Governance Options for Dual-Use Research

Gerald L. Epstein

Center for Science, Technology, and Security Policy July 24, 2010



Dual-Use



- The *potential* to commit harm with science and technology developed for beneficial purposes
- Has been with us ever since humans first sharpened sticks or forged metal
- Concerns about *dual-use research* are perhaps the most immediate in biology
 - Self-replication (scale and scope of potential effects)
 - Direct route from research to consequences
- But other disciplines face, or will face, similar issues

Is the Dual-Use Nature of Biology a Problem?



Fortunately, we don't really know. But ...

- Biological science and technology are becoming increasingly powerful and accessible.
- There are people and groups who profess the desire to kill on a mass scale.
- How sure can we be that no such individuals will ever seek to fulfill that ambition with biology?

But Why Worry About State-of-the-Art Research?



- Some research involves materials and organisms that can pose immediate dangers.
- Today's cutting-edge research is tomorrow's skilled craft and the day after's commodity.
- People use the tools with which they are familiar. And an increasing number of people are becoming familiar with biology.
- Those with technical expertise are not immune to the forces that lead others to do harm.

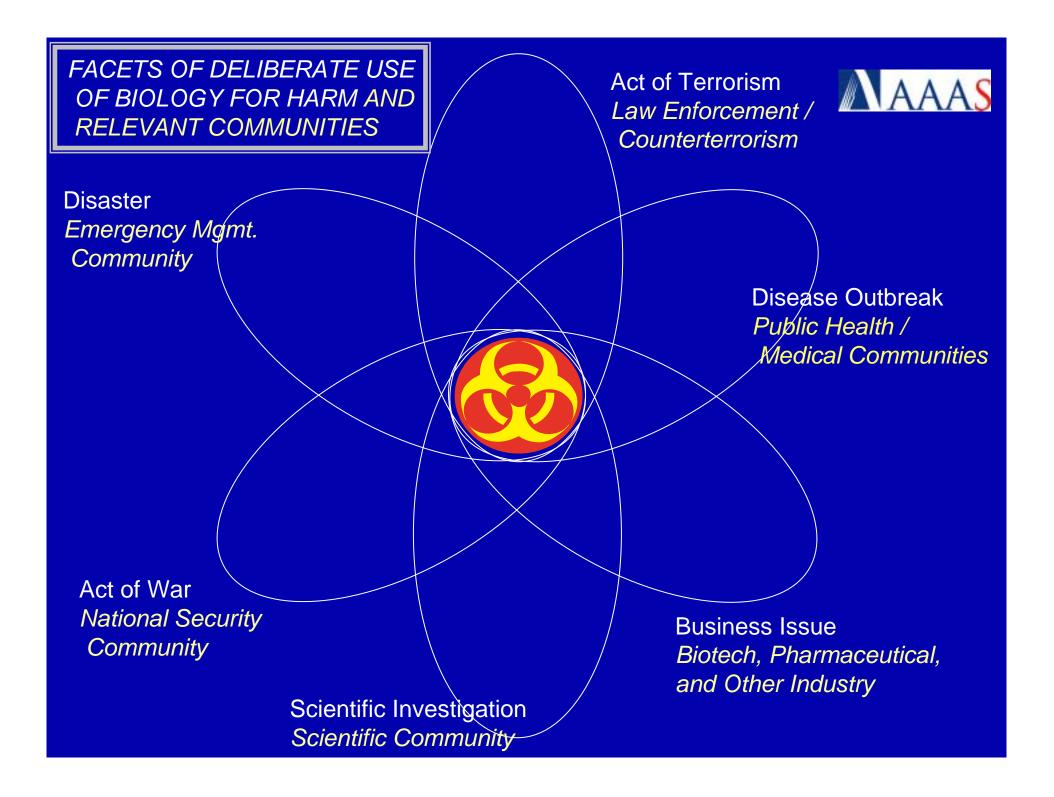
Whose Responsibility Is It to Mitigate This Risk?



Possibilities include:

- Nobody's the risk is overblown
 - (See previous slides)
 - Governments and publics may not think so
- The risk is real, but the risk of government overregulation of science is worse
 - Perhaps governments are less well suited to act than others
- The risk is real, but it's somebody else's problem
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Governance Options for Dual-Use Research



- Governance does not necessarily mean government or regulation
- "Hard" (regulatory) approaches are poorly suited to deal with dual-use research risks, which are
 - Science-intensive
 - Rapidly evolving
 - Subjective
 - Inherently international

Governance Options for the Research Community



- The scientific community has "softer" tools that may be more appropriate, such as
 - Norms and codes of conduct
 - Peer review
 - Oversight (of initiation and communication of research)
 - Education
 - Raising awareness
- Therefore, involvement by scientific institutions, publications, societies, and leadership is critical
- If overregulation is a danger, so is the risk of losing public trust