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# Internal dynamics of a terrorist entity acquiring non- conventional weaponry

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# The biological-chemical threat spectrum

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- 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)

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- 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)

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- 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)

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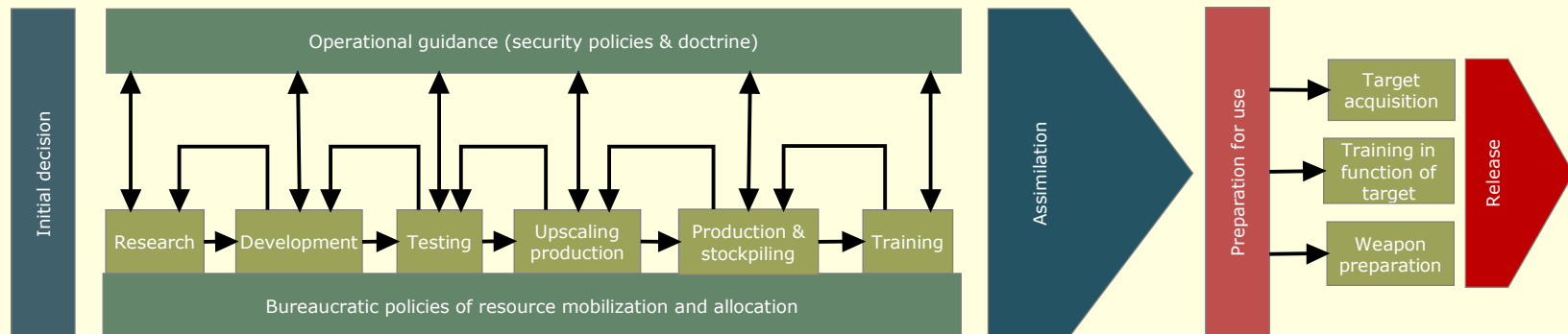
- Perpetrator still unknown; agent from US bio-defence laboratory
  - Bruce Ivins: A convenient end to an inconvenient truth?
- Goal: unknown, speculation about boost to US bio-defence programmes in wake of Al Qaeda strikes against USA
  - Targets were members of Congress (Democrats) → made opposition 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

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- 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

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- 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

