
Internal dynamics of a terrorist entity acquiring non- conventional weaponry

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The biological-chemical threat spectrum

- War scenarios
- Terrorism
- Criminal acts

- Consideration and availability of different chemical or biological agents
 - Depends on intent
 - Depends on availability
 - Depends on technical skills and structure of the entity

Rajneesh cult (USA – 1984)

- Goal: influence local elections
- Use of salmonella (food poisoning)
 - Over 750 people incapacitated
 - Solution poured over food in salad bars
- Outcome: failure
 - test run
 - attack on eve of elections did not take place
 - Cult basically dissolved

Aum Shinrikyo (Japan – 1990-95)

- Goal: Take over government of Japan
- Development of wide array of weaponry + large military force
 - BC agents intended to destabilise society (provocation of Armageddon)
 - Major BC research, development and production programme
- Sarin attacks in Matsumoto (1994) and Tokyo (1995); assassination attempts with VX
 - Matsumoto: 8 fatalities; about 600 injured
 - Tokyo: 13 fatalities; 5500 other casualties (a large majority psychological distress)
- Outcome: failure
 - Strategic goals never attained
 - Both sarin attacks were tactical operations to thwart threats against cult
 - Biological weapon programme never produced a usable agent, even on research level
 - Cult dismantled; leaders arrested and tried

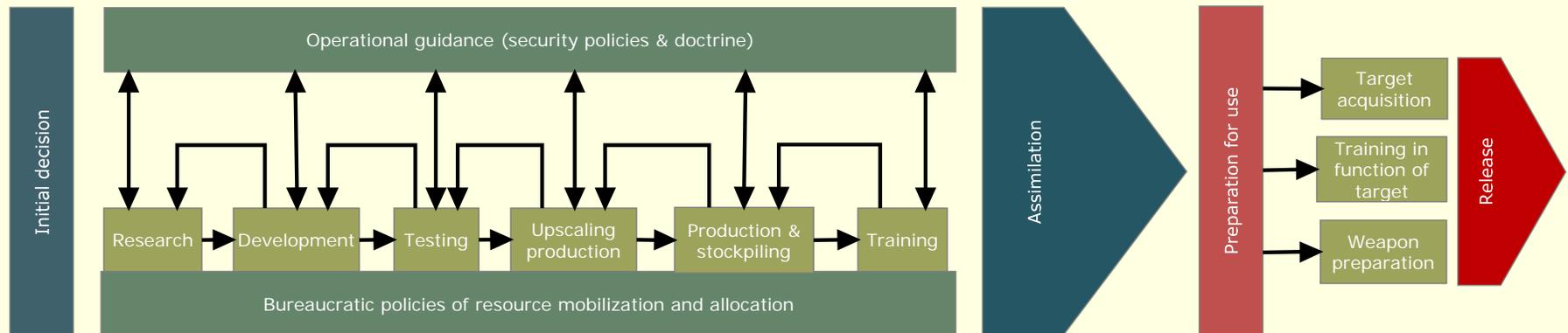
Mail-delivered anthrax spores (USA – 2001)

- Perpetrator still unknown; agent from US bio-defence laboratory
 - Bruce Ivins: A convenient end to an inconvenient truth?
- Goal: unknown, speculation about boost to US bio-defence programmes in wake of Al Qaeda strikes against USA
 - Targets were members of Congress (Democrats) → made opposition to spending increases unlikely
 - Targets were mass media outlets → maximise publicity
- Use of small amount of anthrax spores (sophisticated preparation)
 - 22 casualties, including 5 fatalities
- Outcome:
 - Targeted members of media and Congress escaped unhurt
 - Mass hysteria in the USA
 - Anthrax spores ended up in mail in Europe and Asia

The BC armament dynamic: the missing link in terrorism studies

- Armament is a structured process that starts with an initial proposal containing technical and performance specifications of the desired weapon and (if successful) ends with the weapon's deployment with the armed forces.
- Weapon acquisition is a complex process
 - Availability of equipment
 - Access to raw materials
 - Development of operational guidance
 - Planning, training and execution of attack
 - Internal group dynamics
- **Core hypothesis:** The factors that contribute to a terrorist entity acquiring advanced biological or chemical weapons are the same ones that lead to the entity's demise

