

CBRN Weapons

Why technology transfer controls are important to you ...

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Why technology transfer controls are important to you ...

- Moving into the post-proliferation security environment
- Implications for the professional environment
- Contribution of education and outreach

Part 1

MOVING INTO THE POST-PROLIFERATION SECURITY ENVIRONMENT

Entrance of the *post-proliferation era*?

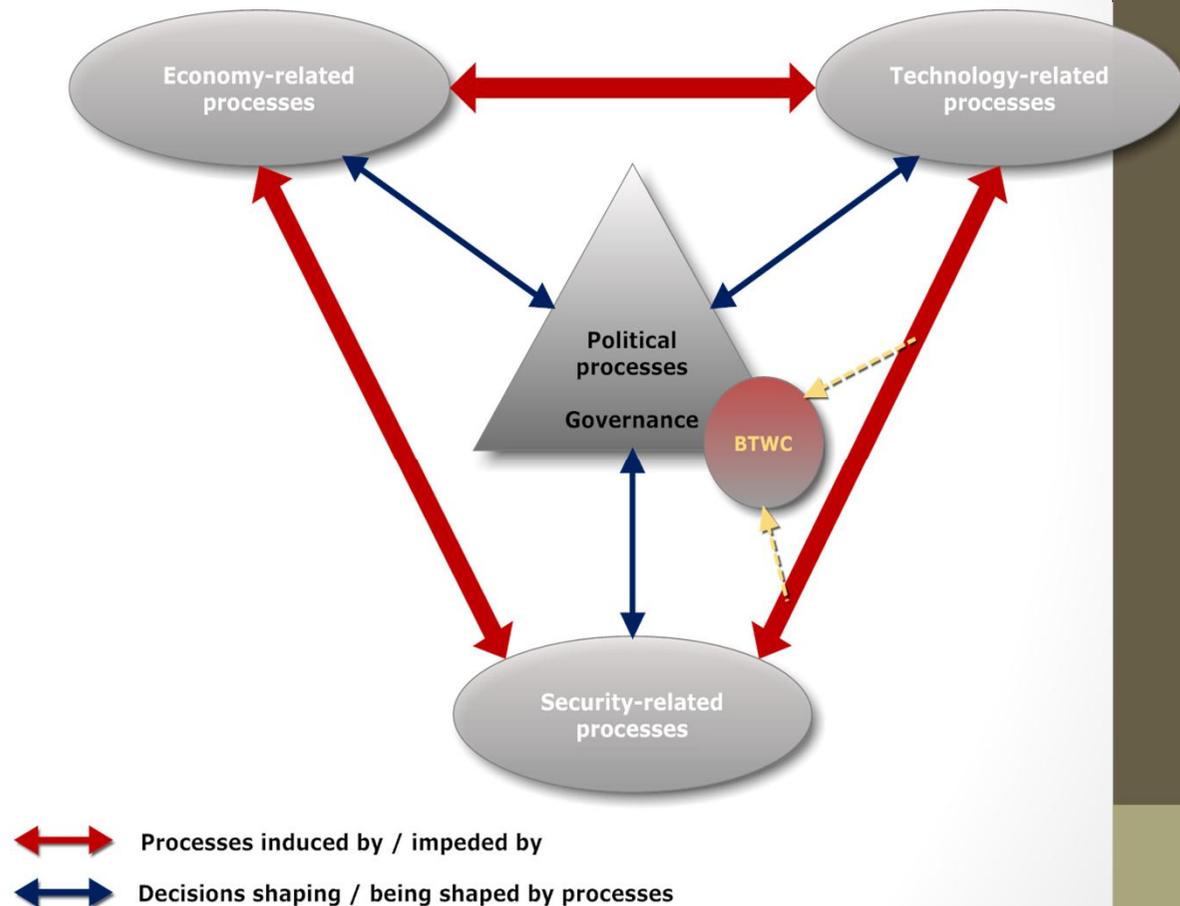
- **Nuclear:**
 - Global warming and growing interest in nuclear energy
 - Commercial pressure to access new markets
 - e.g., US-India & US-UAE bilateral agreement; Saudi Arabia forthcoming
- **Biological:**
 - Biology and biotechnology critical to development & health
 - Many developing countries conduct leading-edge research
 - Education expanding everywhere: spread of knowledge to manipulate pathogens, including genetics
 - Biotechnology is essentially information: no physical goods to cross borders
 - Corporate acquisition and sell-offs
- **Chemical:**
 - Similar to biological
 - Many production facilities with potential for CW manufacture now located in developing world