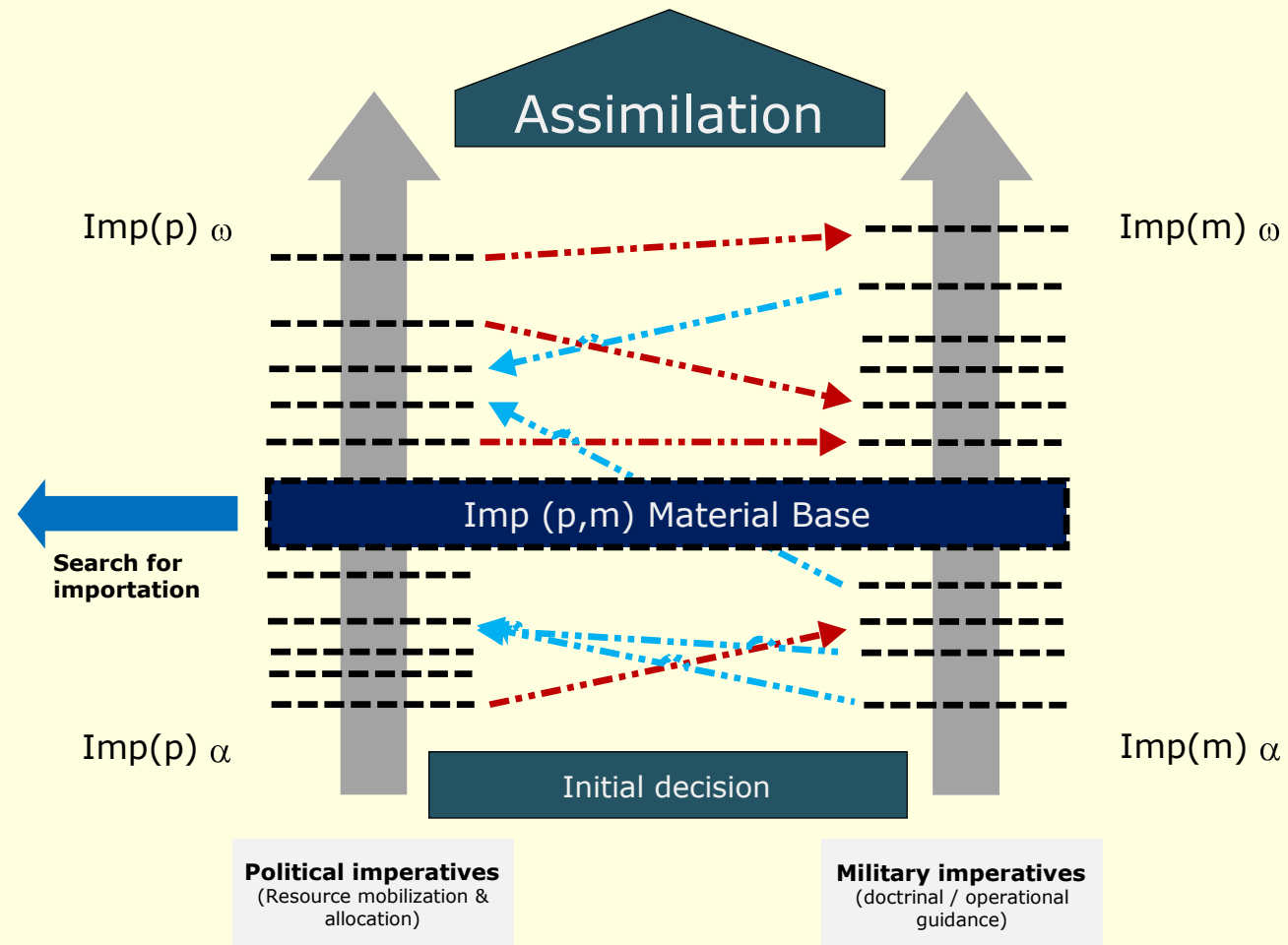


# Assimilation

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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

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- 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