Armament dynamic: basic scheme



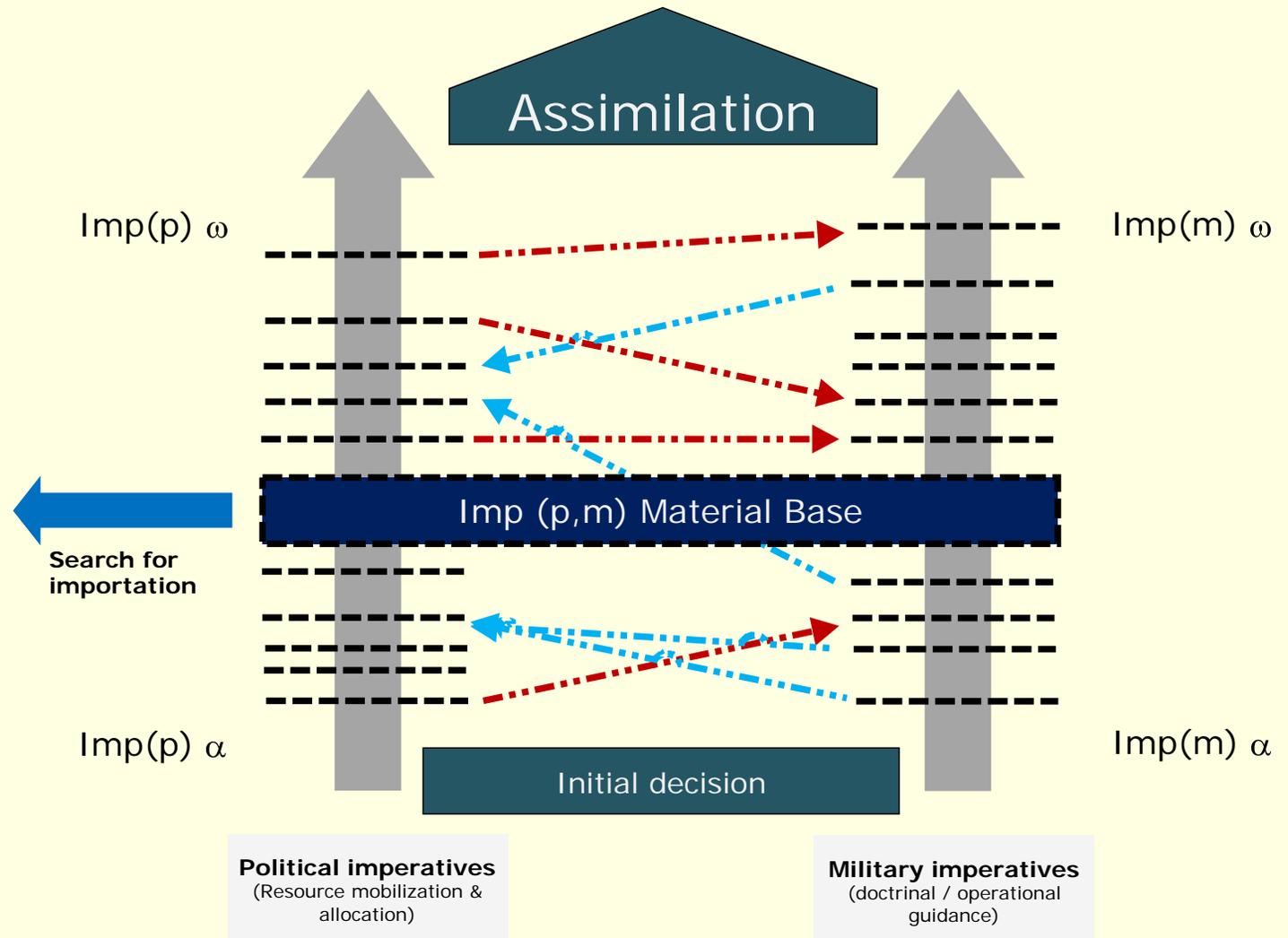
Structure of the armament dynamic

- Goals
 - States: security policy and strategies
 - Terrorist entities: ultimate political ambitions
- Guidance to achieve the goals
 - Doctrine, strategies and tactics
- Instruments
 - Selection of weaponry (in function of goals)
- Execution
 - Preparation for the use of weaponry according to doctrinal guidance in support of the goals