Between the folds of the foreseeable

- **Confluence of trends**
 - Presently trend analyses are mostly linear, allowing for certain unexpected, but as yet unknown developments
 - How to identify the confluence of otherwise independent trends and assess their impact (role as trigger for treaty failure)?
 - e.g., 1st gas attack (22 April 1915): meeting of science, industry and military doctrine
- **Failure by routine**
 - Routine verification / inspections to see what?
 - Set procedures
 - Where is the danger of systemic anomaly blindness or confirmation bias?
 - Risk of limiting processes to technologies specified in treaty → focus increasingly on past weapon programmes, not future challenges
 - Latest developments in science and technology
 - Do we really expect threats to come from terrorists or criminals?
 - Governments usually create the pull factors [demand] for weapon programmes
 - For CW, the industry would follow only if there is a government request
 - How to sense indicators and assess their relative importance?
- **How to design new treaties and and keep abreast of fast evolving global trends in society, science & technology, economy, and security?**

What future role for disarmament?

- No unified model for governance of weapon control anymore
- New stakeholders and security actors
- Increased role of non-state national & transnational actors
- Shifting relative balances of powers (economy, politics, military) and multiple power centres (polycentrism)
- Geographical decentralisation of business and industry activities
- South-south trade patterns and impact on technology diffusion
- *Declining role of states in shaping developments, but many states reject formal governance responsibilities for non-state actors under CWC/BTWC*



National implementation = key

- 'Any necessary measures'
 - Wide range of legislative and regulatory tools available
- Penal legislation
 - Deterrence and prevention
- Criminal procedural legislation
 - Enable investigation and prosecution of CBW-related crimes
 - Before an incident (→ incorporation of the *General Purpose Criterion*)
 - After an incident
- Transfer controls
 - Import and export control legislation
 - Legislation governing domestic transfers of materials
 - Legislation must cover all actors involved in the transfer process
- Authorisation of legitimate chemical and biological activities
 - Registration and licensing of legal and natural persons and certain types of activity
 - Transport regulations
 - Chemical safety/security and biosafety/-security measures

The Future: Multi-layered & multi-sectorial governance model?

- **Weapon control**
 - Multilateral agreements (Geneva protocol, BTWC, CWC)
 - Proliferation prevention arrangements (Australia Group, PSI, Global Partnership, etc.)
 - UN agencies: UNSC, UNODA, 1540 Committee, UNEP, UNDA, etc.
 - National laws and regulations (criminal, penal, trade, safety, etc.)
- **Disease prevention**
 - WHO, FAO, OIE + their regional organisations/initiatives
- **Crime and terrorism**
 - UNSC Resolutions (1540, terrorism resolutions, etc.)
 - Interpol, Europol, etc.
- **International transfers**
 - WTO, WCO, etc.
- **Economic actors**
 - Companies (national, multinational, transnational)
 - Research institutions
 - Individuals
- **Instruments of collective & individual governance**
 - Codes of conduct; Professional codes; Ethics
 - Awareness-raising & education
 - Whistle-blower protection schemes