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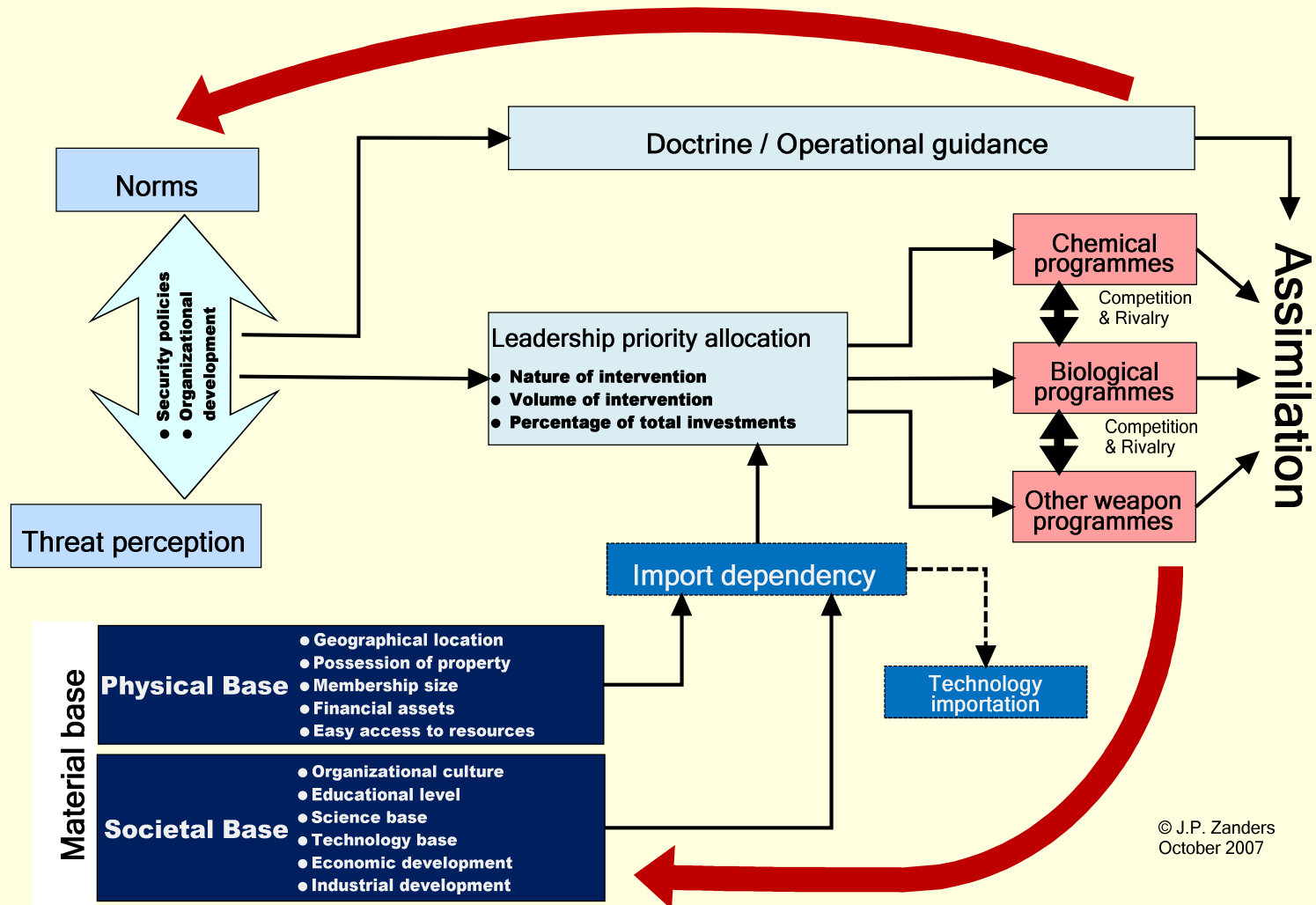
- Is the more 'traditional' comparative analysis of similar entities
- Synchronic comparative analysis most relevant, revealing impediments relating to
  - Material base (both physical & societal)
  - Threat perception and behaviour
  - Aspects of internal decision-making relating to the armament dynamic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

# Terrorist organisation vs. state

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- 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

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- 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

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- 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

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- 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

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- 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

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- 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

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- 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

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- 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

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- 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

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- 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 organisa its forces to employ those weapons?
    - Force structures
    - Identification of specialisad 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

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- 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

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- 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

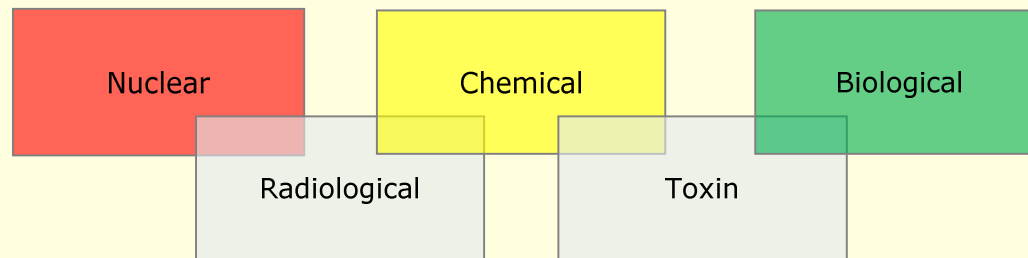
# Alternative use of BC agents

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- 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

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- 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

# THE TRENCH

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Challenging entrenched positions

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