Assimilation

Assimilation is the ***process*** by which for a particular weapon, weapon system, or arms category ***political and military imperatives***, as constrained by the political entity's ***material base***, become ***reconciled*** with each other so that that particular weapon, weapon system, or arms category becomes an integral part of ***current mainstream military doctrine***.

Armament dynamic: Impediments



Determining the impediments

- Difficulty:
 - only three major cases, one of which gives very little information on goals
 - Aum Shinrikyo: relatively much is known
 - Rajneesh: limited goals; limited programme → good for contrast
 - Some 'loners': some information available
 - Danger of not being able to certify relevance of identified impediments and their role

- How to apply comparative studies?
 - Terrorist organisation vs. terrorist organisation
 - Terrorist organisation vs. state
 - Apply 'black box' approach

Contrasting two terrorist entities

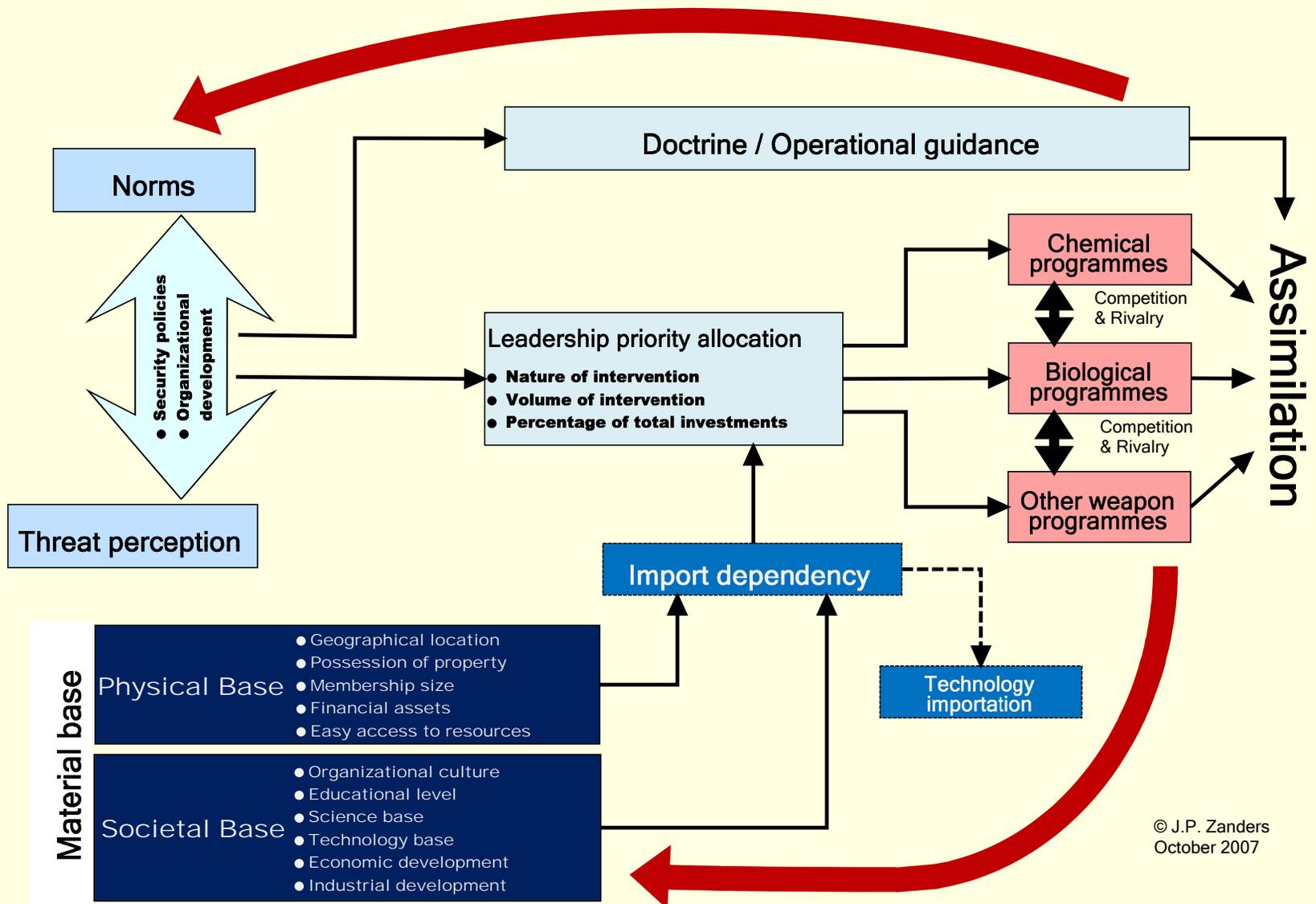
- Is the more 'traditional' comparative analysis of similar entities
- Synchronic comparative analysis most relevant, revealing impediments relating to
 - Material base (both physical & societal)
 - Threat perception and behaviour
 - Aspects of internal decision-making relating to the armament dynamic
- Contrast with terrorist entities that have not pursued BC weapons
 - Organisational structure
 - Ideology
 - Financing
 - Leadership & relation leadership—members

