Biodefense: How Much Transparency is Enough?

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The Need for Transparency

- In September 2001, the *New York Times* revealed three classified “threat assessment” projects:
  - a genetically engineered strain of *B. anthracis* (DIA), the reengineering of a Soviet-era biological bomblet (CIA/Battelle) and construction of a small-scale facility to produce an anthrax simulant (DTRA)
  - Some of this work appeared to violate the BWC, and the fact that it was secret aroused international concern.
  - The proportion of the U.S. biodefense program that is classified is unknown, but the three projects are probably the tip of the iceberg.

- **Increased transparency** is needed to build confidence that the biodefense program is BWC-compliant and is not being used as a cover for prohibited, offensively oriented activities.
  - The new select agent rules have led to increased physical security and access controls at government laboratories such as Fort Detrick, further reducing the transparency of biodefense research.
Policy Tradeoffs

- Allowing states to conduct classified biodefense programs creates a potential loophole to hide offensive BW developments.
- Biodefense is the type of R&D most likely to have offensive applications and thus in greatest need of transparency.
- But too much transparency could reveal weaknesses and vulnerabilities that an adversary could exploit.
- Where should we draw the line? What types of information useful for transparency purposes can be disclosed without revealing specific, non-obvious vulnerabilities that would materially aid an attacker?
- The appropriate degree of transparency or opacity may depend on the type of biodefense research being undertaken.
Types of Biodefense Research

- **Basic research on microbial pathogenesis**
  - Highly sensitive information related to weaponization and countermeasure resistance may need to be classified or otherwise restricted.

- **Countermeasure development (e.g., vaccines, antimicrobials)**
  - Transparency about countermeasures can have a useful deterrent effect (deterrence by denial), but obvious vulnerabilities should not be revealed.

- **Microbial forensics**
  - General information can have a deterrent effect, but release of details of techniques (e.g., DNA probes) could enable a violator to evade detection.

- **Analysis of information and strains obtained by covert means**
  - Disclosure of findings could compromise intelligence sources and methods.

- **Threat assessment studies**
  - Studies designed to explore the feasibility of potential bioweapon technologies (for countermeasure development) should not be disclosed.
If the “mousepox experiment” was repeated with the variola (smallpox) virus for threat assessment purposes, there would be two possible outcomes: either the insertion of the IL-4 gene increases virulence and vaccine resistance in variola virus, or it does not.

- In the former case, opacity is preferable.
- In the latter case, transparency is preferable.

In other words, transparency is stabilizing when it tends to minimize a suspected BW threat and reduce vulnerability concerns, but destabilizing when it validates a suspected BW threat and exposes a key vulnerability.

Should sensitive biodefense information be shared with gov’t officials and scientists, but not with the general public?
Need for External Oversight

- At present, each U.S. funding agency (DoD, CIA, etc.) is responsible for the security classification of biodefense programs and ensuring that such programs are compliant with the BWC.

- Agencies should not be in a position to regulate themselves because of (a) potential conflicts of interest and (b) the fact that self-regulation cannot inspire international confidence.

- Instead, an external review process is needed, with the burden of proof on the agency seeking to classify specific biodefense activities.
  - Executive Branch oversight
    - All “black” biodefense programs vetted by lawyers employed by an agency (e.g., State Dept., HHS) not directly involved in the research
    - NAS scientific advisory committee (with clearances) could review projects
  - Congressional oversight
    - Review of “black” biodefense programs by Armed Services or Intelligence Committees, or a special Select Committee on Biodefense