“Bioterrorism” and the Dual Use Dilemma

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“Bioterrorism” and the Dual use Dilemma

- Much current debate

“Bioterrorism”

- “Terrorism” is a deeply divisive and controversial term
- General definition: “the use of biological agents against civilians by nonstate actors”

A Note on Security Issues

- Difficulty with assessing any area of terrorism:
  - National Security
  - Classified Information
  - Restricted Access
- Facts, analysis and conclusion face the possibility of major reappraisal, subject to new, previously secret, information

The Issue at Stake

- When discussing bioterrorism, the most important questions to ask are
  1. “What has caused such a level of interest, debate, expenditure and alarm; and
  2. Are such attitudes and activities justified?”

Answering the Questions

- 1) Is the focus on bioterrorism a genuine reflection of the threat it poses?
- 2) How does the “dual use” dilemma relate specifically to bioterrorism

The Threat of Bioterrorism

- Assessment of the threat must take into account:

1. Likelihood of an attack
2. Efficacy of an attack

Likelihood

- Very limited number of examples of bioterrorist attacks
- Very few groups that *may* have the capability to execute an attack have chosen to do so (King, 2005)
- Important only to take into account successful attacks, or genuine and realistic attempts
  - Hoaxes are not under discussion

Examples of Past Bioterrorist Attacks or Realistic Attempts (1)

- Rajneesh, 1984
  - Use of Salmonella in US restaurants
- Aum Shinrikyo (1990-1994)
  - Attempted, but failed, to acquire, produce and use Anthrax and Botulinum Toxin

Examples of Past Bioterrorist Attacks or Realistic Attempts (2)

- al-Qaida (1999-2001?)
  - Failed attempt to acquire, produce and use Anthrax
  - December 2001
    - Evidence of recruitment activities in bioscience field
    - Unable to acquire pathogenic culture of Anthrax
    - No *publicly* available information to suggest ability to continue this work post-2001 (Leitenberg, 2005)

Examples of Past Bioterrorist Attacks or Realistic Attempts (3)

- "Amerithrax" attacks
  - September-October 2001
  - Use of anthrax
  - Perpetrator currently unknown

Efficacy

- There is an extremely low likelihood of nonstate actors being able to execute "mass casualty attacks" (Rappert, 2006)
- Only "successful" attacks (Rajneesh, Amerithrax) were low level in terms of casualties.
- Difficulties abound in relation to
  - Weaponisation
  - Access
  - Agent fragility

Dual Use (1)

- Given that bioterrorism appears to be both unlikely and ineffective, one must ask:
  - "How easy is it for a nonstate actor to acquire and implement the knowledge *sufficient* to overcome these hurdles?"

Dual Use (2)

- Publicly available research: can it aid bioterrorism?
- Logically, yes
  - Dual use is inherent within bioscience research
- Practically, no
  - Many systems have been put in place to flag up research of a "contentious" nature
  - Very little actually identified as such. Even less affected by decisions to restrict its publication

Dual Use (3)

- Cannot simply view dual use research and its relationship to bioterrorism in a vacuum
- Other factors are at play; simply having access to the research is not enough
  - Access to specific equipment
  - Aforementioned access to agents
  - Individuals with appropriate expertise and training

Ramifications for "Dual Use" in terms of Bioterrorism

- These issues do not render the "dual use" dilemma irrelevant
- Rather, it must be re-framed by taking into account other factors

State Backed Bioterrorism? (1)

- Nonstate actors working alone appear not to be able to mount serious bioweapons threat, whether or not they have access to dual use research
- The possibility of State level help changes this.

State Backed Bioterrorism? (2)

- Has it ever happened?
- Not as far as is publicly available, no.
- No evidence a state has ever aided a nonstate actor in the production of biological weapons (Leitenberg, 2004)

"Amerithrax" (1)

- An anomaly in terms of bioterrorist attacks
- Successful
- Effective: low casualty rates (5 fatalities)…but this appears to have been the intent, given the method of dispersal.

"Amerithrax" (2)

- It's success initially appears to point to one of two conclusions:
  1. it represents a successful and sophisticated nonstate actor executing an effective bioterrorist attack; or
  2. it represents an unprecedented example of a state backed bioterrorist attack

"Amerithrax" (3)

- The anthrax was distributed through the US postal system
- Current evidence suggests that program was that of the United States of America

"Amerithrax" (4)

- If the anthrax was derived form the US "biodefence" program, the situation is changed completely, and a third conclusion seems more likely:
  3. The "Amerithrax" attack represents an increased threat of bioterrorism *as a consequence of state level "biodefence" activities*

Summary

- Bioterrorism:
  - Possible but unlikely,
  - Mostly inefficient without State level involvement,
  - Threat overstated,
  - Response is currently disproportionate
- Dual Use dilemma and bioterrorism:
  - Dilemma clearly exists
  - level of concern does not reflect the practical situation
  - "biodefence" poses greater risk
- State backing
  - No evidence
- "Amerithrax":
  - represents the risk of State level "biodefence" activities

Conclusions

- Responses to bioterrorism should be proportionate to the threat posed
- Over-regulation of the biological sciences due to concerns over dual use research should be avoided, as should unnecessary "biodefence" projects
- Focus on bioterrorism detracts from considering the threat of State level bioweapons programs:
  - The fact that the anthrax attacks of 2001 in the US came from a "biodefence" program is evidence of this.

Recommendations (1)

- Bioterrorism is a *criminal* act.
- Conventional anti-terrorism activities should not be understated
  - Intelligence
  - Enforcement

Recommendations (2)

- Further procedures:
  - Education
  - Codes of Conduct
  - Laboratory (bio)security/biosafety
  - Reduction in “biodefence” biological weapons research

Thank you for your time