Terrorist organisation vs. state

- This comparative analysis follows from lack major cases allowing study of armament dynamics in terrorist organisations
 - Need to validate assumptions and insights suggested by comparative analysis of terrorist organisations (particularly with regard to the reference organisation)
 - It is possible because of basic conclusion that any two political entities can be contrasted
- Synchronic comparative analysis most relevant, revealing impediments regarding
 - Material base (both physical & societal)
 - Threat perception and behaviour
 - Mastering and managing stages of the armament dynamic
 - Aspects of internal decision-making relating to the armament dynamic
- The reference state is ideally one with a (previously) nascent CBW programme (e.g., Iraq, Libya)
 - Degree of import dependency for raw materials, expertise and equipment (proliferation dimension)
 - Technical difficulties
 - Threat perception and behaviour
 - Detailed descriptions of research and development, as well as up-scaling of programme

- Detailed study of the society in which the terrorist organisation is embedded is also necessary as it will reveal important characteristics of the societal base of the terrorist organisation

Practical organisation of analysis



Norms

- Error to assume that terrorist organisation has no norms or values
 - Organisation embedded in society that produced it
 - Certain values and norms will be deviant (reaction)

- Normative behaviour is correlated to goals
 - Does organisation need broader societal appeal?
 - Which elements will be emphasised / suppressed?

- Norm-setting by leadership
 - Accepted by rank and file (e.g, impact of charismatic leadership)
 - Indoctrination / brainwashing techniques
 - Limited scope for questioning
 - Isolation from broader society
 - Low tolerance for dissidence (punishment; physical elimination)

- Tension:
 - Charisma is opposite of institutionalisation (needed for weapon programmes)
 - Source of set of group dynamics that may lead to group's demise

Threat perceptions

- Threat perception is inherent in a terrorist organisation
 - Lives in active conflict with surrounding society
 - Threat = existential
 - Law enforcement / military operation may lead to elimination of organisation (no freedom from prosecution)
 - Possibility of competition from other organisations
 - Also on level of individual: shared experience
- Threat perceptions tend to increase
 - Paranoia fed by isolation from society
 - Perceptions will increase when on verge of acquiring certain operational capabilities
 - Concerns about footprint of operational preparations
 - Response to real or perceived (re-)actions by law enforcement authorities
- Sometimes artificially inflated by leadership for internal control
 - May become difficult to manage
 - Particularly if threats are linked to specific predicted events or dates

