echo of the 1978 killing of Bulgarian dissident Georgi Markov, he disposes of a hospital official by injecting her with ricin through the tip of an umbrella.
11. Hayes' title part-echoes Richard Matheson's *I Am Legend* (1954), about an incurable plague sweeping America.
12. *Dark Winter* was set notionally in 2002 and included in its scenario a sting operation against an Al-Qaeda agent, who was trying to buy plutonium and biological pathogens. One of the lead players was R. James Woolsey, prominent in the EMP debate (v. Chapter 7). After a series of meetings by the National Security Council, the exercise concluded that the USA was dangerously unprepared for a bio-attack (O'Toole 2002). It subsequently inspired the Tom Clancy web-game *The Division*.
13. Taylor's title alludes to the black-clad female Chechen Islamists who participated in the Moscow theatre raid of 2002. In the novel, a viral outbreak is contained by rapidly quarantining cases in New York and on a cruise liner.
14. The article was Michael T. Osterholm's "Preparing for the Next Pandemic," *New York Times* (June 21, 2005), which criticised Chinese secrecy in handling the SARS epidemic.
15. The article quoted is Chris Phoenix, "Nanotech Weaponry," *Responsible Nanotechnology* (February 12, 2004), http://crnano.typepad.com/crn-blog/2004/02/nanotech_weapon.html/.
16. The series was shown on Showtime TV in December 2005. A second series was screened the following December with the title *Sleeper Cell. American Terror* showing the cell as targeting a shipment of nuclear material arriving in Los Angeles port. Both were scripted by Ethan Reiff and Cyrus Voris.
17. The use of a Moslem protagonist in the series is examined in Abbas (2008).
18. The repeated use of the term "vial" carries apocalyptic echoes of the golden vials "full of the wrath of God" in *Revelation* 15.
19. Immediately after the speech, the novel concludes with a bibliography of writings about nanotechnology.
20. Harrison extrapolates sarin from its use in the 1995 Tokyo subway attack, as does Joel C. Rosenberg in *Without Warning* (2017), where a mortar attack is launched against the White House at the very moment that the president is announcing success in the campaign against ISIS. Some of the mortars are loaded with sarin stolen from a Syrian facility. Harrison's title had already been used in a 1999 film depicting a military confrontation between the USA and the Soviet Union.

21. A former officer in the Army National Guard, Harrison subtitles his work *A Novel of New Millennium Terrorism*. In contrast, the 1990 film *By Dawn's Early Light* is a late Cold War narrative, where dissident Russians detonate an atomic bomb in the Ukraine and the superpowers rush to prevent a nuclear holocaust.
22. Bear has served in the SIGMA group of Science Fiction writers, founded 1993, advising Homeland Security on terrorist scenarios.
23. Bear's sequel novel *Mariposa* (2009) describes an attempt by a corporation to sabotage the power grid of the USA.
24. Parker's background is in biosecurity and he has served as an agricultural specialist in Homeland Security.
25. Maberry has explained that the idea for the novel came out of research for his non-fictional study *Zombi CSU: The Forensics of the Living Dead* (2008); Ketchersid (2009).
26. Harvey's sources are Jim A. Davis and Barry R. Schneider's *The Gathering Biological Warfare Storm* (2004), an account of US biodefence; Ken Alibek's *Biohazard* (2000), by a former worker in the Soviet biological warfare centre; and Richard Preston's *The Hot Zone. Biohazard* received an enthusiastic endorsement from Robin Cook. Alibek supplied the model for the defector Mirovik in Tim Downs' *Plague Maker*.
27. A valuable survey of lone-wolf bioterrorism narratives has argued that they "prepare the ground for the acceptance of an erosion of personal freedoms. Surveillance and expansion of the powers of counter-terrorism agencies is presented as the only feasible form of managing these risks"; Polina Levontin et al. "Lone Wolf Bioterrorists and the Trajectory of Apocalyptic Narratives," *Vector* (December 12, 2017), <https://vector-bsfa.com/2017/12/12/lone-wolf-bioterrorists-and-the-trajectory-of-apocalyptic-narratives/>, 14. While it is certainly true that these novels aim to highlight inadequacies in security, these emerge through absences and discontinuities, indicating a lack of inter-agency collaboration and an unwillingness to consider domestic terrorism, among other issues.
28. Johnson's bio-conspirator acknowledges a debt to Tom Clancy's *Executive Orders* (56–57) in designing his particular virus.
29. Verton's title is borrowed from the 2000 infrastructure interdependency exercise in preparation for the 2002 Winter Olympics in Utah.
30. One of Meredith's acknowledged sources for *The Rainbow Virus* (Meredith 2013b).