Part 2

IMPLICATIONS FOR THE PROFESSIONAL ENVIRONMENT

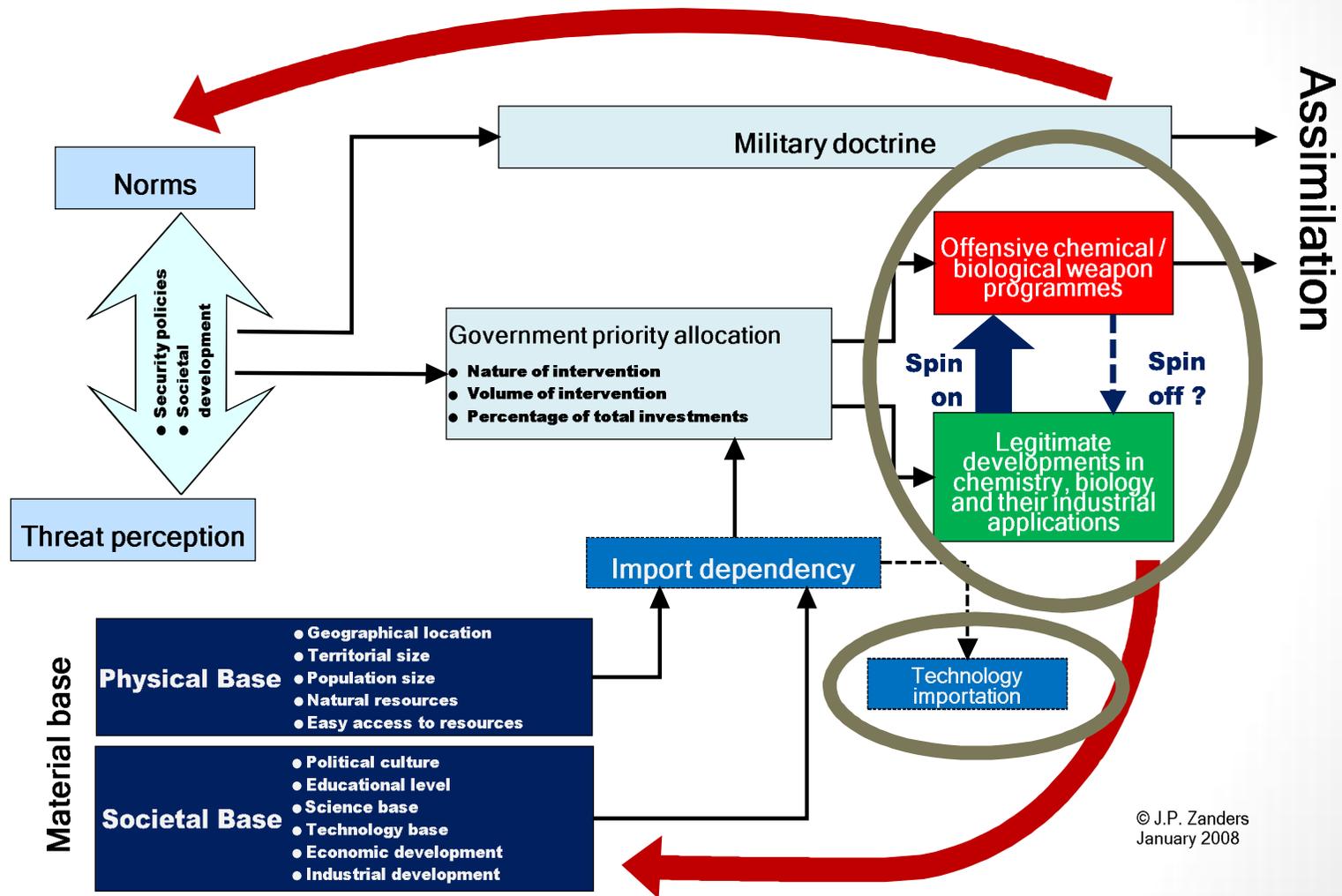
Understanding the *General Purpose Criterion* (GPC)

- The GPC is a critical tool in addressing the 'dual-use' issue
 - Under the GPC the BTWC and CWC *do not prohibit* objects or activities
 - They *prohibit* certain purposes to which they may be applied (i.e. acquisition, retention and use of the proscribed weapons)
- Functioning of the GPC
 - The *default position* is that all applications of biological agents, toxins and toxic chemicals are prohibited
 - Only a restricted set of purposes are '*non-prohibited*'
- Implications of the GPC
 - It covers *any and all* pathogens, toxins or toxic chemicals, whatever their origin or production method – past, present, and yet to be discovered
 - Even if control lists are used, unlisted items still fall under the prohibition
 - Any possession or manipulation of agents that cannot be justified under a non-prohibited purpose is a violation of the law
 - Can play a significant role in '*preventing*' acquisition or '*pre-empting*' use of CBW

2 examples of applying the *General Purpose Criterion* (GPC)

- **The research scientist**
 - Prof. X researches dangerous pathogens in a BSL-4 laboratory
 - In a professional capacity he/she is licensed or authorised to undertake such activities and to be in possession of highly contagious pathogens
 - In the evening he/she returns home. Prof. X thus takes on the persona of a private citizen and cannot undertake any of the professional activities or be in possession of any of the pathogens. Irrespective of professional qualifications or quality of the home laboratory, he/she would otherwise be unambiguously in violation of the national law based on the GPC.
- **Terrorist preparation of an attack with a CBW**
 - In many instances law enforcement authorities can only act after a crime has been committed.
 - A terrorist in the stage of planning and preparing for a strike with toxic chemicals or a pathogen is already violating the GPC.
 - If the GPC is included in domestic legislation, then law enforcement officials can therefore legally pre-empt the terrorist act before the agent is fully developed, produced or used.