Security policies

- Significant field of tension between norms & threat perceptions
 - Determines the security policies
 - Informs doctrinal / operational guidance development
 - Affects internal organisational development
 - How will the organisation structure itself to achieve goals?
 - How does it affect priority setting?
 - How does it inform choice of means to achieve goals?
- Prevailing norms will affect choice of means
- Acquisition of capabilities affects normative behaviour
 - Development of rationale to justify capabilities (to own members)
 - Growth of threat perceptions
 - Fear of discovery by outside world
 - Fear of treason / betrayal
 - Increases urgency of weapon programmes
 - Feedback loop from assimilation
- Rising threat perceptions affect normative restraint
 - Certain courses of action become gradually acceptable
 - Acute existential threat may produce extreme (pre-emptive) actions

Material base

- Preconditions determining ability to set up BC armament dynamic
- 2 components
 - Physical base:
 - Relates to host society
 - Virtually impossible for terrorist organisation to alter these factors
 - Move to different society
 - Set up branches in other societies
 - Options, however, have impact on organisational goals, local recruitment options, or ability to blend in society
 - Societal base:
 - Relates to terrorist organisation itself
 - May take a very long time to effect
- Shortcomings in the material base determine import dependency
 - What cannot be developed or acquired domestically, must be acquired from outside the terrorist organisation

Physical base

- Where is the organisation located?
- Does it own property?
- Do cultural, educational, economic, scientific and technological characteristics of the host society promote the BC armament dynamic?
- Ease of member recruitment
 - Particularly regarding required skills
 - Skills cannot be (commercially) hired
 - Need to convince highly educated or trained individuals of organisational ideology (impact of functional specialisation)
- Ease of access to necessary resources (e.g., precursors; laboratory equipment, production technology)
- Ease of accumulation of financial assets
 - Wealthy host society
 - Tax breaks for certain types of organisation

Societal base

- Organisational culture
 - Decision-making structure
 - Hierarchical structure, e.g.,
 - Vertical integration
 - Cell-based structure
 - Loose affiliation of subsidiary / associated structures
 - Leadership characteristics
- Level of education, science & technology within the organisation
 - Will depend on recruitment strategies
 - Consideration of specific skills required for armament dynamic & operational planning and execution of attacks (functional specialisation)
- Economic development
 - Acquisition and management of financial and human assets
- Industrial development
 - Setting up of necessary infrastructure for research and development
 - Establishment and running of production facilities
 - Establishment of technology acquisition infrastructure and procedures (e.g., front companies and legitimate businesses)

Leadership priority allocation

- BC armament dynamic does not exist for its own sake
 - What are the terrorist organisation's strategic (top-level) goals?
- What instruments does it seek to acquire / develop in pursuit of those goals?
 - How does it mobilise its resources in function of those goals?
 - How does it distribute its resources over the different programmes supporting those goals?
 - Loose affiliation of subsidiary / associated structures
- Which are the criteria for distribution of (always limited) resources?
 - Purely managerial considerations?
 - Favouritism by leadership?
 - Impact of stimulation or emergence of competition among different programmes
 - Relative influence on decision procedures of senior members
- How are decisions influenced by external developments (e.g., emergence of a clear existential threat)

Weapon programmes

- Goal—instrument relationship in selection of weaponry
 - Large ambitions will lead to a selection of a wide variety of weaponry
 - A single type of weaponry is unable to achieve all goals
 - BC agents can only play certain roles
 - For more specific or time-limited ambitions, a single weapon category may suffice
 - Less inclination towards large investments in own development and production of weapons (e.g., complex BC agents)

- Rivalry and competition
 - However large the financial assets, resources are always limited
 - There will be competition / rivalry for the share of scarce resources among the people responsible for each of the programmes
 - Chemical and biological programmes are most likely to be run by different individuals

- Even with nihilistic organisations, the question must be posed about the added value a particular type of weaponry has over another one (particularly in the light of their acquisition difficulties)

Development of operational guidance

- Informed by ambitions of the terrorist organisation
 - Influenced by normative standards
 - Influenced by threat perceptions and their interaction with normative standards

- Top-level goals
 - How does it wish to achieve them?
 - Which types of weaponry are required to achieve these goals?
 - Do BC agents serve these goals, and if so, how?
 - Can the group achieve or otherwise acquire these weapons?
 - If not, necessary adaptation of top-level goals

