

EXTRACTS FROM PRESENTATION BY RICHARD MOTTRAM- SCIENCE AND THE TERRORIST CHALLENGE

The UK and a number of other countries have sought to assess the terrorist threat in the wider context of a national security strategy focused not just on traditional inter-state risks but also on challenges at the level of the individual. Thought about this way, terrorism needs to be seen, evaluated and decisions on how to counter it taken alongside the evaluation of other risks.

How science and technology can be used to help counter terrorism is very important and of significant potential value. But the contribution of science and technology is more interesting and broader than this. Science contributes potentially to the problem of terrorism as well as to helping to counter it. For example:

- There is the awkward fact that scientists, engineers, and doctors play a considerable role as terrorists.
- There is the risk that inadequately regulated scientific activity and the unconstrained dissemination of scientific knowledge may significantly enhance the terrorist threat in its most severe forms.
- And there is the risk that scientific and technological solutions could have significant impact on the character of the free society we are seeking to sustain against the efforts of terrorists to undermine it.

One clear lesson to be drawn from the Iraqi WMD episode is the importance of ensuring that intelligence analysis and assessment draws on expert scientific advice and more broadly on the scepticism at the heart of the scientific method. One policy conclusion is the importance of maintaining deep scientific expertise within the intelligence community.

Our thinking about terrorism has increasingly come to be seen through the prism of the 9/11 attack for obvious and understandable reasons. But in thinking about the panoply of terrorist risks and how they might evolve, we should perhaps not become too narrowly focused, particularly when weighing the likelihood of and impact of different types of terrorist attack.

Terrorism is a major concern whether in terms of the al-Qaeda threat or other possibilities that might unfold in the future. Low-probability/ high- consequence risks, whether in relation to nuclear or biological risks, need to be addressed alongside the inevitability of continuing conventional attacks.

There is a number of areas where the science and engineering community has an important part to play in countering terrorism, for example:

- The role of the social sciences in gaining a better understanding of drivers of extremism.
- In covert intelligence and police work where there is increasing scope to exploit advances in sensor technology and increasingly powerful vision processing and data mining capabilities... increasingly agencies concerned with human intelligence are huge data-exploitation businesses, drawing on private sector lessons in the development of social network analysis. With these changes come substantial issues about possible infringement of civil liberties

- The development of enhanced physical protection against bomb attacks, and work to protect borders against movement of suspect people and suspect materials. For the future an increasing focus will be on how security can be designed in to places and structures.
- Sophisticated capabilities are required to monitor, identify and respond to attacks, whether of a conventional or CBRN kind.

As well as addressing scientific and technological contributions to new ways of more effectively countering terrorism, consistent attention needs to be given to crucial but relatively unglamorous actions- such as nuclear and biological security.

As inadequately regulated scientific activity and the unconstrained dissemination of scientific knowledge may significantly enhance the terrorist threat, notions of scientific freedom and openness need to be tempered accordingly. But it will be very difficult to devise regulatory regimes that are effective on a global basis.

Uncertainty over the threat and the breadth of the response required make countering terrorism a difficult subject to handle within Government, including in the development of Government-wide Science and Technology strategies.

Finally the speaker asks whether we need a more structured debate about different risks and their relative importance, and whether scientists have a role to play in such a debate?