Operationalising the assimilation model



How do these considerations affect your work?

- Consensus may exist about the prohibition of the weapon, but controversy exists about underlying technologies and processes because the final single-purpose phase in the weapon development process may be difficult to establish
- Different threat perceptions among relevant societal constituencies (military, politicians, scientists, industry, etc.) may lead to different assessments of risks, and therefore of responsibilities
- Limited awareness about potential contribution of their activities to future weapon development exists among scientists and industry representatives

Part 3

CONTRIBUTION OF EDUCATION AND OUTREACH

Basic knowledge about CBRN and underlying technologies

- Basic knowledge is fundamental
 - For yourself to appreciate risks and threats
 - To be able to appreciate when a risk or threat emerges
 - To communicate your knowledge and insights
- Awareness of context
 - What are the international and national regulatory frameworks governing a particular type of technology?
 - Which agencies bear responsibility for technology transfers?
 - Where can I inform myself about my own responsibilities?

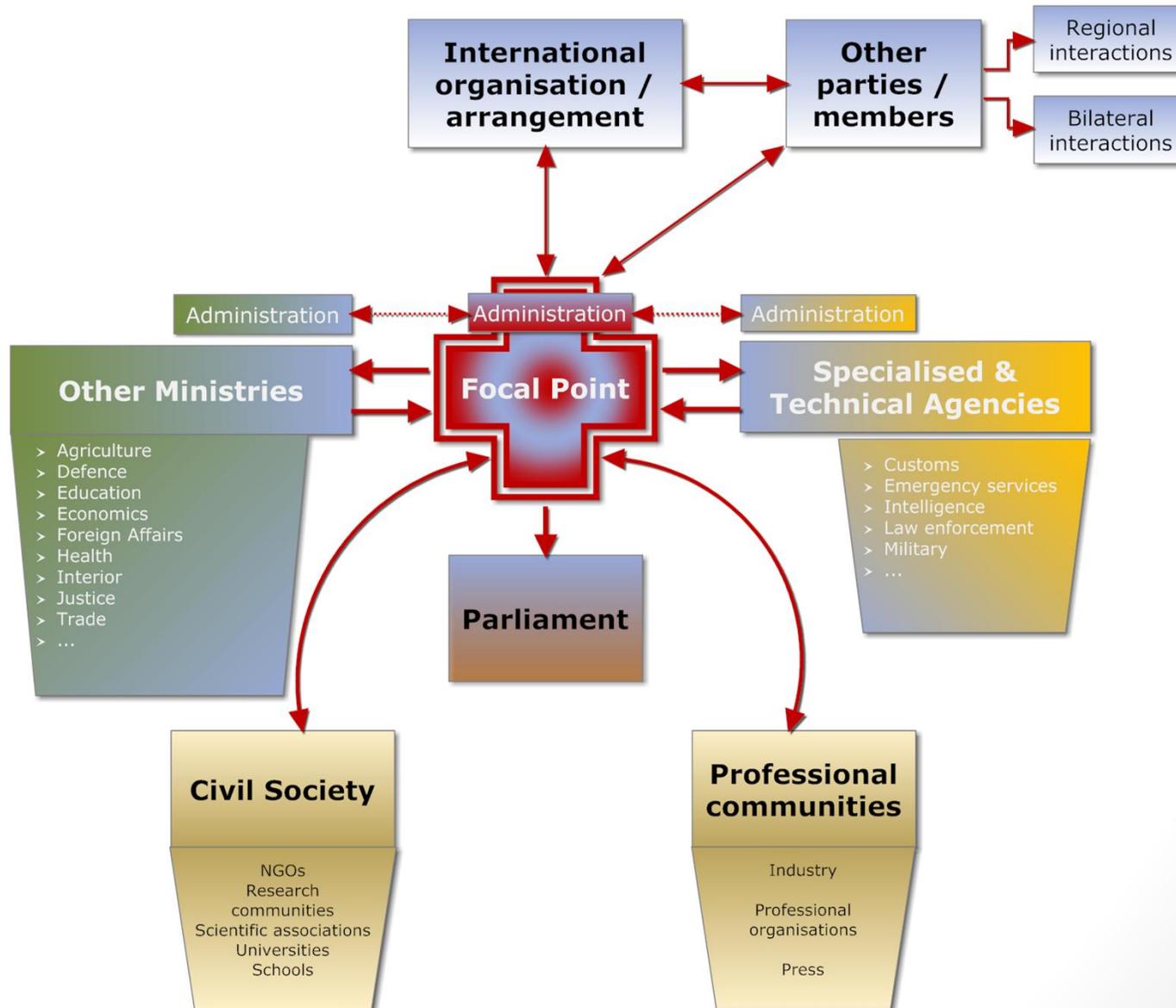
Core objectives of CBRN education

- Basic knowledge about CBRN and underlying technologies
- Identification and understanding threats and risks
- Understanding responsibilities
- Knowing relevant international frameworks
- Understanding transfer controls
- Knowing partners and target audiences
- Deploying educational and outreach strategies

Common understandings

- **Education as a strategy**
 - Covers different goals & strategies
 - Formality and goal orientation
 - Builds on prior knowledge, expertise and skills
 - Context and setting will determine best methodology and degree of formality
- **Outreach as a strategy**
 - Supplements policies or activities by official bodies, and may rely on activities by other communities, such as civil society constituencies;
 - Seeks out potential target audiences and then reaches out to them;
 - Often aims to develop and nurture constituencies to sustain an entity's goals;
 - Informs or assists rather than instructs target audiences.

Who needs to be involved?



Relevancy of education and outreach

- Importance of having a **national focal point (NFP)**
 - Treaty implementation
 - Organisation of outreach to key stakeholders in a State Party
- **Potential educational needs:**
 - Have officials discover *why* it is important *to them* to have maximal treaty implementation?
 - Have officials discover *why* it is important *to them* to engage with stakeholders?