- Tactical goals
 - Breakdown into sub-goals and target identification
 - Operational planning
 - How does it organise its forces to employ those weapons?
 - Force structures
 - Identification of specialised skills
 - Training

- Adaptation
 - Weapon development may create strategic and tactical opportunities
 - Complications in weapon development impose constraints
 - Impact of evolution in threat perceptions and their interaction with prevailing norms

Assimilation

- The degree to which the developed weapons and the operational guidance are integrated with each other
- Variations at any stage of the armament programme will affect the nature and degree of assimilation

- This outcome affects:
 - The quality of the weaponry (BC agents) developed
 - The type of weaponry developed
 - The volume of weaponry produced
 - The ability to deploy and use the weaponry successfully (success being defined in function of the goals)
 - The sophistication of such deployment and use

Organizing BC terrorism for mass casualties

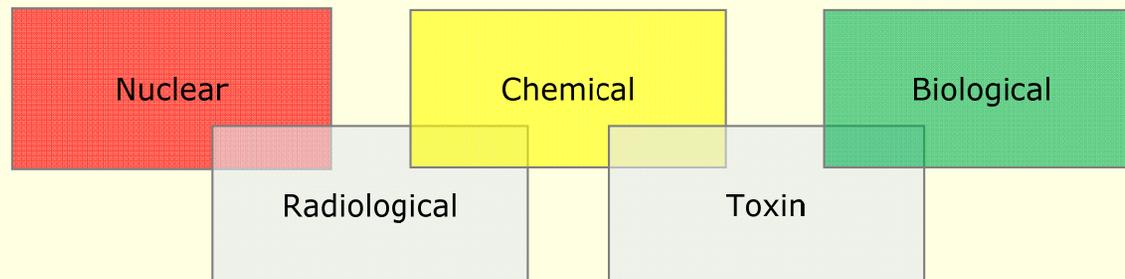
- Highly (vertically) integrated organisation
 - Charismatic leadership
- Skills required within organisation
 - Cannot be hired
 - Specialists must be convinced of organisation's ideology
- Functional specialisation
 - Different steps in armament dynamic require specific skills
 - Places burden on recruitment of specialists
 - Failure to do so has major impact on both armament dynamic and ability to deploy and use weapons
- Elaborate preparations needed (large footprint)
 - Research facilities
 - Testing ranges
 - Production units
- Logistical burden
 - Technology acquisition (high import dependency)
 - Weapon deployment
- Dissemination may be technologically most challenging

Alternative use of BC agents

- Against humans
 - Potential for mass casualties exists, but not necessarily most likely scenario as agents difficult to acquire
 - Incapacitation
 - Wider range of agents available
 - Easier to collect from nature and cultivate
 - Delivery uncomplicated
 - Lower requirements for skills and functional specialisation
- Against animals and plants
 - Economic impact
 - Agents easier to acquire; less of a risk to perpetrator
 - Easy to deploy
 - Many vulnerabilities in the food chain
- Economic and societal disruption
 - Goal is to disrupt functioning of utilities, commercial enterprises, public agencies
 - Wider range of BC agents available
 - Several can be commercially obtained
 - Exploitation of fear and lack of adequate preparations
 - Effectiveness of hoaxes

CBRN incidents

- Categories from a weapon-technology perspective



- Most incidents are in the grey areas
 - Toxins
 - Radiological materials
- Agents are easier to acquire
 - Enable incidents involving individuals; small groupings
 - Opportunity may play a significant role in those incidents

General conclusions

- The possibility of a major terrorist BC strike cannot be excluded
- However,
 - The acquisition process is complex for the potentially most destructive agents
 - The armament process is not inevitable
 - Promoting factors
 - Counter-acting factors
 - Paradox: some promoting factors may actually contribute to the failure of the BC acquisition process (impact of feedback loops)
- The 'lesser' agents in the armament dynamic
 - Economic or environmental terrorism, assassination, and other more (time-)limited goals
 - They come within the capabilities of more groups or individuals
 - Lower demands on operational guidance
 - Acquisition also less demanding
 - Lower need for functional specialisation
 - Less destructive