

Dual-use Forschung

Teil eines Sicherheitskonzept zur Kontrolle öffentlicher
Forschung.

- Science and Security in a Post 9/11 World: A Report Based on Regional Discussions Between the Science and Security Communities (Committee on a New Government-University Partnership for Science and Security, National Research Council) 2007
- U.S. Commission on National Security/21st Century (February 2001)
- **The officials were not always able to offer concrete examples of the reality of these threats, but they clearly **perceived** vulnerabilities to which all in the university community should be sensitive.**

Three situations that illustrate the dilemma that the scientific and security communities face

- First, the **publication of research on pathogens** could provide terrorists with recipes for their production, enabling an attack that could endanger our population.
- Second, the **exportation of advanced technology** that can be used in both the civilian and military sectors (so-called dual-use technology) has the potential, if misused, to benefit adversaries.
- Third, the **training of foreign students in advanced dual-use technology** may provide their countries of origin with increased understanding of some of those technologies when the students return. As a consequence, it has been proposed that access to such dual-use technology by foreign students at U.S. research universities be controlled through “deemed” export controls.

Thesen

- Definition: dual-use research Concept “encompasses biological research with legitimate scientific purpose, the results of which may be misused to pose a biologic threat to public health and/or national security.”
- Teilt ein in Gut (wir) und Böse (die anderen)
- Zielt auf die vermutete Nutzung (use), basiert auf angenommenen Risiken, berücksichtigt nicht primär die Intention der Forschung
- Schützt vor Verbreitung von (Hoch)Technologien
- Militärische, kommerzielle, im Interesse von Regierungen durchgeführte / classified (geheime) Forschung im Konzept nicht berücksichtigt (per se dual use wegen Geheimhaltung kaum möglich)

Dilemma: Viele der „dual use“ Erreger stellen die Länder Afrikas und Asiens for enorme Probleme im Gesundheitssektor, NICHT uns

COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items

- Chikungunya virus;
- Congo-Crimean haemorrhagic fever virus;
- Dengue fever virus;
- Ebola virus;
- Hantaan virus;
- Junin virus;
- Lassa fever virus;
- Rift Valley fever virus;
- Yellow fever virus;
- Japanese encephalitis virus;
- South American haemorrhagic fever (Sabia, Flexal, Guanarito);
- Pulmonary & renal syndrome-haemorrhagic fever viruses (Seoul, Dobrava, Puumala, Sin Nombre);
- Genetically modified organisms or genetic elements that contain nucleic acid sequences associated with pathogenicity of organisms

Dilemma: Viele der „dual use“ Erreger stellen die Länder Afrikas und Asiens vor enorme Probleme im Gesundheitssektor, NICHT uns

- COUNCIL REGULATION, 1A004: Protective and detection equipment and components, includes equipment and components that have been identified, successfully tested ... or otherwise proven effective, for the detection of or defence against ..., biological agents "adapted for use in war", ..., even if such equipment or components are used in civil industries such as mining, quarrying, agriculture, pharmaceuticals, medical, veterinary, environmental, waste management, or the food industry.
- Example: we cannot export Ebola virus control material or detection kits to Iran
- Primat der Sicherheit führt zu ethischer Schieflage - Abkopplung der dritten Welt von Wissen und Technologien; spezifisches Problem für Tropenmedizin.

Alternatives Konzept „Ethisch fragwürdige Forschung“

- zielt auf die Intention der Forschung
- berücksichtigt Folgen
- umfasst alle Wissenschaftsbereiche,
- umfasst öffentliche, aber auch militärische, kommerzielle, im Interesse von Regierungen durchgeführte Forschung (Waffenforschung, Überwachungsprogramme, Folgen Profit-orientierter Forschung für Umwelt, soziale Strukturen)
- genereller ethischer Review (nicht beschränkt auf Dual-Use)
- Öffentliche Kontrolle, ggf. Ausschluss bestimmter Forschungsgebiete
- Stärkung des Verständnisses von Wissenschaftlern und Entwicklern für die ethische (evtl. globale) Dimension ihres Handelns. „Ich diene meinem Land/meiner Firma/meinem Institut“ darf für keinen Wissenschaftler ein ethisches Handlungskonzept sein.

U.S. Commission on National Security/21st Century (February 2001)

- First, there is concern that the United States' porous borders could allow terrorists to enter the country and attack U.S. citizens. Some of these terrorists might pose as (or in fact be) **students** in order to gain entry and find cover in a university community. Hence, it is argued that there is a need for programs to **police the entry of students and to verify their activities**.
- Second, there is concern that terrorists might use U.S. advanced technology against us. Some universities are vulnerable because of the **presence of dangerous pathogens or other research materials that could be used as weapons**. Moreover, there is concern that terrorists aspiring to apply advanced technology in weapons might **develop the technical capability to do so through a university education**.
- Finally, there are concerns that arise from the reality that **America's economic well-being is founded on the maintenance of its scientific and technological edge**. Government security officials expressed the general concern that foreign countries seek to penetrate U.S. universities (as well as U.S. businesses) for the purpose of obtaining early access to technology so that they can supplant U.S. capabilities and reap the economic gains for themselves.