 - Build up knowledge for officials: *Do* they know what is necessary? How *can* they know?
- **Potential benefits from educational strategy:**
 - Enhanced domestic appreciation of importance of full treaty implementation
 - Articulation of expectations by stakeholders
 - Improved 2-way communication about treaty needs and opportunities between capitals and delegations
- **Requires a longer-term strategic approach**
 - Will create an *enabling platform* for international cooperation and treaty implementation (which includes technology transfers for peaceful purposes)

Possible concrete actions through E&O

- Connect NFPs with relevant national and international networks
 - Discover *why* and *how*?
- Link key stakeholder communities to those networks
 - Let them discover *why* and *how*?
- Raise awareness of dual-use risks, regulations, norms and (international) obligations to enhance integration in those networks
- Let stakeholders identify their concrete expectations/requests from international cooperation
 - Promotes international collaboration and technology transfers for peaceful purposes

Education about export controls ...

- Is about changing attitudes of individuals or groups
 - Audiences need to acquire enhanced awareness about the potential implications of their activities and individual actions
 - They must be able to identify and assess short-term and longer-term risks and threats
 - They must acquire situational awareness to maintain standards of responsible behaviour
- Knowledge transfer is insufficient to shape attitudes
 - Audiences need to be engaged
 - They need to discover for themselves *why* the issue area is important / relevant to them
 - They need to discover *how* they can mitigate risks and threats
 - The insights need to become part of the daily professional routine

Why is there a need for education?

- Consensus may exist about the prohibition of the weapon, however
 - Controversy may exist about technologies and processes underlying CBRN weapons
 - The dual-use challenge: the *final, single-purpose phase* in the CBRN weapon development process may be difficult to establish
- Different threat perceptions may exist among relevant societal constituencies
 - Military, government officials, politicians, scientists, industry, etc.
 - These may lead to different assessments of risks, and therefore to different appreciation of responsibilities
- Limited awareness exists among *scientists* and *industry representatives* about potential contribution of their activities to future weapon development



THE TRENCH

Recalling where science, industry and military art converged
Challenging entrenched positions

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