Keeping a cool head

The threat of bioterrorism should be kept in perspective, says **Bill Durodié**

WHEN addressing the possibility of bioterrorism we need to keep a cool head. There is an emerging tendency in the world today to focus on exotic or extreme threats. But the mundane and the mainstream are far more likely.

In post-9/11 US, funding for civilian biodefence increased to over $5b/y. Shortages in diagnostic, clinical and research capacity were identified, as were the problems of having a plethora of agencies, from government departments to universities and industry, working with potentially-lethal pathogens. As Bruce Hoffman put it, "*[Bioterrorism] was where the funding was, and people were sticking their hands in the pot. It was the sexiest of all the terrorism threats and it was becoming a cash cow. So the threat of bioterrorism became a kind of self-fulfilling prophecy*."[1]

But we also need to maintain a sense of proportion. Various forms of cancer kill over half a million Americans a year, tobacco over 400,000 (as does obesity), and almost 100,000 die of infections caught in hospitals. Bioterrorism killed no-one in the US in the 20th century and five, so far, in the 21st.

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One danger is that it is we who give the issue greater prominence and purchase. Indeed, in 1999, Osama bin Laden's right-hand man, Ayman al-Zawahiri, noted in relation to biological weapons that "*we only became aware of them when the enemy drew our attention to them by repeatedly expressing concerns that they can be produced simply with easily-available materials.*"[2]

Increasingly, the authorities focus on vulnerability assessments rather than threat assessments. This prioritises the use of speculative scenarios over the gathering of intelligence. The 'what if?' worst-case possibility is emphasised over the rather more plausible 'what is' real evidence.

For instance, people wondered, what if Saddam Hussein had somehow acquired the smallpox virus, despite there being no evidence for this. And, what if he then passed it on to terrorist groups there was no reason he should be in contact with? What if they could weaponise it, and then deploy it?

the domino effect

Like knocking over a line of dominoes, with one step inexorably leading on to the next, Western society gradually reorganised itself around its own worst nightmares. Stockpiles of vaccines were acquired, and then first responders and even the public inoculated, just in case.

People invariably focus on the toxicity of such agents, not their availability and containability, or the difficulties in preparing and delivering them. The fact that the Japanese cult, Aum Shinrikyo had experimented and failed with such substances a decade earlier, having expended $10m and having had access to significantly greater scientific acumen than al-Qaida does not stop the speculators.

This fear of malign intent distracts us from more plausible sources of threat, as well as encouraging a few loners. Indeed, every single case of radiological material bought on the black market has been a sting operation by security agents.[3] It seems ironic that the demand is fairly limited, but that the supply only comes from government sources.

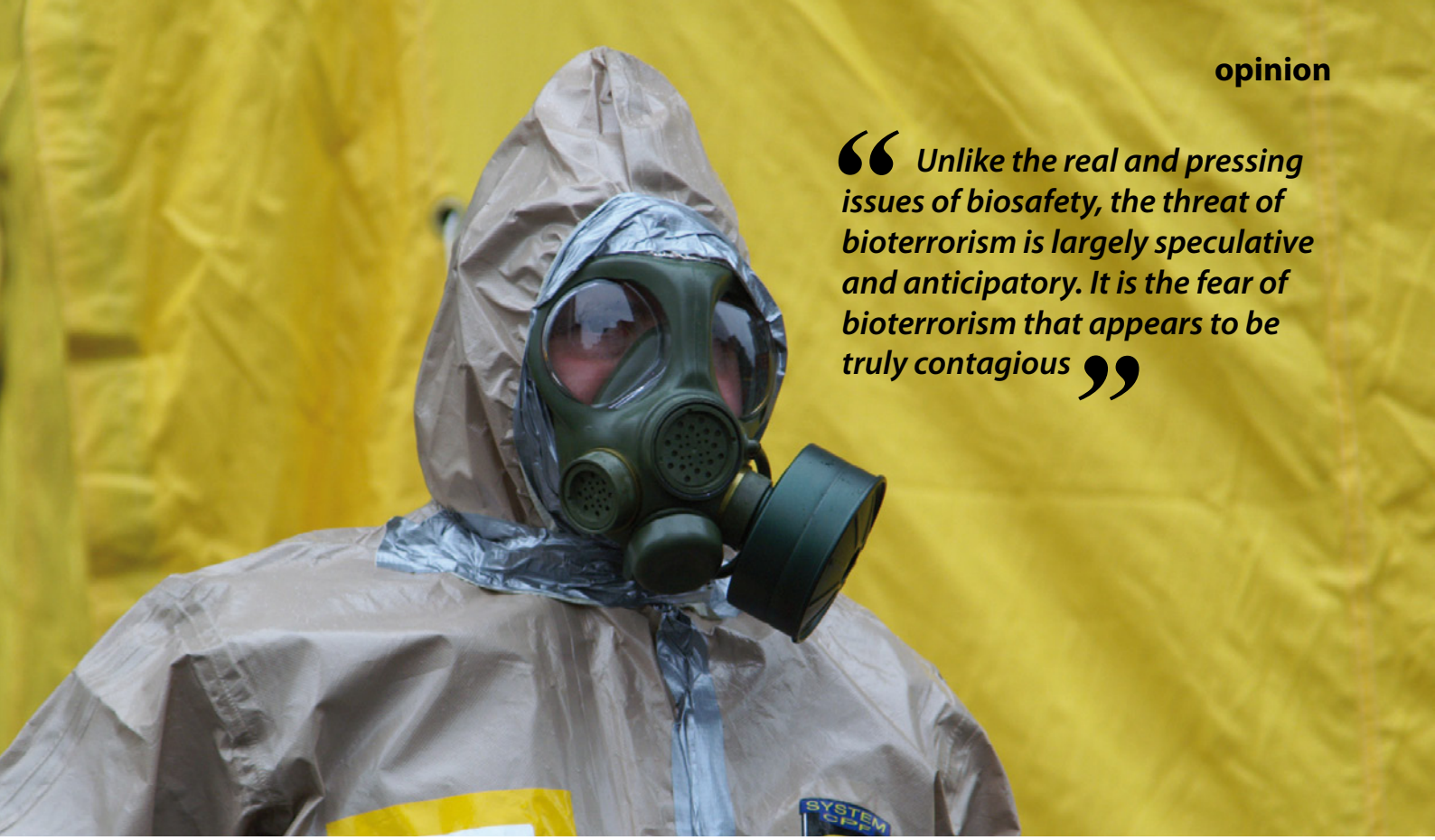
The price of constant overreaction can also be assessed in how society handled the outbreak of 'swine flu' this year. The response to this was shaped through the experience of the SARS episode in 2003, which in its turn was used by public health officials as an indicator of how far they had come since the anthrax incidents in the US of 2001. They are now keen to test out their new systems and are constantly seeking to convey threats to the public.

But in their haste 'to be seen' to communicate the risks, they are also in danger of overstating them, and thereby losing public support for some time to come. It was known early on that the H1N1 virus was weak, yet this rarely formed part of the message. Instead, the focus was on its spread, hence the profligate use of the term 'pandemic', by those who appeared to have little awareness that this referred neither to large numbers nor to its virulence.

keeping the lid on

Nothing in life is risk-free. If we want to use biological agents ourselves we have to accept that mistakes occur. But these are more likely to be contained, not catastrophic. Typical problems are those of limited accidental releases, improper transportation and non-compliance with regulations relating to facilities and the vetting of personnel.

It is easy to be alarmist about this. Approximately 390 entities and 15,300 staff have access to select agents across the US. Recent inspections there



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found that 11 of 15 universities (and all eight state facilities) investigated failed to comply fully.[4] But such problems are largely self-limiting. And, as requisite biosafety levels depend not just on the pathogen, but on the type of experiment to be performed, it is easy to get things out of context.

The key questions remain: how much capacity do we actually require without facilitating proliferation? Where are these facilities and pathogens to be situated? How do we ensure adequate regulation without undermining competitiveness? And what will the impact of the recession be on all of this?

No matter what we do, it is ultimately impossible to preclude against another Bruce Ivins (the American microbiologist widely suspected to have been behind the US anthrax incidents). To address issues of alienation and disconnection we would be far better off focusing on what we are for as a society than solely on worrying about those we are against. We need to inspire people with a sense of mission and purpose, not just counter and contain them.

Unlike the real and pressing issues of biosafety, the threat of bioterrorism is largely speculative and anticipatory. It is the fear of bioterrorism that appears to be truly contagious; particularly it would seem, among some working in the world of security. But we must not be driven by our fears or by revenue opportunities either.

Government itself is not immune to all of this as, while not benefiting from the 'economic capital' that drives businesses, politicians and officials derive quite considerable 'moral capital' through claiming to address pressing problems in society. We should all be more principled than that. As David Koplow points out, "*It's bad enough when an important federal government programme designed to deal with a pressing national security threat turns out to be mostly a waste of money; it's worse when that programme also turns out to distract people and agencies from the more serious and fruitful approaches to the problem; it's worst of all if that programme actually contributes to making the problem even worse than it otherwise would be. The current bioterrorism programme, tragically, accomplishes all three of these.*"[5]

The epidemiologist Nicholas King has pointed to the long history of using the fear of disease in society as a metaphor for the perception of threat that emerges in a period of change and uncertainty[6]. Likewise, writer Kenan Malik suggests that bioterrorism is particularly pertinent today as it highlights the possibility of a gradual, or sudden, corrosion from within.[6]

Certainly, much of the discussion about these matters reveals morbid fantasies and poisonous nightmares that say more about us than about the supposed threats that we face. It's high time we had a more balanced and mature discussion about these, rather than being driven by worst-case scenarios and speculation over the obscure possibility of extreme incidents. **tce**

further reading

1. Bruce Hoffman, cited in Susan Wright, "Terrorists and biological weapons: forging the linkage in the Clinton administration", *Politics and the Life Sciences*, vol 25, no 1–2, February 2007
2. Cited in Alan Cullison, "Inside al-Qaida's hard drive", *The Atlantic Monthly*, vol 294, no 2, September 2004
3. Robin M Frost, "Nuclear terrorism after 9/11", *Adelphi Paper*, no 378, December 2005
4. Cited in Frank Gottron and Dana Shea, "Oversight of high-containment biological laboratories: issues for congress", *Congressional Research Service report for congress*, March 2009
5. David Koplow, "Losing the war on bioterrorism", *Security Law Commentary*, Georgetown Law Center on National Security and the Law, 6 October 2008, available *at www.securitylawbrief.com/commentary/2008/10/losing-the-war.html*
6. Both cited in Bill Durodié, "Facing the possibility of bioterrorism", *Current Opinion in Biotechnology*, vol 15, no 3, June 2004

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